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Internet Marketing for Profit Organizations: A framework for the implementation of strategic internet marketing

Rimbach, Felix

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INTERNET MARKETING FOR PROFIT ORGANIZATIONS

A framework for the implementation of strategic Internet marketing

by

FELIX RIMBACH

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Abstract

Felix Rimbach - Internet Marketing for profit organization

The development of the Internet has significantly changed the face of established markets and operation approaches across a tremendous spectrum of different industries. Within the competitive environment of those industries, the opportunities and risks derived from the new platform are so ubiquitous that unused opportunities quickly translate into potential risks. Those opportunities and risks demand for a structured approach how to implement a sustainable Internet marketing strategy that targets clear business objectives.

Marketing and strategic management theory describes very clear structural principles towards their operational implementation. Based on those principles an extensive literature review has been conducted which confirms the result from representative statistics that demonstrate the lack of a comprehensive framework for strategic Internet marketing. The distinct result of this research is such a comprehensive framework which has been directly derived from the illustrated principles of strategic management and Internet marketing. All major components of this generic framework are designed, evaluated in dedicated surveys and validated in extensive case studies.

The main achievements of the research are:

- A comprehensive review of the current state-of-the-art Internet marketing strategies
- Conceptual specification of a strategic Internet marketing framework with generic applicability to profit organizations
- Demonstration of the practical feasibility of the proposed framework at the implementation level (via several examples like the SIMTF and SIMPF)
- Confirmation of the applicability of the framework based upon a survey of potential beneficiaries
- Validation of the effectiveness of the approach via case study scenarios

Changing the understanding of a former technical discipline, the thesis describes how Internet marketing becomes a precise strategic instrument for profit organizations. The new structured, complete and self-similar framework facilitates sales organizations to significantly increase the effectiveness and efficiency of their marketing operations. Furthermore, the framework ensures a high level of transparency about the impact and benefit of individual activities. The new model explicitly answers concerns and problems raised and documented in existing research and accommodate for the current limitations of strategic Internet marketing. The framework allows evaluating existing as well as future Internet marketing tactics and provides a reference model for all other definitions of objectives, KPI and work packages. Finally this thesis also matures the subject matter of Internet marketing as a discipline of independent scientific research providing an underlying structure for subsequent studies.

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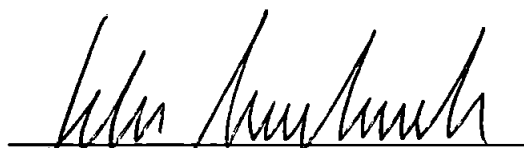
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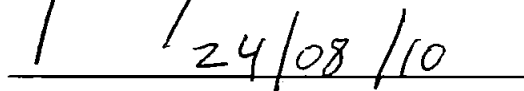
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Abbreviations

ABS	Absatz (German word for "Paragraph" used in German Law)
AMA	American Marketing Association
B2C	Business to Consumer
B2B	Business to Business
BSC	Balanced Scorecard
C2C	Consumer to Consumer
CIM	Chartered Institute of Marketing
DNS	Domain Name System
ERP	Enterprise Resource Planning
EUR	Euro
FAQ	Frequently Asked Questions
FTP	File Transfer Protocol
GUI	Graphical User Interface
HTML	Hyper Text Markup Language
HTTP	Hyper Text Transfer Protocol
IIS	Internet Information Service
ISBN	International Standard Book Number
ISP	Internet Service Provider
KPI	Key Performance Indicator
NOD	Need Oriented Design
PMI	Project Management Institute
PO	Profit Organization
PR	Page Rank
ROI	Return on Investment
ROI (F)	Return on Investment (Financial)
ROI (NF)	Return on Investment (Non-Financial)
SDLC	Software Development Life Cycle
SE	Search Engine
SEO	Search Engine Optimization
SERP	Search Engine Result Pages
SIMPF	Sustainable Internet Marketing Processing Framework
SIMTF	Sustainable Internet Marketing Technical Framework

SME	Small and medium sized enterprises
TSPR	Topic Sensitive Page Rank
TTFB	Time To First Byte
URL	Unique Resource Locator
USP	Unique Selling Proposition
UStG	Umsatzsteuer Gesetz (German Law governing recognition of taxes)
VoIP	Voice over IP

1 Introduction

"Strategy without tactics
is the slowest route to victory.
Tactics without strategy

is the noise before defeat."

(Sun Tzu)

The Internet started in the 1960s as a computer network connecting US scientific and academic research institutes (Leiner et al., 1999; ARPANET, 2007; Sterling, 1993; Moschovitis, 1999). Even now the underlying technology of the Internet is just a simple system based on web servers, routers and cables. Fifty years after its inception this technical system is now perceived as a major platform for a tremendous spectrum of commercial and non-commercial services (Brynjolfsson & Smith, 2000; Young & Johnston, 2003). This perception and the subsequent opportunities for both suppliers and consumers created an inherent need for profit organizations (PO) to engage into Internet marketing activities with their own Web sites. The question of whether all those activities are adding value to the underlying business model of the publishing organization, or even achieve a specific pre-determined objective, remains not just unanswered but also mostly unasked.

1.1 Research objectives

Based on a 2008 global survey from McKinsey (interviewing 410 marketing executives from public and private companies around the world, representing industries such as business services, energy, retail, technology, and telecommunications) one third of companies that advertise online already spend more than 10% of their entire marketing budget using this method; 60% of the organizations will spend more than 10% within the next 3 years (baseline 2008) on Internet marketing. 85% of companies responded that 'paid keyword search' is more efficient than advertising in traditional media. The most commonly mentioned barrier to digital advertising - according to 60% of all respondents – was 'insufficient capabilities' (internally & agency), followed by 52% who highlighted 'insufficient metrics to measure the impact' as a critical problem (McKinsey Quarterly, 2008).

As illustrated in the UK search engine marketing benchmark report 2009, "the lack of [qualified] internal resources (cited by 44% of organizations) and lack of budget (31%) are the biggest problems holding company marketers back from being as successful as they would like at Search Engine Optimization (SEO)" (Econsultancy, 2009). The survey performed by the MIC (1999) illustrates the highest factors of concern entering B2B-E-commerce from a SME perspective:

Factors	Percent
Transaction Security	24%
Insufficient market information	15%
Lacking technical support	16%
Uncertain transaction mechanism	12%
Inadequate bandwidth	7%
Legal restriction	3%

Table 1 : Problems hindering SME introduction of B2B E-Commerce (MIC, 1999)

"The result of the survey revealed that 'lack of technical support' and 'concern of online security' were the two most serious hindering factors considered by the SMEs when introducing e-commerce. This was largely due to the fact that SME were behind in computerization and had invested less in management information systems (MIS) than large enterprises. Problems generally cited by the SMEs in this regard include: (1) lack of knowledge of where to start and the most appropriate timing for introduction; (2) lack of information whom they should approach to seek for assistance; (3) lack of understanding of what were the benefits they could derive from investing into B2B commerce; and (4) lack of knowledge of governmental assistance and tax incentives available." (Asian Productivity Organization, 2000)

Those different survey results – indicating "missing capabilities", "lack of knowledge where to start", "no understanding of benefits", "insufficient metrics", "lack of resources and skills" - clearly suggest the lack of a consistent guiding framework as to how to use the Internet sustainably for marketing purposes. Without such a framework the concept of Internet marketing as a strategic discipline, and all implementation tactics, risk being less effective and efficient than they might otherwise be. The result of this research substantiates the concerns and challenges raised in the surveys and subsequently provide a framework for a sustainable Internet marketing strategy. The new framework enables POs to leverage the new media, which is essentially indicated to be more effective than any other

traditional marketing channels (McKinsey Quarterly, 2008).

The necessity for sustainable strategies and appropriate subsequent tactics to be economically successful is a conventional wisdom of business administration; a wisdom we still struggle to implement consistently (Kaplan & Norton, 1992; Niven, 2006; Niven, 2008; Kaplan & Norten, 2006; Tyagi & Gupta, 2008; Keyes, 2005). In the area of Internet marketing the inconsistency is largely based on the absence of a comprehensive framework which translates overall business objectives into KPIs and finally a technical environment (Afuah & Tucci, 2001; Ferrell & Hartline, 2005; Zittrain, 2007). The underlying principles of strategic management, as well as marketing in general, have been manifested for several decades, but current Internet marketing approaches do not reflect those structural requirements properly. The aim of this underlying thesis is to summarize the principles of strategic management and marketing, analyze if current models follow those principles and to finally outline a newly-developed framework that describes how to use the Internet sustainably as a precise instrument for the implementation of clear strategic business objectives. This novel complete and self-similar framework is derived from the sound fundamental principles of marketing and strategic management, and consists of a comprehensive set of SMART (specific, measurable, accurate, realistic / relevant, time-bound) Internet marketing objectives and an integrated structure of corresponding key performance indicators (KPIs). The balanced set of objectives and KPIs are essential to provide the fundamental direction of all subsequent work packages that support the technical implementation. The overall model cannot be understood as a technical system or a set of individual solutions, but a managerial structure of Internet marketing. Distinguishing the framework from existing structures, the integrated model focuses explicitly on adding value to the PO's overall strategy – not just elements thereof. Based on this generic and holistic perspective of objectives, KPIs and underlying work packages as well as elements of a precise implementation approach are outlined. While those technical details are highlighted, the contribution of this research is the overall model as such and not the individual components used. This final structure is targeted to facilitate the PO to implement a sustainable overall Internet marketing approach. This overall approach recreates transparency about the value contribution of specific investments and illustrates the impact of individual initiatives. The result of a comprehensive survey provides data to evaluate key characteristics of the new framework in the current marketplace. Furthermore extensive case studies and scenarios provide

statistical evidence about the validity and benefit of the new model.

1.2   Research methodology

To achieve the outlined objectives of the research descriptive, constructive, explorative and empirical methodologies were required and utilized (Creswell, 2008; McBurney & White, 2006; Graziano & Raulin, 2006). Figure 1 illustrates the different methods applied, as well their objective and reference in the thesis:

Research Method	Objective	Reference
Descriptive Research	Analyzes the existing environment to determine requirements towards strategic frameworks	Chapter 2
Explorative Research	Analyze and crystallize weaknesses in current environment	Chapter 3
Constructive Research	Development of the new strategic framework	Chapter 4
Empirical Research (Prototypes)	Implementation examples of model to demonstrate feasibility in principle	Chapter 5
Empirical Research (Survey)	Evaluates the strength and weaknesses of the framework based on significant feedback	Chapter 6
Empirical Research (Case Studies)	Test feasibility and impact of the framework based on empirical evidence	Chapter 7

Figure 1 : Utilized research methodologies

The detailed research approach illustrated in the figure above is elaborated in the sections below. The constructive, explorative and empirical research followed an iterative approach which facilitated the determination of the final model. The new model was fundamentally

changed based on a first survey and empirical findings of the case study scenarios. The intermediate models of the initial iterations are not described in this thesis, but just the finalized structures.

Descriptive Research: The descriptive research illustrates the basics of the subject matter – strategic management and Internet marketing - and crystallizes the fundamental structural requirements towards a strategic Internet marketing approach. Marketing in general, as well as Internet marketing in particular, is an existing subject of applied science and theoretical research. The identified structural requirements become the evaluation criteria of existing models in Chapter 3 as well as the new approach of Chapter 4.

Explorative research: Based on the requirements highlighted in the descriptive research of Chapter 2 existing models as well as the entire Internet marketing environment are analyzed in Chapter 3 (page 38). The explorative research highlights significant shortcomings in the current environment substantiating that a consistent framework for strategic Internet marketing does not exist. The attempt to create a novel strategic approach within the current environment requires a comprehensive exploration of existing concepts and developments. Based on those concepts and their demarcated shortcomings a new model can be constructed. The existing literature in the area of Internet marketing strategies originates from two different perspectives, derived from either an explicitly technical or a general marketing direction. Considering these two perspectives – and the subject as such – relevant online information (i.e. from the Internet itself) might not always be scientifically reliable; on the other hand offline research (e.g. books or articles) is – upon publication and distribution – potentially outdated or does not capture the full scope of current Internet marketing practices. Even though the scientific reliability of certain online references cannot be confirmed, these sources were of substantial significance to describe the latest status of the research. The figure below illustrates the potential conflict which is balanced in the literature review:

Focus Media	Part of General marketing	Technical Internet Marketing
Online	Reliable ? Focus ?	Reliable ? Strategic ?
Offline	Up to date ? Focus ?	Up to date ? Strategic ?
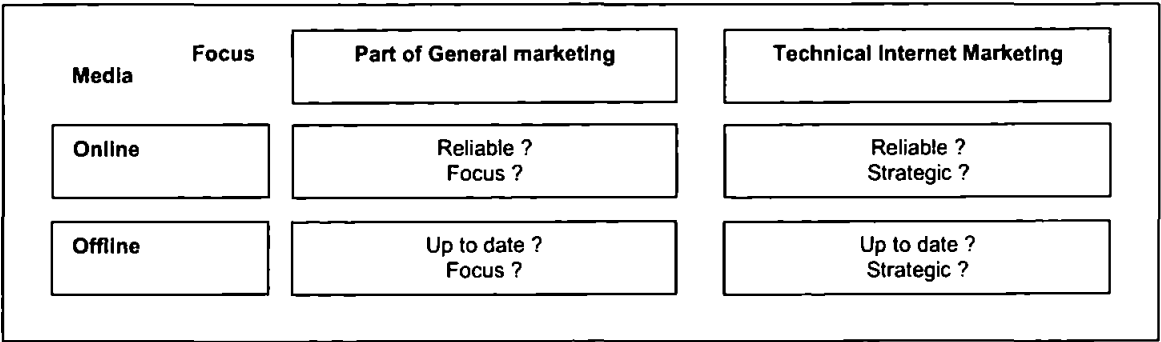
Figure 2 : Issues in existing Internet marketing research

Based on this conflict, Internet sources have been avoided as much as possible or used primarily to state matters of opinion, rather than to provide referential validation. Most references within this thesis are primarily founded on the review of academic offline material. The large spectrum of references has been selected based on the date of edition / publication to indicate aspects of either continuity (references over a period of time) or actuality (recent publications). Online material is used to also incorporate and elaborate especially on new, potentially scientifically not yet substantiated, approaches.

Constructive Research: Based on the requirements identified in the descriptive research (Chapter 2) and shortcoming of existing models explored in Chapter 3 (page 38), the new model is illustrated in Chapter 4 (page 76). The new model is directly conceptualized based on the structural principles of strategic management and marketing as highlighted in Chapter 2 (page 14).

Empirical Research – Prototypes: Based on the descriptive, explorative and constructive research, several empirical methods allowed evaluating and validating the new models and concepts formulated in the research project. The empirical element of the overall research identified strength and weaknesses as well as priorities and applicability of and within the new model. The illustrations of Chapter 5 (page 164) provide practical examples how to derive an organizational, technical or operational structure from the introduced strategic Internet marketing framework. As the framework as such remains generic the implementation examples provide only an insight of how it could be applied. Furthermore an example is documented exemplifying how to evaluate individual marketing tactics based on the overall framework.

Empirical Research – Survey: Several iterative surveys were conducted to elicit insights into the practical environment of strategic models of Internet marketing and feedback about the newly developed structure. The main survey investigated the priorities of Internet marketing as well as the setup of implementation models in correlation to the suggested new approach. The respondents answered questionnaires distributed directly to them via different media. The surveys included open as well as closed questions to enable a comprehensive evaluation of the strategic frameworks. The answers to those questions were segmented into different groups and analyzed accordingly. The setup and findings of the main survey has been summarized in Chapter 6 (page 187). A set of smaller surveys has been conducted to provide a baseline for evaluation of certain selected conceptual components introduced in this thesis. The statistical findings of all surveys provide an indicative insight into the overall subject and may allow other researchers to develop complementing or alternative structures.

Empirical research – Case Studies: The new framework and certain concepts thereof required empirical evidence to confirm their validity and explain internal dynamics. Empirical research in extensive case studies and different scenarios allowed providing a significant data set to extrapolate the impact of the suggested new structure. The case studies of Chapter 6 (page 218) involved two representative market participants: The first representative is a small PO promoting and selling educational material and corresponding services via the Internet; the second representative is a network of content Web sites offering free information with the attempt to recover (or exceed) the operational costs with advertisement income. All elements of the new framework are analyzed in dedicated scenarios ceteris paribus to provide scientifically reliable data and finally practical evidence of the impact and benefit of the overall model.

The complete research is based on the understanding of the Internet as a media providing all four main features of a 'generative technology' (leverage, adaptability, ease of mastery, accessibility (Zittrain, 2007)). With those generative characteristics, the Internet is continuously changing the overall marketing environment and is "technically morphing in un-anticipated ways" (Zittrain, 2007). The underlying research of this generative technology included publications, research as well as expert discussions over a timeframe of over six years. On the other hand, it has to be considered that effective concepts for Internet marketing are very short-lived as market participants try to leverage a potential

competitive advantage immediately; which again makes alternative and more effective approaches necessary. This challenge determined the structure of the majority of the newly developed concepts (see Chapter 4 and 5) anticipating the inner dynamics of the research environment.

1.3　　　Thesis structure

The scientific scope of marketing theory in general has been extensively explored (Fullerton, 1988); the consideration of structured Internet marketing has been initiated but remains proportionally underrepresented.

The overall thesis structure is outlined in Figure 3 and described in the paragraphs that follow:

1 – Introduction
2 – Requirements towards Strategic Internet Marketing
3 – Assessment of current Internet Marketing approaches
4 – New Framework for Sustainable Strategic Internet Marketing
5 – Implementation of the Internet Marketing Framework
6 – Evaluation of the Internet Marketing Framework
7 – Validation of the Internet Marketing Framework
8 – Conclusion
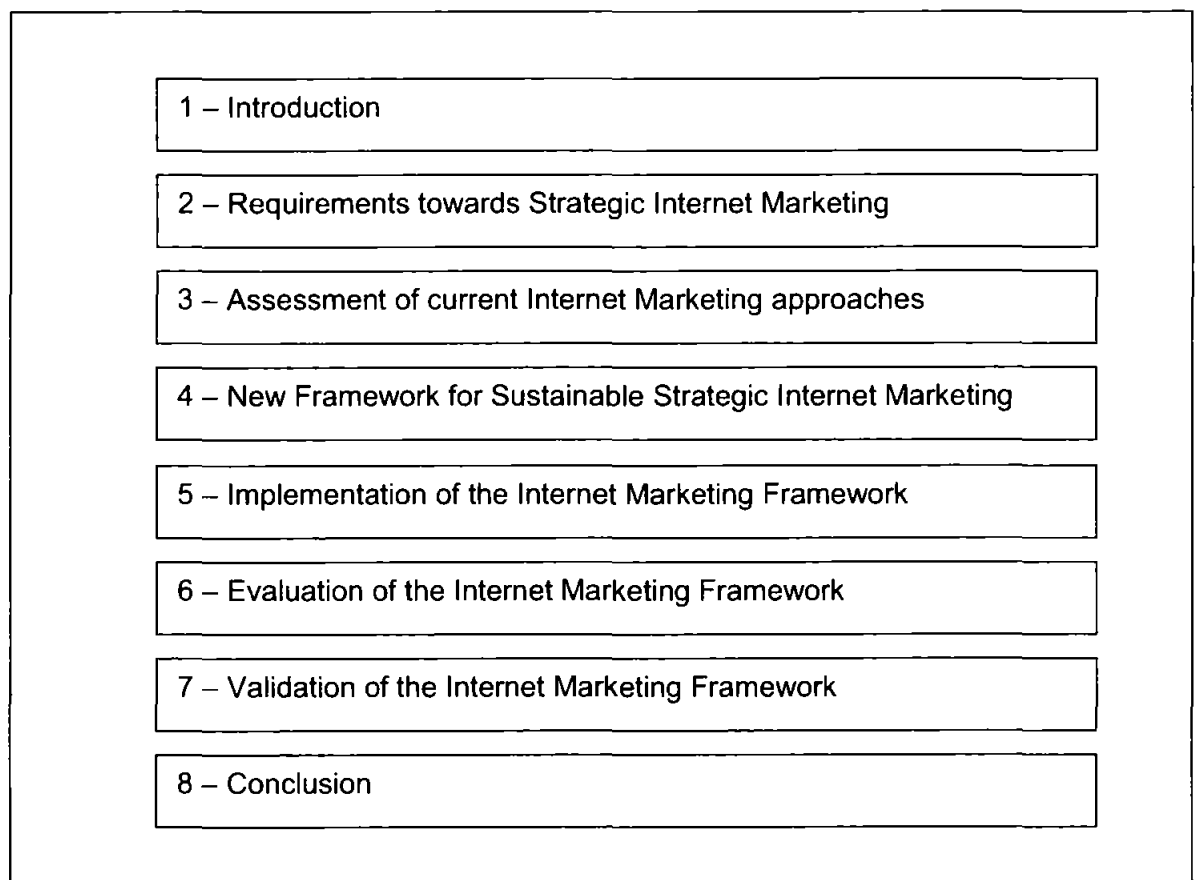
Figure 3 : Overall structure of thesis & BSC model

Chapter 2 – Requirements towards Strategic Internet Marketing

This chapter outlines the current understanding and fundamental principles of strategic management and marketing summarizing prominent implementation models. Furthermore the discussion clearly defines Internet marketing, provides a short overview of the historical development and indicates the significance of Internet marketing in business economics. The basic principles of those two areas (strategic management and Internet marketing) become the inherent requirements for the evaluation of existing and future Internet marketing approaches.

Chapter 3 – Assessment of Current Internet Marketing Environment:

Within this chapter established strategic Internet marketing models are consolidated and evaluated based on the definitions and requirements described in Chapter 2. The analysis highlights the significant deficiencies of current approaches. The research provides evidence that, while individual elements of a strategy exist, no overall integrated framework for sustainable Internet marketing has been established (satisfying the basic structural requirements highlighted in Chapter 2), and therefore also subsequent technical or processing models are not consistently derived. Considering those limitations, no empirical or explorative validation of such a strategic framework has been conducted and scientifically documented. Without such clear strategic structures the value contribution of Internet marketing remains in-transparent to senior management and the discipline finds neither solid theoretic or applied justification, nor effective and efficient implementation approaches. The result of this assessment finally supports the suggested problems and concerns highlighted in the surveys illustrated in the introduction of this thesis. Besides overall strategic frameworks (section 3.1 – page 40), related approaches based on consumer, supplier and intermediary perspectives are analyzed (section 3.2 – page 46) to provide a holistic insight into the multidisciplinary nature of the research subject.

Chapter 4 – New Framework for Sustainable Strategic Internet marketing

Chapter 4 introduces the suggested novel framework for sustainable strategic Internet marketing based on the previously introduced fundamentals of business marketing and strategic concepts (Chapter 2). The new self-similar (parts resemble the whole) framework provides the currently missing holistic perspective, is structured based on the principles of strategic management and includes all components of the BSC (Kaplan & Norton, 1992;

Niven, 2006; Niven, 2008; Kaplan & Norten, 2006; Tyagi & Gupta, 2008; Keyes, 2005). The comprehensive, but simple approach of balanced Internet marketing objectives is developed based on the elementary basics of marketing and illustrated in this Chapter 4. This structure of objectives has been used across the entire research. To successfully manage the implementation of a strategy, a balanced set of prominent metrics is introduced to steer the details of subsequent strategic work packages (Parmenter, 2007; Alexander, 2006; Paladino, 2007). The balanced set of KPIs becomes an essential managerial component of the overall strategic system to prioritize and fine-tune the implementation of subsequent work packages. Based on the objectives and key performance indicators outlined, a novel strategy map consisting of generic work packages has been structured. Each individual work package is directly focused on the objectives and supporting KPIs. Based on this new approach an organization can focus on areas which have the highest business priority. Unlike existing approaches, the new framework enables POs to leverage the Internet for marketing purposes in a structured and sustainable way. The concerns highlighted in the initial survey feedback, (e.g. "no understanding of benefits", "insufficient metrics" and "lack of knowledge where to start"), are therefore explicitly addressed and the result creates the capabilities to fully develop a strategic advantage over competitors.

Chapter 5 – Implementation of the Internet marketing framework:

Following the sustainable Internet marketing framework established in Chapter 4, the translation towards the practical implementation and utilization has been highlighted as the main challenge of senior management. Chapter 5 describes several examples how to use the framework to determine an organizational, technical and operational structure. The technical example shows how to use the framework to derive a potential Web site platform. A second example highlights how to derive an operational or support model based on the Internet marketing framework. Finally, in a third example, an organizational implementation illustrates how to use the framework to derive a plan for the initial setup. Those new models exemplify how POs can create technical structures and operational processes that anticipate changes and allow adjustments in the generative environment and remain successful as well as cost efficient over a longer period of time. The principles of the implementation model are therefore a subsequent extension of the sustainability considerations crystallized as a major limitation of existing models. Furthermore this chapter also includes an example of how existing tactics can be evaluated based on the

new framework.

Chapter 6 – Evaluation of the Internet Marketing Framework:

Chapter 6 contributes scientifically reliable data from a dedicated survey to evaluate the components of and priorities within the new framework. The discussion summarizes the survey process as well as major findings based on different market segmentations. The survey provides a unique data set focusing on sustainable Internet marketing strategies and the first insights into the application of comprehensive Internet marketing strategies within established POs in this area of research. The data highlights the current absence, as well as appreciation for a comprehensive overall model as well as interesting patterns in the current environment. It furthermore provides a very large data set of priorities and correlations.

Chapter 7 – Validation of the Internet Marketing Framework:

Several extensive case studies have been conceptualized, implemented and analyzed over the last five years of the research. The structure and relevant findings of those case studies are illustrated in this chapter to validate the impact and benefits of the newly developed framework and complementing concepts. The validation is based on different target environments: firstly an independent PO which targeted to sell products via the Internet over several years; and secondly a newly developed network of over 10.000 information-based Web sites. Both objects are put into different scenarios (ceteris paribus) while elements of the newly developed framework are applied. The properly documented findings of those scenarios confirm the assumed impact and benefit of the concept's individual components and – more importantly – the new model overall. Furthermore, the case studies provide an additional example of practical implementation.

Chapter 8 – Conclusion:

The last chapter summarizes the major findings, as well as the theoretical and practical impact of the research. Finally the limitations as well as directions of further research are described.

1.4   Research contribution

The novel contribution of this thesis is the specification of a complete and self-similar

generic framework for the implementation of strategic Internet marketing based on clear principles of strategic management and marketing.

On the one hand the findings documented and concepts suggested in this thesis create a new theoretic framework for the potentially most significant marketing channel of the future (evidence of significance provided in Chapter 2). This new theoretic framework provides a fundamental structure for future researchers of general business administration, marketing or technical disciplines to align existing and create new strategies. Furthermore, the research will provide a sustainable basis for evaluation of the effectiveness of continuously morphing future implementation models, while the structure of objectives, KPIs and work packages remains the same.

On the other hand the approach proposed in this thesis will allow sales organizations to significantly increase the effectiveness and efficiency of their marketing operations (which already occupies a significant share of the PO's budget). The new model describes a detailed implementation plan of Internet marketing in an organization and how to maintain a high level of sophistication adjusting to changes over a period of time. The utilization of this model will sustainably increase the marketing success and reduce the underlying expenses. The concept of inherent balance of objectives and KPIs ensure furthermore that individual activities do not have a cannibalizing effect on each other and the impact and benefit of all activities and investments are transparent to key decision makers within the organization. The new models will therefore explicitly answer concerns and problems raised and documented in existing research and accommodate for the current limitations of strategic Internet marketing.

In the context of POs (defined as an organization seeking short, mid and long term profit as its primary goal) the new framework is applicable – with certain limitations (as highlighted in section 8.3) - for any kind of industry or any kind product / service. Certainly the framework can be used as a reference point to derive a more specific strategic implementation plan for a specific organization.

The overall framework, as well as individual components or implementation examples thereof were subject to peer review via several publications as well as several extensive presentations and discussions. The publications are attached in appendix A; the

presentations and discussions, especially in regards to the marketing perspective, were conducted in close cooperation with researchers focusing on marketing in general or strategic management.

2 Requirements towards strategic Internet marketing

> *"The underlying principles of strategy are enduring,*
> *regardless of technology or the pace of change."*
>
> *(Michael Porter)*

The overall principles of strategic management are independent from the subject matter or implementation focus. A strategic approach for Internet marketing requires therefore the same fundamental structures than any other strategic discipline. This chapter defines strategic management and summarizes the following principles and inherent requirements towards their implementation models in section 2.1:

- Structure of clearly defined objectives, corresponding key performance indicators and derived work packages
- Determination and differentiation of strategy and tactics via iterative approach

Furthermore this chapter defines the subject of strategic and operational Internet marketing within the overall marketing theory and summarizes the historical development and current significance. The researched facts illustrated in section 2.2 provide evidence of the enormous significance of Internet marketing for PO. Finally the basic objectives of marketing / Internet marketing are crystallized in the context of a strategic approach. The generic and generally accepted structure of marketing objectives is summarized as follows:

- Marketing focuses on attracting attention, raising interest and desire as well as motivating action of potential consumers

The structural requirements of a strategy and objectives of marketing activities become the main evaluation criteria of existing (Chapter 3) and future (Chapter 4) frameworks.

2.1 Principles of strategic management

This section 2.1 defines the basic terminology of strategic management (section 2.1.1) and describes the fundamental structural requirements towards an implementation framework (section 2.1.2).

2.1.1 Definition of strategic management

The term 'strategy' is derived from the Greek word for 'generalship' and has therefore clear military connotations. The theoretic principles of strategic thinking are discussed explicitly since Sun Tzu in the 6th century (Griffith, 1963). The definition of the term strategy has been sharpened in the 19th / 20th century as "the art of the employment of battles as a means to gain the object of war" (Clausewitz, 1832) or later "the practical adaptation of the means placed at a general's disposal to the attainment of the object in view" (Moltke, 1909). Steiner (1979) and Mintzberg (1994) translated those principles into the business environment, describing that strategy highlights the vision, mission, purpose or direction of an organization as well as the how to achieve or realize them. Nickols (2000) summarizes the current understanding and stresses the impact of working without strategic considerations:

"It [strategy] is a general framework that provides guidance for actions to be taken and, at the same time, is shaped by the actions taken. This means that the necessary precondition for formulating strategy is a clear and widespread understanding of the ends to be obtained. Without these ends in view, action is purely tactical and can quickly degenerate into nothing more than a flailing about. When there are no 'ends in view' for the organization writ large, strategies still exist and they are still operational, even highly effective, but for an individual or unit, not for the organization as a whole. The risks of not having a set of company-wide ends clearly in view include missed opportunities, fragmented and wasted effort, working at cross purposes, and internecine warfare." (Nickols, 2000)

The main characteristics of a strategy are highlighted by Nickols above, differentiating it towards tactical approaches. Also historical references highlight this fundamental difference: "Tactics is the art of using troops in battle; strategy is the art us using battles to win wars" (Clausewitz, 1832). The original writing of Heller (2006) describes this particular difference and symbioses of 'purposeful procedures' and 'long-term planning' for the business environment:

"Strategy is 'any long-term plan', which will be the product of 'the art of conducting a campaign and maneuvering an army.' Tactics are 'purposeful procedure' achieved by exercising 'the science or art of maneuvering in presence of the enemy'. The two are as close as Siamese twins. Companies need the twin skills - those of the strategist, who can select the right long-term objectives and envisage the means that will reach those goals: and those of the tactician, who will deploy those means in a series of maneuvers - short, medium and long-term - to achieve the desired ends." (Heller, 2006)

The determination of a strategy and tactics can not be understood as a sequential process resulting in a static structure, but rather iterative (Woodhouse & Collingridge, 1993; Moore, 1995), a "repetitive learning cycle [rather than] a linear progression towards a clearly defined final destination" (Elcock, 1993; also see above definition of Nickols, 2000). Since the first theoretic focus the general definition, structure and significance of strategy and tactics remain rather undisputed (Drucker, 1954; Chandler, 1962; Sweet, 1964, Ansoff, 1965; Chaffee, 1985; Ohmae, 1982; Lamb, 1984; David, 1989; Hamel & Prahalad, 1989; Hill & Jones, 2007; Pearce & Robinson, 2008; David, 2008).

2.1.2   Structural requirements of strategic management

The definition of strategic management prescribes a clear structure towards an implementation model. The balanced scorecard (BSC), initially developed from Schneidermann (2006) and Kaplan & Norton (1992) as a pure performance management tool, is established as the most prominent framework to translate strategic objectives into action measured via key performance indicator (Kaplan & Norton, 2004) and can serve as an example for the structural requirements of a strategic model. The structural architecture of the BSC is suggested to be the most prominent strategic framework (reflection of alternatives further below). Already early statistics revealed that around 64% of companies questioned used a BSC approach (IMA, 1996). According to Bain & Company's survey of CEO management tools and techniques, more than half of the global 1,000 companies had adopted the BSC in 1999 (Palladium, NN) and around 57% are still using it in 2005 (Heilmann, 2006). The Gartner Group estimated that 40% of Fortune 1000 companies had the Balanced Scorecard implemented in 2001 (Harper, 2001). Also Heaney (2003) indicates that the BSC was used by over half of the companies listed in the index of the Fortune Global 1000. Based on this success the Harvard Business Review has acclaimed the balanced scorecard as one of the most

influential ideas of the past 75 years and it is the most requested title of the Harvard Business School Publishing (Harvardbusiness, 2008). This high degree of acceptance and appreciation of the BSC (structure of objective setting, strategy map and key performance indicator) suggests the approach to be used as a potential guiding structure for the further analysis.

The third generation of the balanced scorecard consists of a destination statement (vision), a strategic linkage model connecting the strategic objectives to activities as well as measures (key performance indicator) selected to monitor each objective and work package (Lawrie & Kalff & Andersen, 2005; Cobbold & Lawrie, 2002). Furthermore the original concept of the balanced scorecard suggests four categories (dimensions) as an aid in the consolidation of relevant key performance indicator for an overall business (Kaplan & Norton, 1992). Those dimensions are determined by the scope of the strategy and can be customized accordingly. As part of this research the overall strategy definition process is of major interest; the definition of dimension and measurement methods are of minor importance. The strategy definition process of the BSC follows the general understanding of strategic management as highlighted above. The example below shows the structure of defining objectives, measures / targets and initiatives (work packages) for the different areas of the classical categories of a general BSC:
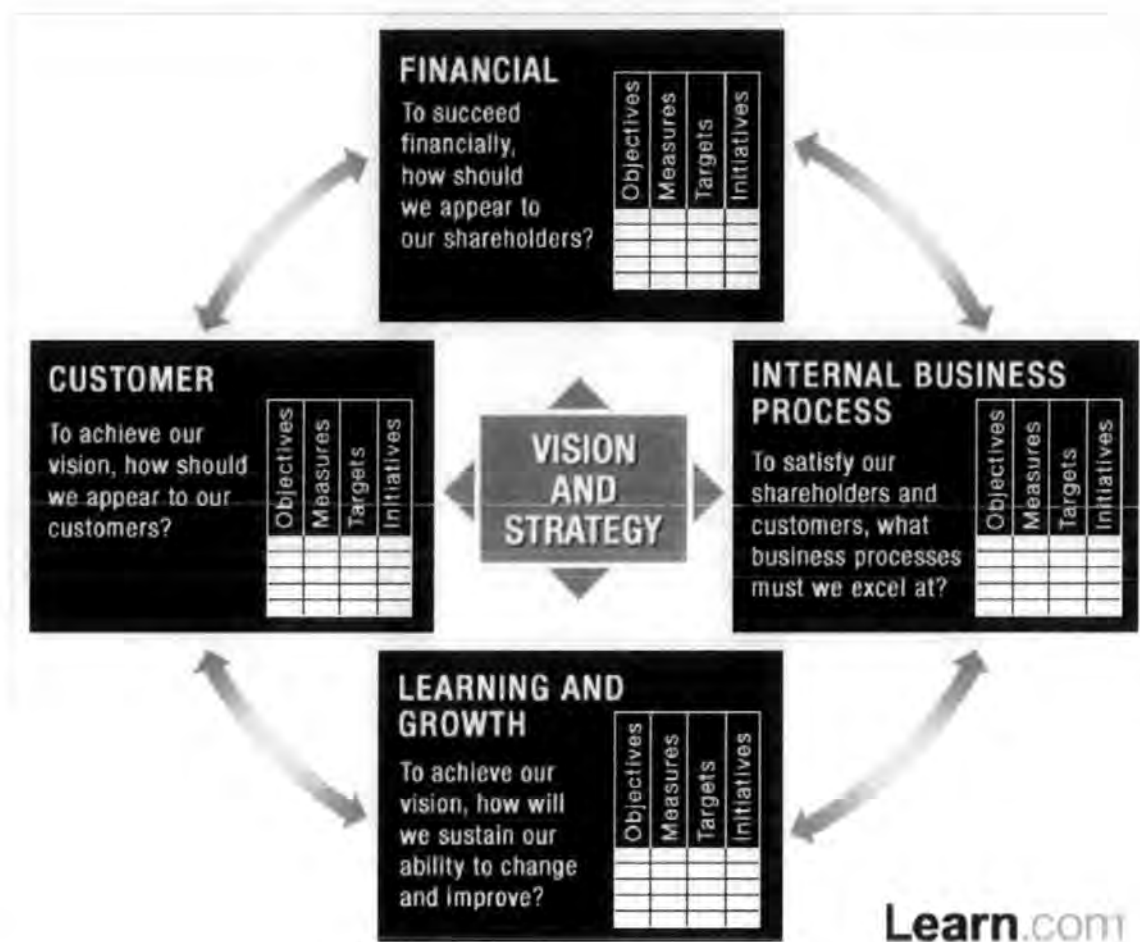
Figure 4 : Example Balanced Scorecard (Learn, NN)

While the example above splits the measures and targets, the targets substantiate solely a numeric value towards the measures themselves. The targets therefore do not constitute an own, but represent just the utilization of a fundamental structural element (measures).

Searching for alternative approaches, critics of the BSC focus on the suggested details of objectives / dimensions or measurement models, but not the general overall concept of objective setting, strategy map and key performance indicator– as this structure is much more basic (standard items of a strategy based on section 2.2.1) than the BSC as such. The potentially most prominent extension (or criticism) is voiced based on the establishment of a decision analysis method called 'Applied Information Economics' (AIE). This method focuses on a more sophisticated valuation of especially intangible assets, especially information as such (Hubbart, 2007). This quantification process of intangible

aspects (largely used for IT projects) creates the overlap to the balanced scorecard, which also includes the utilization of non-financial key performance indicators for business management (Hubbart, 2007; Fischhoff, et al. 1982). Based on this scope AIE remains less an alternative of the strategy definition process, but more a complement in terms of metrics specification and calculation (Hubbart, 2007; Fischhoff, et al. 1982). Furthermore there are several authors suggesting alternative dimensions of measurement or objective definitions compared to the suggested structure from Kaplan & Norton (Cobbold & Lawrie, 2002). For example Leibold, et al. (2002) or Voelpel, et al. (2005) designed a "systematic scorecard focus", redefining the objective definition within the original dimensions. The difference between the two concepts is illustrated in an example by the original authors: "Within the customer value perspective, companies look at their capability to constantly provide new customer value. In contrast to the BSC, the main focus of this view should be shifted from the mere goal to deliver simply more value than others, to trying to cocreate new value for customers in the business ecosystem" (Voelpel, et al. 2005). Based on this understanding also this model is not a true alternative to the overall structure of objective setting, strategy map and balanced key performance indicator as such, but an extension on how to identify the right objectives for an organization.

This section has highlighted the historical and modern principles of strategic management and implementation approaches. Those basic principles – iterative definition of clear objectives, determination of corresponding key performance indicator and description of subsequent work packages strategic – become the main evaluation criteria of existing approaches in Chapter 3.

2.2   Principles of Internet marketing

This section firstly defines Internet marketing as well as describes its history and significance in section 2.2.1. Due to the broad spectrum of Internet marketing, this section is much more extensive than the corresponding illustrations for strategic management (section 2.1.1). Based on this introduction the structural principles of Internet marketing are illustrated in section 2.2.2 to substantiate the evaluation criteria of existing and future frameworks for strategic Internet marketing in the subsequent chapters.

2.2.1 Definition of Internet marketing

One of the earliest theoretic definitions of marketing was formulated from the National Association of Marketing Teachers in 1935 describing marketing as "the performance of business activities that direct the flow of goods and services from producer to consumers" (Lewis & Erickson, 1969). The American Marketing Association – responsible for the official definition of marketing used in books and taught at university in the US – adopted the definition in 1948 and did not change it until 1980. In 2004 the Association still followed a similar but more holistic (including customer relationship) and generic (products and services become value) structure. Marketing became "an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders" (Gundlach, 2007). The newest definition from AMA illustrates marketing again as an activity, and not function, positioning marketing broader in an organization than just a department. Since 2007 marketing is defined as "the activity, set of institutions and process for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (Wilkie & Moore, 2007). Also Lamb et al. outline marketing as the repetitive process of "creating value, communicating value and delivering value" (Lamb et al., 2008). The UK Chartered Institute of Marketing (CIM) defines marketing as "the management process responsible for identifying, anticipating, and satisfying customer requirements profitably." (CIM, 2005). Alternatively to the academic theoretic definitions above, illustrating marketing as a managerial discipline, certain authors describe marketing more from a pragmatic or application-oriented perspective. President (2008) for example defines marketing as "the art of getting people to change their minds – or to maintain their mindsets, if they're already inclined to do business with you" or "something that generates profits for their business" (President, 2008). Princeton.edu defines marketing as "the commercial processes involved in promoting and selling and distributing a product or service" (Princeton.edu, NN); Wiktionary.org simply as "Buying and selling in a market" or "the promotion, distribution and selling of a product or service; includes market research and advertising" (Wiktionary.org, NN). This understanding of applied marketing uses a predetermined "marketing mix" (term again defined by the AMA) of product, price, place and promotion (4P) to position products and services in the marketplace (Kotler & Keller, 2005; McCarthy, 1960; Borden, 1964; Culliton, 1948; Frey, 1961). The marketing mix as such

has to be understood as a set of controllable, tactical marketing tools that work together (not as independent options) to achieve company's objectives (McCarthy, 1960; Barlon, 2006; Bitner & Booms, 1981).

Based on the understanding of marketing in general, Internet marketing is the marketing of products and services via the Internet. It therefore directly relates to the "place" and "promotion" perspective of the marketing mix. The Internet is also a means for determining potential product and price structures, but this analytical process is understood as Internet (marketing) research and not marketing as such. Also in regards to the marketing definitions of CIM and AMA illustrated above the Internet can be used to identify or anticipate customer requirements, but Internet marketing describes the satisfaction (CIM), communication or delivery process (AMA). Ward defines Internet marketing from an application perspective: "Internet marketing refers to the strategies that are used to market a product or service online, marketing strategies that include search engine optimization and search engine submission, copywriting that encourages site visitors to take action, web site design strategies, online promotions, reciprocal linking, and email marketing" (Ward, NN). Also Jain describes a very application oriented understanding: "Internet marketing as a collaboration of all Internet related marketing activities, it actually includes everything right from search engine marketing and optimization, to affiliate marketing and banner advertising, email newsletter marketing etc. website analysis, performance tracking and customer relations are all considered to be parts of the umbrella head Internet marketing" (Jain, 2008). Just Market-Vantage – an Internet research service provider - extends the Internet marketing definition to marketing research: "Leveraging the Internet as a means of communicating a company's messaging, attracting prospects and customers, and conducting market research" (Marketing-Vantage, NN). As indicated the definition might be related to the scope of service of this specific PO. In general Internet resources follow the understanding of the definitions illustrated above (e.g. en.wikipedia.org/wiki/Internet_marketing, www.e-traffik.com/resource-center.html, wps.pearsoned.co.uk/wps/media/objects/1452/1487687/glossary/glossary.html, bizsuccess.kudzu.com/, www.netboosterasia.com/glossary.html, sensacom.com/web_glossary.html, imperialsoftwaresystems.com/solutions/glossary.php).

Within the field of Internet marketing there are several other terms used as synonyms to describe related / equivalent concepts. Internet- or E-commerce for example groups the

concept of sales or purchases taking place using the Internet or through other electronic means (Brown, 2006; Chaudhury & Kuilboer, 2002). That means the term E-Commerce describes more the transactional technical processes while Internet marketing focuses on all managerial and technical activities leading to that transaction. Internet advertising focuses on mostly paid, public and usually non-personal presentation or announcement of a persuasive message by a specific firm or sponsor to its existing and potential future customers (Schlosser et al., 2000; Dreze & Hussherr, 1999). Internet advertising therefore focuses just on one element of the above mentioned instruments of the entire marketing mix (promotion).

The biography of marketing in general can be structured in the history of economic thought (providing theoretic account) and economic history (focusing on the history or marketing practice) (Hollander et al., 2005). On the one hand implicit marketing practice as such is part of doing business since the beginning of trade. Due to its implicit nature, missing documented references on historical marketing practices make it difficult to demarcate specific strategies; solely technical innovations (e.g. Gutenberg's printing machine or radio and TV) provide indicative milestones for innovative marketing activities. Marketing theory as an independent area of research on the other hand was quite clearly established at the beginning of the 20th century (Sheth & Gardner & Garrat, 1988). Bartels in "The History of Marketing Thought" categorized the development of marketing theory into different periods (Bartels, 1988):

1900s	Discovery of basic concepts and their exploration
1910s	Conceptualization, classification and definition of terms
1920s	Integration on the basis of principles
1930s	Development of specialization and variation in theory
1940s	Reappraisal in the light of new demands and a more scientific approach
1950s	Re-conceptualization in the light of managerialism, social development and quantitative approaches
1960s	Differentiation on bases such as managerialism, holism, environmentalism, systems, and internationalism
1970s	Socialization; the adaptation of marketing to social change

Table 2 : Periods of Theoretic Marketing (Bartels, R. (1998))

Marketing historians like Shaw & Jones (Show & Jones, 2005) and Weitz & Wensley (Weitz & Wensley, 2006) point to the publication of Alderson in 1957 ("Marketing Behavior and Executive Action") as the major turning-point in the history of marketing theory. Moving away from the "macro functions-institutions-commodities approach" to a "micromarketing management paradigm", marketing theory started to incorporate other fields of knowledge besides simply focusing on economics, notably behavioral science, becoming a full multidisciplinary field. (This characteristic becomes the determinant for the expansive elaboration in section 3.2.) The first historical appearance of Internet marketing refers back to the E-sales strategies of the 1990s (Brousseau, 2001; Schniederjans & Cao, 2002). The aim of E-sales was to optimize sales-processes by trying to intensify the relationship to certain stakeholders using synchronous, independent and web-based communication technologies. Already within this initial understanding, E-sales is part of an overall marketing strategy addressing the complete marketing mix of product, price, place and promotion (4P (Kumar, 2004), and people (5P) (Aaker, 1998)) as a whole (Savitt, 1980; Layton & Grossbart, 2006). The main historical phases of classical E-sales strategies were grouped as (1) information, (2) interaction, (3) transaction and (4) integration (Thier, 2003). The illustration below shows some examples of each area and indicates the technical motivation of the approach.

Information (1990 – 1995))	Interaction (1995 - 1998)	Transaction (1998 - 2000)	Integration (2000 - 2005)
- Homepage - Catalogue - Download	- Email - Newsletter - Newsgroups - Configurators	- Shops - Payment processes - Status Information	- Business-2- Business - ERP-Integration - Virtual markets
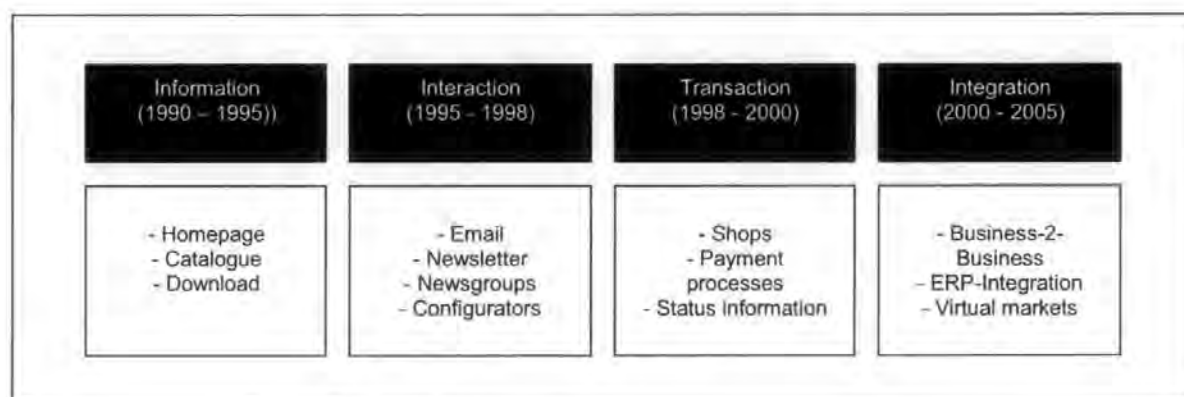
Figure 5 : Classical objectives / phases of e-sales and implementation examples (Thier, 2003)

The following sub-sections shortly elaborate upon the four objectives / phases. The four objectives are also understood as a sequence of maturity levels of E-sales activities. A similar phase model is illustrated by Tassabehji (2003). Equivalent to the above mentioned outline the structure from Tassabehji describes maturity phases (or stages of evolution).

Phase	
1	Corporate brochure-ware
2	Buying and selling on-line
3	Digital economy & e-business
4	Business at the speed of thought
5	Dropping the "e"

Table 3 : Stages in the evolution of e-business (Tassabehji, 2003)

The first phase describes the approach of using Web sites to like an online brochure. Equivalently to the paper version of a brochure the information is static and no interaction is possible. This approach is similar to the information phased highlighted above. The second phase extends the e-business strategy to facilitating transactions via the online platforms. The third phase changes the perspective from a micro-economic to a macro-economic (or e-business) view, how several organizational entities cooperate via online services. "Business at the speed of thought" (a book authored by Bill Gates in 1999) refers to the changing business models facilitated via digital infrastructure and information

networks. Finally, the fifth phase describes how e-business becomes an integral part of normal operations. To summarize the historical evolution of Internet marketing the structure of Thier (2003) is used because it focuses solely on e-sales and not on e-business in general.

Information (1990 – 1995): Information based strategies describe the first level of maturity of classical Internet marketing mainly used between 1990 and 1995. The strategy was derived from the new technology to create static HTML Web site with texts and images published in the Internet. While the first – very basic – development of those Web sites already started in the early 1990s, they are still the most common element of the Internet today. On a static homepage sales organizations were empowered to provide information about products and services using a standard markup language. Potential customers were enabled to easily access the Web site via the first browsers and check available information. In case of adjustments of specific product and service attributes or descriptions, the Web sites had to be edited using certain administrative tools. Some companies used those tools also to publish entire Web catalogues – a static list of products and services with detailed descriptions, pictures and corresponding pricing. Web-catalogues allowed the consumer to get an overview of the complete range of offered products and services. As the static Web sites did not have transactional capabilities, potential purchases had to be initiated via alternative channels like telephone, fax or regular retail shops. The most advanced technology used within this information based Internet marketing strategy was offering the download of files. Downloads of brochures, articles or software were performed via hypertext or file transfer protocols (HTTP & FTP). Almost every Web site today still supports the initial objective to inform potential customers about the details of products' and services' attributes. From a legal perspective many governments require sales organizations to enclose an adequate set of information about the products and services to protect the consumers (Wilson, 2005; Resnik, 2002). Additionally, the Internet is now more dominantly used as the primary source of information gathering before a purchase decision, even for products and services which can not be bought via the Internet at all (Gillin, 2008; De Vries, 2008). The Internet is an easily accessible platform to search for information. This information is used to foster a potential purchase decision about the products and services offered by the PO (The psychological aspects of the consumer decision process (including pre- and post-purchase issues) are illustrated by Wilkie (1986), page 491 – 584). Providing a

comprehensive and persuasive set of information on a Web site has therefore been rightly identified as a valuable strategy. Static information Web sites are the first occurrence of Internet marketing activities starting in the early 1990s; around 20 years later the significance to inform customers and partners remains unchanged (Hooi et al., 2000). The aspect of creating awareness for products and services has become a necessary element of an Internet marketing strategy and constitutes a major (but balanced) pillar of the new approach illustrated in Chapter 4. Mustafa Online for example targeted an information-based Web site as illustrated by Hooi et al.:

"Drawback of Mail Order Catalogue: Mustafa launched a mail order catalogue system in 1993 to reach out to overseas customers. However, there were some drawbacks of this strategy. First, the catalogues were published every two years since a substantial period of time is required to produce them. The process involved gathering of information on product, photographing products, designing the catalogue and printing the catalogue. "Products move so quickly. Usually by the time the hard copy is published, 50% of the items are out of dates," said Mr. Mohamed Saleem, electronic resource planning manager. Therefore when the catalogues were mailed to customer, the information they contained whether it was on products or foreign exchange (forex) rates, were outdated. Second the whole process of producing catalogue, from the gathering of information to printing, can amount to a substantial sum of money. In addition there are mailing costs to be considered. Therefore, costs can get quite high, especially since the bulk of catalogues are sent overseas" (Hooi et al., 2000).

Interaction (1995 – 1998): Interaction based Internet marketing started around 1995 and was the main focus area until 1998. New technical capabilities like HTML forms, the utilization of databases and server-based scripts allowed the first interactive elements. These elements were used to offer functionalities like advanced searching, configuration, emailing or newsletters. The most sophisticated interactive element was a "configurator" which allowed potential customers to customize products and services online based on a set of input parameters selected in online forms. Interactive elements certainly enabled the developer to create practical functionality available via the Web sites, but the business objective which could be achieved by investing in the new features remained rather undetermined (Thier, 2003). Interactive elements on a Web site can be practical, but the originally intended use has to be deducted from clear objectives of the PO. Interactive elements are still used on almost all Web sites today. Newsletter, "configurators" and forums for example remain interesting components to develop consumer's loyalty or to raise retention rates. The elements are technically rather easy to develop, integrate and maintain. In comparison to the information based Internet marketing strategy, interactive elements also require servicing processes within the PO: emails have to be answered,

newsletters have to be edited or forums maintained. This additional workload was and sometimes still is frequently underestimated (Miller, 2009; Viney, 2008). The example below illustrated by Brown is a good representative of an interaction based Internet Web site of the mid 1990s. An example of an interaction based Web site is illustrated by Brown (2007):

"In the mid-1990s, Atlantic Publishing Company embraced the Internet with a very basic Web site, featuring a full list of their product lines, with pricing and ordering information. The Web sites included an online order form that required users to enter the items they wanted manually, calculate the item costs and totally manually and send the order via a secure Web page to corporate headquarters for processing." (Brown, 2007)

Transaction (1998 – 2000): Based on the maturing Web technologies and experience with interactive elements more complex Web sites were developed in the late 1990s. The more sophisticated utilization of program languages like php, perl, asp or jsp and simple databases allowed the development of, for example, online shops and integrated online payment processes. Based on the underlying technology, transaction based Internet marketing was theoretically just an extension of interaction based Internet marketing. The new systems allowed sites to dynamically perform business functionalities and to automatically generate data to complete transactions. Enabling transactions via the Internet added a complementary sales channel for established sales organizations. For many companies the opportunity to sell more products and services directly via a Web site has been the primary reason to consider the Internet as a valuable platform (Thier, 2003). Sales of products and services which seemed to be limited to the local retail and wholesale market quickly advanced to be accessible nationally or even internationally. Certainly this spectrum created major challenges for example from a taxation perspective as illustrated by the OECD (OECD, 2001). The advantage of the transaction based technology was also to liberate the purchase process from time and location. Transactions could now be placed as well as operated from everywhere anytime. Transaction based systems started with simple online shops. Via online shop software the sales organization was able to publish and promote the company's products and services in the Internet and consumers were able to order those products directly online. Finally new technologies also allowed transferring payments digitally and to therefore close the complete purchasing process (e.g. instant payment notification (IPN) from paypal or gateway from moneybookers). Tracking or localization services, which provide the business partner an insight into the supply or logistic chain, can be theoretically allocated to the transaction or

integration based technologies. Even though such services require technical integration of certain databases, they are commonly associated with the transaction area due to the fact that the underlying data-stream remains mainly unidirectional. Transaction based technologies and strategies are still a key element of the E-business environment. The implementation of online-shops, auction and payment systems dominate a large spectrum of the Internet environment. Many interaction and transaction concepts are now blended with integration aspects and are difficult to demarcate.

Integration (2000 – 2003): Understanding integration (in the pure definition of the word) as an objective of E-sales is rather difficult. Integration can certainly provide a large value to the PO, but system integration generally focuses on technical back-office- and administrative activities rather than on sales and marketing objectives. Integration describes the process of bringing a set of applications together using certain software or architectural principles. The discussion of integration has been significantly enforced with the development of Enterprise Resource Planning (ERP) systems (e.g. SAP or Oracle). ERP systems aim to cover all required data and business functionality of the PO, including the whole supply chain management as well as sales and marketing processes. Based on those integrated systems, existing Web sites can be linked to back office application. Companies like eBay for example connected their enterprise back office applications (SAP) with their front-end Web sites (Ebay, 2007). Following the same concept business-to-business integration via the Internet started allowing partners to share data or to initiate orders directly in the supplying company. Again, SAP for example enables its customers to sell excess inventory and unused capital equipment directly on ebay marketplace (SAP, 2003). From an E-sales perspective both types of integration are highly valuable. While information, interaction and transaction are necessary elements which are used in an Internet marketing strategy, they do not focus primarily on the main objectives which can be achieved with Internet marketing. Also integration remains just a technical concept which enables new value added products or services. This approach of a technology-driven application of the Internet is a first indicator of the current strategic understanding of this media (illustrated in Chapter 3).

The significance of the Internet for marketing practices is based on the understanding of the main properties of the Internet. The table below illustrates the main properties of the Internet and their marketing implications as consolidated in existing publications:

Property	Marketing Implications
Bits not atoms	Information, products, and communication in digital form can be stored, sent, and received nearly instantaneously. Text, audio, video, graphics, and photos can all be digitized, but digital products cannot be touched, tasted or smelled
Mediating technology	Peer-to-peer relationships, such as auctions and music file sharing, and business partnerships can be formed regardless of geographic location. Technology allows timely communication and data sharing, such as with businesses in the supply chain
Global reach	Opens new markets and allows worldwide partnerships, employee collaboration, and salesperson telecommuting
Network externality	Business can reach more of their markets with automated communication, and consumers can disseminate brand attitudes worldwide in an instant
Time moderator	There are higher expectations from consumers about communication with companies and faster work processes within companies
Information equalizer	Firms employ mass customization and consumers have more access to product information and pricing
Scalable capacity	Firms pay for only as much data storage or server space as needed and can store huge amounts of data
Open standard	Companies can access each other's database for smooth supply chain and customer relationship management. This equalizes large and small firms
Market deconstruction	Many distribution channel functions are performed by nontraditional firms (e.g. Edmunds.com and online travel agents) and new industries emerged (e.g. ISPs)
Task automation	Self-service online lowers costs and makes automated transactions, payment, and fulfillment possible

Table 4 : Internet properties and marketing implications (Strauss et al., 2003; Afuah & Tucci, 2001)

Those marketing implications consolidated from different researchers in the table above – especially global reach, market deconstruction – position the Internet as a generative

technology with tremendous opportunities. Additionally to those opportunities, the implications transpire into a lot of economically dangerous and unfavorable characteristics (as illustrated by Sterne: security, channel conflicts, international pricing, international trade law, international culture, intellectual property (Sterne, 1999)). Current POs' activities support this holistic understanding. A survey performed in 2002 illustrates the opinion of top US executives about the perceived benefits from E-Business and Online Marketing for their organization. The result clearly indicates that the majority of US executives see the significance of online activities from a mostly strategic perspective in improving customer relationship, creating growth opportunities and increasing brand visibility.

Benefit	% Mentioning
Better-quality customer relationship	61 %
More business development opportunities	50 %
Better brand visibility[1]	50 %
Drive fat from supply chain	42 %
Reduce time-to-market	33 %
Increase customer quantity	25 %

Table 5 : Benefits of E-Business and Online Marketing (Patrick Marketing Group Report, 2002)

Even though the objectives of E-Business and Online-marketing are not interchangeable, the result of the survey clearly shows that the understanding of E-Business and Online-Marketing is not limited to selling more or reducing cost of the retail distribution network. The value of an additional electronic platform drives all perspectives of a classical organization. A very detailed illustration of 103 holistic reasons to do Internet marketing based on 14 categories (general benefits, competitive advantage, competitive research, customer research, prospecting, sales, publicity, collateral, customer relations, advertising, cut product support costs, branding, international sales, general business) has been consolidated by Janal (2000). Furthermore Li (2009) provides statistical evidence of the positive influence of a broad online marketing strategy on revenue growth. Based on the world Internet usage and population statistics in Table 6, the global significance of the Internet as a popular communication and information channel can be

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[1] The aspect of brand building via E-Commerce is illustrated by Leong and Ping (2000), page 157.

assessed.

Region	Population	Internet Usage	Percent Population	Usage growth 2000 – 2008
Africa	975 Mio	54 Mio	5.6 %	1,100 %
Asia	3,780 Mio	657 Mio	17.4 %	475 %
Europe	803 Mio	393 Mio	48.9 %	274 %
Middle East	196 Mio	45 Mio	23.3 %	1,296 %
North America	337 Mio	251 Mio	74.4 %	132 %
Latin America	581 Mio	174 Mio	29.9 %	861 %
Oceania	34 Mio	21 Mio	60.4 %	173 %
Total	6,710 Mio	1,596 Mio	23.8 %	342 %

Table 6 : World Internet usage and population statistic - March 2009 (Miniwatts Marketing Group, 2009)

The statistics reveal three main regions Asia, Europe and North America totaling around 1.3 billion users (and potential customers) which can be targeted via Internet marketing. Considering the number of spoken languages in those three main regions, North America appears as the biggest uniform and therefore potentially most attractive market. This perception is also confirmed by the E-Readiness statistic consolidated by the International Data Corporation (IDC) and illustrated by Mruetusastorn (2000). Besides the global perspective, individual domestic markets differ significantly from the e-business maturity (e.g. in Finland over 70% of enterprises placed orders over the Internet, in Romania the value is under 5%)[2]. Within some new statistics (e.g. BDA China[3]) China has already overtaken the United States in terms of total number Internet users, just 22.1% of them use the platform actively for online shopping (compared to 71% in the United States, The Straits Times 2008). This number of market participants clearly indicates the magnitude of the Internet as a significant and potentially the most significant sales and information channel for a large spectrum of POs. The number of potential consumers – as an indicator of the platforms significance – is further supported by statistics of the supply side of this marketplace. In May 2009 netcraft, a service company providing research data since

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[2] United Nations (2005), Eurostat database 2005; UNCTAD e-business database, 2005, Values are from 2004.
[3] www.bdaconnect.com.

1995, received responses from 235 million publicly available Web sites (thereof around 80 million active), growing by 4 million sites per month (netcraft, 2009). Figure 6 illustrates the growth during the last 15 years.
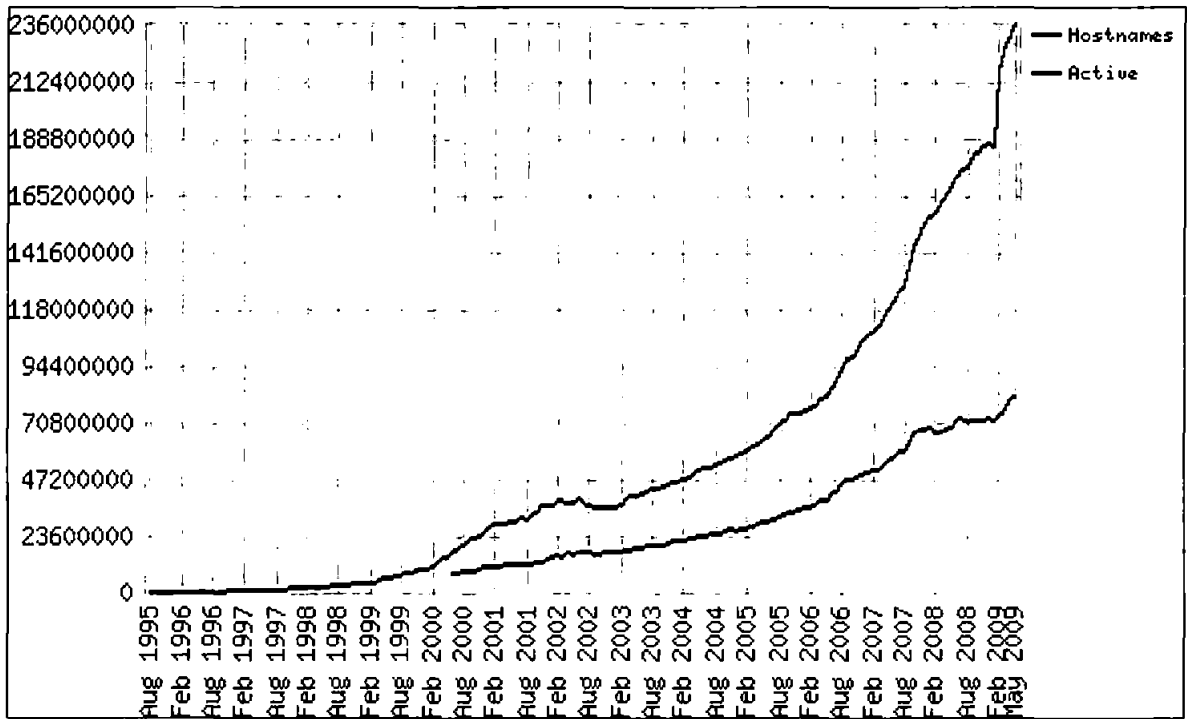
Figure 6 : Total public sites across all domains August 1995 - May 2009 (Netcraft, 2009)

This massive growth provides consumers also with a growing selection of alternative products and services. That means that the overall competitive strength of a PO is more and more determined by the Internet positioning. New or strengthened competitors easily pick up market share or force the discontinuation or total reengineering of traditional sales organizations. The geographic distribution of Web sites as illustrated below matches the statistics from the consumer perspective indicated above. It furthermore provides an insight into the most competitive new markets.
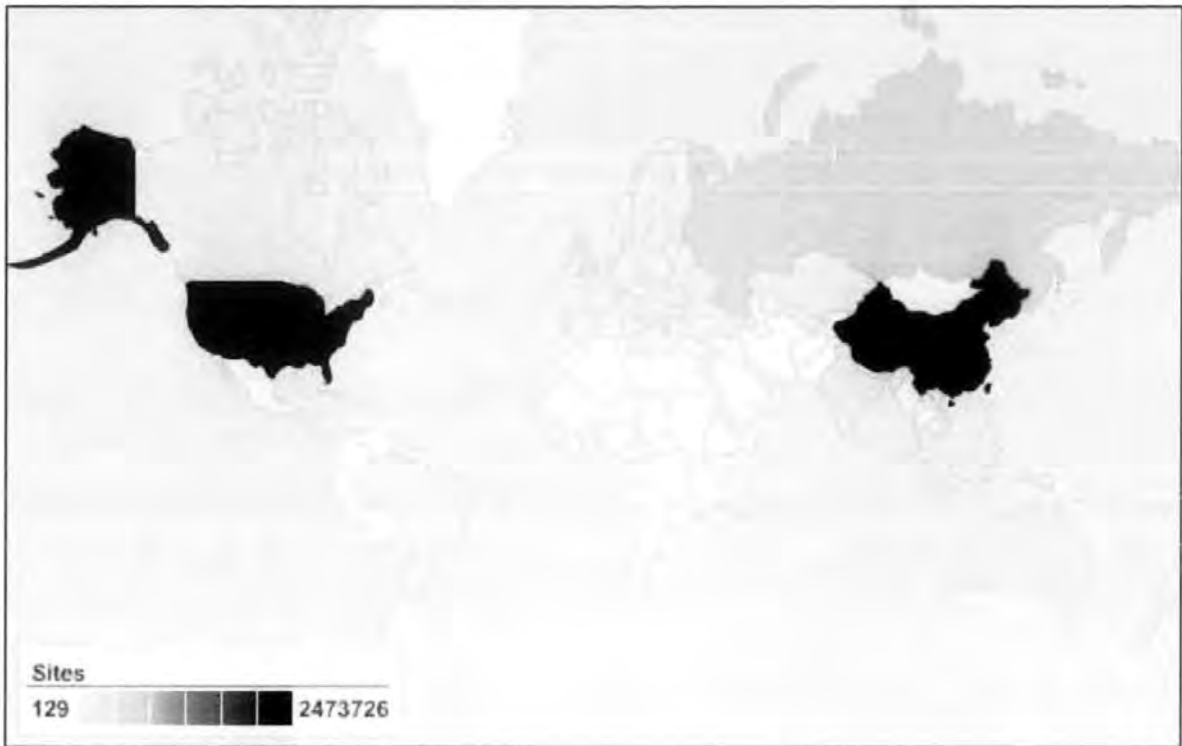
Figure 7 : Global distribution of publicly available Web sites (Netcraft, 2009)

The statistics provided from the US Census Bureau indicates how those numbers of market participants translate into e-commerce revenues. Based on the figures provided from the US Census Bureau in 2008 already more than 1/3 of all manufacturing shipments are initiated via e-commerce.

NAICS Code	Description	Value of Shipments				Y/Y Percent Change		E-commerce as Percent of Total Shipments		Percent Distribution of E-commerce Shipments	
		2007		2008							
		Total	E-commerce	Revised Total	Revised E-commerce	Total Shipments	E-commerce Shipments	2007	2008	2007	2008
	Total Manufacturing	5,305,935	1,855,719	5,016,563	1,666,799	5.8	18.4	35.0	31.2	100.0	100.0
311	Food manufacturing	586,907	202,684	536,939	153,996	9.3	31.6	34.5	28.7	10.9	9.8
312	Beverage and tobacco product manufacturing	127,625	72,049	124,033	68,046	2.9	5.9	56.5	54.9	3.9	4.3
313	Textile mills	35,857	14,168	38,829	12,377	-7.7	14.6	39.6	31.9	0.8	0.8
314	Textile product mills	28,677	13,499	33,264	11,588	-13.8	16.5	47.1	34.8	0.7	0.7
315	Apparel manufacturing	24,318	7,280	30,325	9,182	-19.8	-20.7	29.9	30.3	0.4	0.6
316	Leather and allied product manufacturing	5,652	1,347	5,941	926	-4.9	45.5	23.8	15.6	0.1	0.1
321	Wood product manufacturing	101,958	19,422	112,403	14,960	-9.3	29.8	19.0	13.3	1.0	1.0
322	Paper manufacturing	176,103	61,128	169,033	40,842	4.2	49.7	34.7	24.2	3.3	2.6
323	Printing and related support activities	103,488	25,645	99,800	19,181	3.7	33.7	24.8	19.2	1.4	1.7
324	Petroleum and coal products manufacturing	606,144	189,934	546,811	160,177	10.9	18.6	31.3	29.3	10.2	10.7
325	Chemical manufacturing	725,057	247,150	657,062	203,168	10.3	21.6	34.1	30.9	13.3	13.0
326	Plastics and rubber products manufacturing	211,416	61,405	211,299	48,686	0.1	26.1	29.0	23.0	3.3	3.1
327	Nonmetallic mineral product manufacturing	127,271	22,669	126,263	20,726	0.8	9.4	17.8	16.4	1.2	1.3
331	Primary metal manufacturing	259,607	79,431	234,384	59,376	10.8	33.8	30.6	25.3	4.3	3.6
332	Fabricated metal product manufacturing	343,541	82,062	317,214	64,109	8.3	28.0	23.9	20.2	4.4	4.1
333	Machinery manufacturing	347,892	109,197	326,583	93,763	6.5	16.5	31.4	28.7	5.9	6.0
334	Computer and electronic product manufacturing	333,157	141,551	330,013	120,047	1.9	17.0	35.6	30.9	7.6	7.7
335	Electrical equipment, appliance, and components	129,200	40,606	119,402	34,211	8.2	18.7	31.4	28.7	2.2	2.2
336	Transportation equipment manufacturing	735,829	409,424	699,034	383,560	5.3	6.7	55.6	54.9	22.1	24.5
337	Furniture and related product manufacturing	84,978	22,489	85,618	18,187	-0.7	23.7	26.5	21.2	1.2	1.2
339	Miscellaneous manufacturing	146,257	32,558	150,481	28,790	-2.8	13.1	22.3	19.1	1.8	1.6

Figure 8 : Total and e-commerce value 2007 and 2006 – US market (US Census Bureau, 2008)

The significance of Internet marketing is also noticeable in the amount of money invested into online advertising. Based on studies performed by the Interactive Advertising Bureau and Pricewaterhouse Coopers the budget made available for online advertisement is growing around 25% every six months and placement charges reach up to 1 million US$ for 24 hours (Heise, 2005). The latest data on the UK Internet advertising spend was published in April 2008 by the Internet Advertising Bureau. Figure 9 also illustrates the massive (unseasonable) growth of Internet advertisement and its dominant significance towards other marketing channels. "Internet advertising is the only medium to show growth across 2008" (Internet Advertising Bureau, 2008).
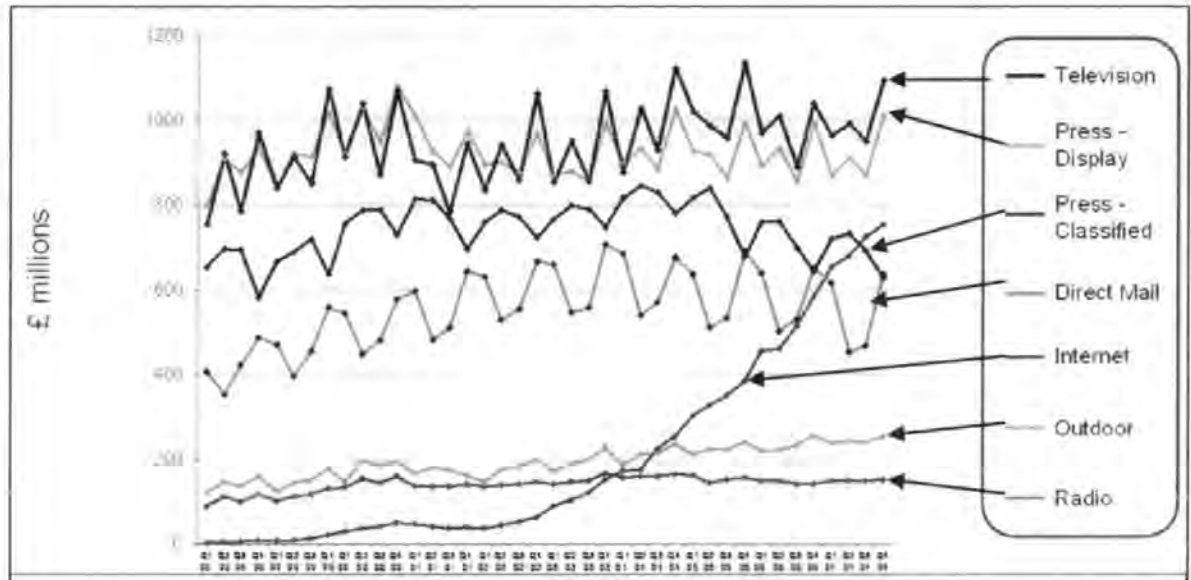
Figure 9 : Internet advertising spend against other media (Internet Advertising Bureau, 2008)

Also in the US market 10% of the total advertising spending is invested in online marketing (Hallerman, 2009). Based on a study from McKinsey, 85% of the responding companies said paid keyword search is more efficient than advertising in traditional media (McKinsey Quarterly, 2008). With more consumers and suppliers performing online transactions the necessity of Internet marketing is undeniable. Certainly there are also specific products and services for which the marketing via the Internet might be of lower relevance than for others (e.g. captive service organizations in general, or specifically hawker center stalls,).

2.2.2 Structural principles of marketing in context of strategic management

Marketing in general includes a broad spectrum of different subjects. Considering the context of a strategic approach this spectrum is narrowing significantly. Following the structural requirements outlined in section 2.1 (objectives, corresponding KPIs and subsequent work packages), the principle question is the clear definition of marketing objectives. Based on this definition subsequent key performance indicators and work packages can be derived. In regards to marketing objectives the AIDA model remains the most basic and prominent starting point (Ferrell / Hartline, 2005; Geml / Lauer, 2008).

The AIDA model describes the four cognitive phases of attention, interest, desire and action that a consumer experiences within a successful marketing process (Ferrell / Hartline, 2005; Geml / Lauer, 2008). The four phases are commonly used to derive specific activities to improve the likelihood of a consumer reaching the next phase and to subsequently sell a specific product / service. Phase 1 focuses just on attracting the attention of the consumer while phase 2 refers to raising the consumer's particular interest by demonstrating the personal value proposition of a product / service (instead of focusing on features, as in traditional marketing). Phase 3 attempts to convince consumers that they desire the product / service and that it will satisfy a specific need. Considering the context of PO as defined in Chapter 1 the differentiation of phase 2 and 3 does not yield into a significant benefit. To further reduce the complexity the two phases have been reduced to one. Finally phase 4 leads consumers towards taking action specifically purchasing the product / service.

Summarizing the model the three marketing objectives can be highlighted:

- Create awareness
- Create interest / desire
- Motivate action

The AIDA model provides a standard structure for the exploration and evaluation of existing approaches. Furthermore, the clear set of objectives can become a guiding structure for the conceptualization of the new Internet marketing approach.

2.3 Summary

The outline of classical strategy theory and implementation models crystallizes clear requirements towards an integrated Internet marketing approach:

- Definition of clear objectives
- Determination of corresponding KPIs
- Development of subsequent work packages

Internet marketing means using the Internet within the marketing mix (4P) to support "the activity, set of institutions and process for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (Wilkie & Moore, 2007). The historical development of Internet marketing and e-sales has been summarized and the enormous significance of Internet marketing for POs illustrated. In the context of a strategic approach, the marketing objectives are clearly defined to be:

- Creating awareness
- Creating interest / desire
- Motivating action

Those clear structural requirements of strategic management and marketing are used within the assessment of current Internet marketing approaches and become the guiding principles for the development of the new framework. In the following chapter the existing research is reviewed to identify if current models effectively address those requirements.

3 Assessment of current Internet Marketing approaches
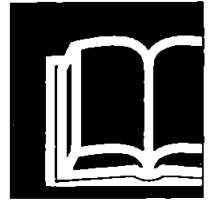
"All men can see these tactics whereby I conquer,

but what none can see is the strategy out of which victory is evolved."

(Sun Tzu - Chinese General and Author, b.500 BC]

The Internet as a technical platform of market communication has been evolving for around 40 years; applied marketing is an implicit method which has existed since the beginning of trade. On the one hand, the substantial theoretic research of both subjects results in the manifestation of a considerable spectrum of different publications and sophisticated concepts. On the other hand, the daily exposure, and accessibility of the ubiquitous research subject as such, motivates explorations also with reference to unfounded personal experience and individual perception. Within this thesis the requirements of strategic management and Internet marketing are clearly summarized in Chapter 2 and provide a transparent guideline for the evaluation of existing models. Section 3.1 analyzes the existing literature based on the principles summarized in the previous chapter.

Beside the main (central) subject of strategic Internet marketing, marketing theory in general is a multidisciplinary subject with many different scientific perspectives. The three main (surrounding) dimensions of general macro-economics provide a reference structure to categorize the literature review to also analyze all related perspectives in a holistic and structured format. The reference structure attempts to cover all participants in a common market place: suppliers, consumers and intermediates. In the context of Internet marketing the consumer perspective consists of largely psychological approaches, the supplier perspective focuses on technical and design concepts of a Web site, finally the intermediary approaches explain how specific channels can be used effectively. The guiding structure for the literature research is illustrated in Figure 10.
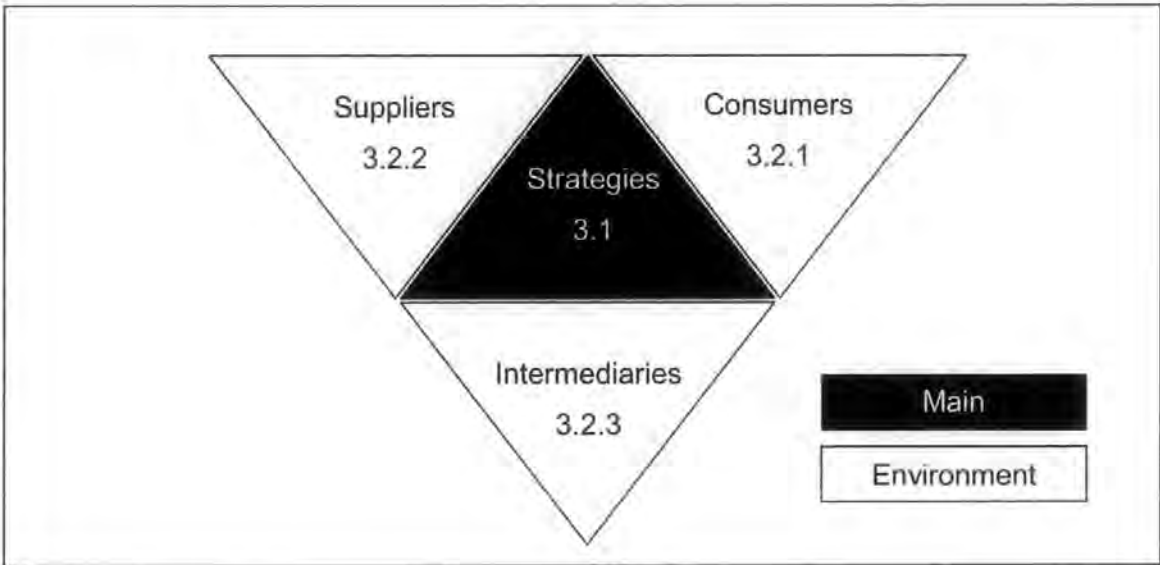
Figure 10 : Main and environmental perspectives of Strategic Internet marketing

Following this model, this chapter provides an in-depth assessment of current Internet marketing approaches analyzing existing theoretic and applied models. This assessment is targeted to provide a holistic view of the entire Internet marketing environment, and on the one hand describes the large spectrum of individual components conceptualized for Internet marketing, while on the other hand also reveals the main fundamental limitations in relation to the structural requirements and principles highlighted in Chapter 2. The result clearly substantiates the initial suggestion that current models are insufficient and a comprehensive framework for strategic and sustainable Internet marketing does not exist.

Within the current environment Internet marketing remains solely a consolidation of different tactical initiatives without an overall strategy. Without this overall strategy the initiatives remain ineffective and inefficient. An overall strategy has to be structured in a framework considering the basic principles of strategic management and Internet marketing to facilitate POs leveraging the Internet as a marketing instrument. The established approaches and its identified limitations become the main determinants of this new framework as outlined in detail in Chapter 4.

3.1 Current State of Strategic Models

Internet marketing is a strategic discipline, which requires a solid framework including objectives, KPIs and work packages for the successful implementation (see Chapter 2 - Kaplan & Norton, 1992; Niven, 2006; Niven, 2008; Kaplan & Norten, 2006; Tyagi & Gupta, 2008; Keyes, 2005). While several researchers propose structures for individual elements of such a framework, just selected authors describe an overall strategic model. This section summarizes those existing strategic approaches – as well as elements thereof – and crystallizes their underlying weaknesses.

3.1.1 Review of strategy based approaches

This section analyzes overall Internet marketing frameworks, as well as the three key individual components of Internet marketing objectives, Internet marketing KPIs and Internet marketing work packages.

Internet marketing frameworks: The current environment of the subject's research describes just a very limited set of overall strategic Internet marketing frameworks. All prominent models and their structural weaknesses according to the requirements raised in Chapter 2 are illustrated in the table attached in the appendix B.1 below. The main criticism is that the existing structures fail to provide a generic model of objective setting, work packages and continuous measurement. The framework presented from Vassos (1996) describes 17 evolutionary stages (and 4 stages: Initial Stages of Web site development (launch, repository, link, cool), Interactive and database Web site strategy (interactive, database, advanced repository, advanced interactive), Advanced Web site Strategies (mass customization, outbound, integration, commerce), Final stages of Web site development (personality, application, global, strategic alliance, closed loop)) with no reference to objective or KPI, similar to the rather technical work from Morgan (highlighting three basic principles of the Internet: how to make Web sites, how to find a Web host, Internet Security) (1996).The structure provided by Goodman (2003) and Ani-Okoye (2009) focus on very specific industries (wine business for Goodman or email marketing for Ani-Okove) and can not be applied as a generic concept. Finally, the illustration from Nai-Wen & An-Yi (2006) and Bluelinermarketing (2006) do not

substantiate a framework at all, describing solely individual methods using the Internet for customer relationship or marketing purposes. Bluelinermarketing (2006) describes in their framework six pillars (I. Search Engine Optimization (SEO), II. Online Advertising, III. Email Marketing, IV. Interactive PR, V. Affiliate Marketing, VI. Web Analytics) which again refer largely to technical implementations and not a set of objectives and metrics which lead to subsequent work packages. Nai-Wen & An-Yi (2006) base their framework on a main structure of customer experience management (3 "Strategic experiential Model elements": Feel, Think, Act) to determine three functions (Making strategy, Executing communication, Becoming connection). Those functions are valid as such but do not substantiate an Internet marketing framework in itself. Additionally to the references of academic sources discussed above (which have been used as a prime influence in the evaluation of existing approaches) also the latest Google database illustrates solely 50-60 matches for "Internet marketing Framework" in May 2009. This entire list includes no other relevant match than the above documented models. Searching for equivalents like "Online marketing Framework" provides one overview from OMLogic Consulting (total 42 matches) which indicates Internet marketing objectives, but also no corresponding KPIs or work-packages (Slideshare, NN), as well as one paper from Powers (NN) with a corresponding title, but no attached framework at all. "Online Advertising Framework" (14 matches) and "Internet advertising framework" (11 matches) provide no valid approaches. While there is no comprehensive Internet marketing frameworks itself, there are several concepts generically described as "Internet marketing strategies". The table attached in the appendix B.2 illustrates the main Internet marketing strategy publications and their weaknesses. A majority of the references provide no strategic framework at all, but just illustrate individual technical implementation methods for specific areas, e.g. Plummer et al. (2007), Brown (2006), Mirchandani (2005), Geskey (2008), Quick Easy Guides (2008), Sakai (1999), Webb (2003), Jeong (2001), Stein (2008), Ellsworth & Ellsworth (1995) and American Productivity & Quality Center (1999). Lurie (2006), Wilson (2001) as well as Sweeney et al. (2006) focus just on the explicit elaboration of specific Internet marketing objectives. Lurie (2006) leaves the precise determination of the objectives to the PO; subsequently KPIs / metrics remain undefined. Wilson (2001) illustrates clear Internet marketing objectives, but also leaves the definition of KPIs / metrics out. Sweeney et al. (2006) includes KPIs / metrics and a structure equivalent to "work packages" in the approach, but the entire approach is not integrated and based on specific objectives. The potentially most comprehensive illustrations are from Chaffey (2009, 2006) and Chaffey et

al. (2009), even including a reference to a BSC. The example provided is generic and the original general management perspectives are utilized disconnecting the concept from concentrating on Internet marketing. That means again that outlined objectives are not connected to relevant KPIs / metrics as well as subsequent work packages.

While especially the models from Chaffey et al. (2009), Chaffey (2009, 2006), Wilson (2001) and Lurie (2006) include interesting individual elements, those references do not provide a model which satisfies the structural requirements as outlined by conceptual strategists (objectives, KPIs / metrics, work packages – see section 2.4). Searching for the keyword like "Internet marketing strategy", "Online marketing strategy" and other synonyms in the Internet provide some matches, but none satisfy the requirements as highlighted in Chapter 2. The main concepts which are published online are summarized and attached in the table of appendix B.3 (including 3 references to books on Amazon). Also the Internet-based research appears to further confirm the statements and data referred to in the introduction (Asian Productivity Organization, 2000; Econsultancy, 2009; McKinsey Quarterly, 2008) that current models are insufficient and an overall comprehensive Internet marketing framework does not exist at this point in time.

Internet marketing objectives: The first element of the strategic framework is the clear definition of Internet marketing objectives. There are several publications describing the objectives of Internet marketing. Additional to the publications already illustrated above, which occasionally refer to Internet marketing objectives (e.g. Chaffey et al., 2009, Charlesworth, 2009), the references of Colborn (2005), Todaro (2009) and D'Guinee et al. (2008) provide dedicated structures just for Internet marketing objectives. Colborn (2005) structure of 4 objectives includes for example "formulating a search engine marketing plan" – a clear indicator of utilizing a technical / tactical perspective instead of focussing on business objectives. "Formulating a search engine marketing plan" is a method to implement a search engine marketing strategy, which potentially leads to awareness – potentially the original business objective. Similar inconsistencies are in the model from D'Guinn (2008), e.g. "Brand feature knowledge". Even though Todaro (2009) has a dedicated section on "advertising objectives" the illustrations are not structured in a way to be utilized as a guiding principle for subsequent KPIs or work packages. The full illustration of the references and weaknesses are illustrated in appendix B.4. Amazon.com does not provide a single match for the keyword "Internet marketing objectives" or

"Internet advertising objectives" (June 2009). Searching for keywords like "Internet marketing objectives", "Online advertising objectives" and alike in the Internet provides several matches without illustrating other structures than summarized above. Some of the additional models like from Collins (2008) and Kyle (NN) are illustrated in appendix B.5. Collins (2008) illustration of Internet marketing objectives includes aspects like marketing research, similar to Kyle (NN) which expands the scope to "lowering operational cost". Both approaches are therefore not specific enough concentrating on the pure motivations of Internet marketing or principles summarized in Chapter 2. "Lowering operational cost" for example is a valid objective but not of marketing. Similar to the literature research also Internet references do not provide a concise concept as pre-assumed for strategic Internet marketing.

Internet marketing KPI: The second element of the strategic framework is Internet marketing KPIs or metrics. The research for operational Internet marketing metrics is very broad; the literature focussed on the subject of a strategic and long-term set of Internet marketing KPIs or Internet marketing metrics remains rather scarce. The main sources are illustrated in the table in appendix B.6. Several references describe comprehensive (but largely unstructured) lists of potential Internet marketing KPIs or Web metrics, e.g. Sterne (2002) or Farris et al. (2006). Both sources do not integrate the KPIs with corresponding strategic objectives and Farris et al. (2006) just focuses on metrics related to creating awareness via Web sites. Authors focussing on metrics from a more holistic perspective, like Arikan (2008) and Jagannathan et al. (2001), also describe how to integrate online and offline channels in measurement (Arikan, 2008) or technicalities of how to build an e-business model, without including a framework of corresponding KPIs. Also "Internet marketing KPI" or "Internet marketing metrics" does not provide any dedicated matches in amazon.com (May 2009). The references identified via the entire Internet research for specific keywords largely link to analytics tools. For example the search for "Internet marketing metrics" reveals just two qualitative concepts (explained below) and a majority of results do not yield into describing specific KPIs or metrics. The first match is a concepts from Lurie (Conversion, spend, attention, bounce rate, errors, onsite search terms, bailout rates) (Lurie, 2007). The structure is not aligned the principles summarized in Chapter 2 and largely ignores the revenue perspective of marketing, which disqualifies the approach as a comprehensive framework. Also the second reference to Cignoli (2007) does not include KPIs of the revenue perspective (Churn rate, click-

through, cost per lead, customer acquisition cost, customer life cycle, impressions, interstitial, lead generation, Opt-in, RFM). Both approaches are also not aligned to any generic Internet marketing objectives or work packages. There are several smaller consolidations and dictionaries of Internet marketing metrics / advertising metrics available (e.g. Marketingterms (NN)), but they are again not structured in a strategic framework or aligned to specific Internet marketing objectives. Based on this research the extensive area of Web metrics remains rather technical and not part of an overall sustainable model comprising all components of an Internet marketing strategy.

Internet marketing work packages: The 3rd element of the overall strategic framework refers to specific Internet marketing work packages. The spectrum of available online and offline literature regarding this topic is very broad (as long as they are disconnected from an overall strategy). Especially considering the enormous variety of online resources a review of existing models can just remain a temporarily valid snapshot. As indicated above the understanding of the strategic and sustainable Internet marketing framework is that individual activities (or work packages) are derived from specific Internet marketing objectives and Internet marketing KPIs (or metrics). While not just overall Internet marketing frameworks are largely underdeveloped and inconsistent, the literature review provides very strong evidence that such a comprehensive approach is not prominent at all at this point of time. None of the references analyzed in this area (as well as the significant amount of literature referred to in section 3.2) uses a strategic structure to categorize or organize individual activities. Based on this understanding a consolidation of all individual disconnected technical implementation models is excluded from this thesis as this assessment would also direct the attention away from this central point of this research (overall strategic models).

3.1.2   Limitations of strategy based approaches

The assessment of the current research provides evidence that existing approaches capture only selected tactical fragments of the overall strategic opportunities of Internet marketing. Even the most prominent models significantly omit to create a comprehensive holistic structure how to develop a sustainable Internet marketing strategy based on the principles highlighted in Chapter 2 (one structure of SMART Internet marketing objectives, balanced corresponding KPIs and subsequent work packages). The assessment therefore

confirms the empirical statistics of McKinsey, Econsultancy and MIC initially presented in Chapter 1, that a strategic Internet marketing frameworks is not established at this point of time. Those survey results – indicating "missing capabilities", "lack of knowledge where to start", "no understanding of benefits", "insufficient metrics", "lack of resources and skills" – are based on the lack of a structured framework, which subsequently results into ineffectiveness and inefficiencies of marketing initiatives and underlying investments.

The rapid evolution of the Internet in the last 20 years continuously redefined technical possibilities (Brown, 2007). During this period Internet marketing approaches, which tried to leverage those technical possibilities, logically remained tactical and the results achieved were potentially unsustainable. Those unsustainable approaches were commonly derived from changing technical considerations rather than focusing on clearly defined long-term business objectives. Investments into specific Internet technologies were made but the benefits of Web sites remained largely intangible, non-financial and in-transparent. "Typically, commercial Web sites were nothing more than a corporate public relations presence with generalized information about a company and its products and services" (Brown, 2007). Beyond public relations, market participants in the existing Internet marketing environment largely targeted using different technical tactics to create qualified traffic on the own Web site, hoping to convert this traffic into revenues (Chaffey, 2003, 2006, 2009; Bughin & Zeisser, 2001). In case of 'qualified traffic' the fundamental underlying objective is primarily to create awareness of a specific target group for certain products, services or the organization as such. If the objective of creating awareness could be achieved without the tactic of generating qualified traffic on the own Web site, any alternative approach could be totally sufficient. Qualified traffic is therefore an example describing solely one possible tactical approach to reach the objective of creating awareness. The illustration below compares the existing versus the optimal approach of deriving a (Internet marketing) strategy following the principles highlighted in Chapter 2. The left example represents the inconsistent situation identified in the review of current Internet marketing approaches, in which the overall structure appears to be determined by technological and tactical considerations. The optimal approach, as emphasized in the classical strategic management literature (e.g. Kaplan & Norten, 2006; Tyagi & Gupta, 2008), is indicated on the right side describing the flow to determine tactics and technologies based on the overall objectives and strategy.
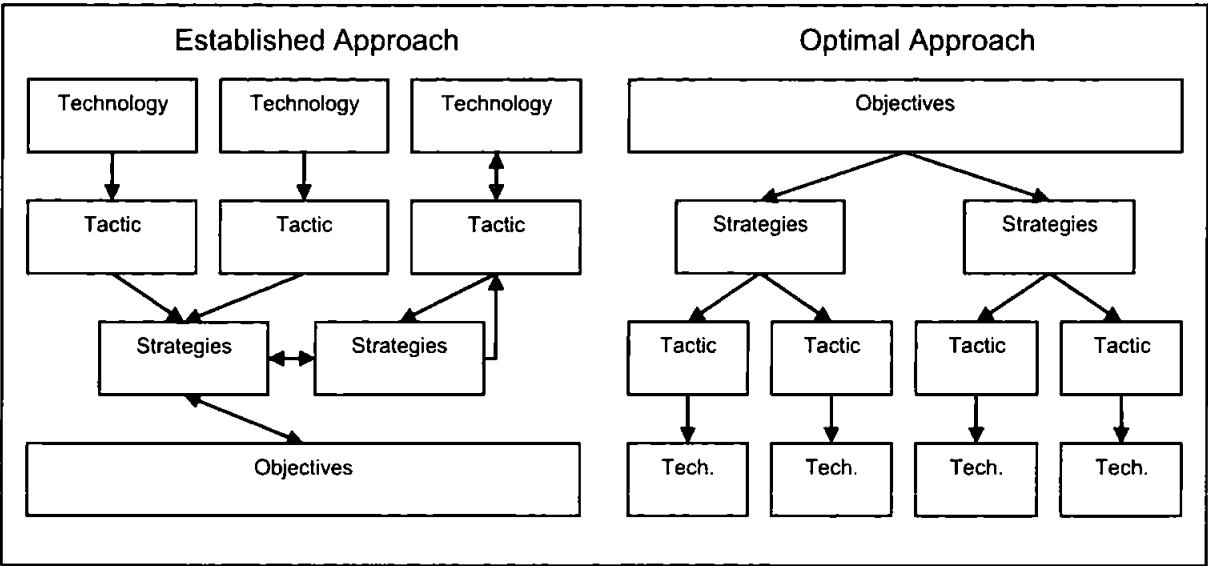
Figure 11 : Dependencies between Internet marketing strategy & implementations

The model as shown on the right side would require a consistent framework of objectives and KPIs which are translated into corresponding strategies and subsequent tactics. Based on the selected tactics different technologies might be deployed. As strategists agree, the approach illustrated on the right yields into a more effective and efficient approach saving resources wasted on insubstantial tactics and investments into technologies which do not add value to the organization's business model (Kaplan & Norton, 1992; Niven, 2006; Niven, 2008; Kaplan & Norten, 2006; Tyagi & Gupta, 2008; Keyes, 2005). This thesis contributes an Internet marketing framework that is based on clear business objectives (the model on right hand side in the figure above), providing a solution to the current "lack of understanding of what were the benefits they could derive from investing into B2B commerce" (APO, 2000). According to those objectives, strategies are conceptualized and translated into tactical and technical implementations. This new framework enables a PO to utilize the Internet via effective and efficient marketing initiatives.

3.2   Analysis of related research

While existing strategic frameworks are largely insufficient, the literature review of related subjects may reveal relevant concepts and determinants for a subsequent new model.

The following sections describe the existing landscape of consumer, supplier and intermediary based Internet marketing theory.

3.2.1   Consumer-centric literature

Consumers use the Internet for different reasons. Focusing and appreciating those motivations should become a fundamental principle of an Internet marketing strategy. As illustrated in the early study from Schau (2001) the main purpose of Internet utilization was emailing, searching for information, reading news or researching data for students (Siegel, 2006). For searching information, the Internet provides a platform which has been developed to easily explore product and service attributes. This function satisfies the basic desire of the homo-oeconomicus (Mill, 1836; Persky, 1995) to search for different alternatives before a potential financial investment or transaction decision (Moriarty & Spekman, 1984; Silk & Kalwani, 1982). Facilitating this research process consumers actively use the Internet to understand the available product and service options. The overall objectives of Internet utilization – the main focus point of an Internet marketing strategy – are summarized in the table below, complemented by available statistics from Siegel (2006):

Interests	Examples
Seeking information	Using a search engine to find information (31%) Getting news (26%) Checking weather (20%) Doing any kind of research for their job (19%)
Making transactions	Sharing files with others (5%) Purchasing a product (5%) Online Banking Selling products
Being entertained	Sending emails (49%) Sending instant messages (14%) Voice over IP Surfing the Internet for fun (23%) Looking for information on hobby / interest (21%) Watching / Listening video or audio clip (11%)

Table 7 : Interests of using the Internet and statistics from Sigel (2006)

Even though this statistic above indicates that certain online transactions are not yet as ubiquitous as others, also online purchasing has seen a significant year to year increase (e.g. 63% from 2000 to 2001). The Internet activities with considerable growth can be roughly extrapolated from the data assessed by Madden in 2003:

Activity	User in Million (2001)	Growth 2000 - 2001
Banking online	34	127%
Searching for religious/spiritual information	35	94%
Buying / marking a travel reservation	58	87%
Participating in an online auction	24	85%
Checking sports scores / information	52	73%
Downloading music files	36	71%
Buying a product	67	63%
Looking for health / medical information	73	59%
Using e-government	66	56%
Getting news	29	53%
Seeking hobby information	22	47%

Table 8 : Internet activities with significant growth 2000-2001 (Madden, 2003)

Considering the data illustrated above an Internet marketing strategy has to consider a) the potential target group volumes as well as b) the expected growth in this segment. Understanding the consumers' motivations as illustrated in the tables above enables the sales organization to customize a marketing strategy accordingly. As described in Chapter 2 the Internet has become a major source of information (reliable as well as sometimes ambiguous). Product details can be compared, news be read, the current movies in the cinema be reviewed or the weather forecast can be downloaded. An Internet marketing strategy can support this investigative process in making this information available via the different devices.

"The Internet is a vast public library available at the mere click of a mouse. Although business and consumers use it extensively for gathering information and research, they are just beginning to show a willingness to pay for it. The marketing challenge is to convince them that content and/or service are worth the cost of a subscription or onetime charge. Whether consumers will pay for information depends on the value of the information and its timeliness, the convenience of receiving it online, the reasonableness of the price, and whether the information is available free elsewhere (Sigel, 2006)."

Many daily human activities are attached with visiting certain geographic locations; for example purchasing a book has to be done in a bookshop or paying a bill requires going

to the bank. The Internet enables the consumer to perform those transactions from home, the office or other potentially more convenient locations. How to effectively match those consumer needs with special offers has to become part of the specific Internet marketing strategy.

"Even though consumer transactions are more profitable and sizable with each passing year, lots of pre-purchase 'window-shopping' still goes on, where buyers research products online and then make purchases offline. This also reflects continuing consumer concern about security and privacy [...]. It emphasizes that complementarity of online and offline marketing activities and indicates that online exposure to products [...] can stimulate product sales (Sigel, 2006)."

The Internet is also more and more used to communicate via different technologies, like email, instant messengers or Voice-Over-IP (VoIP). Especially in recent years the Internet has become a visible alternative to classical communication channels with a significant cost advantage.

"When it comes to being entertained online, users are clever in satisfying their desires by visiting online marketers ranging from Disney to Playboy. Online entertainment can take the form of participating in online auctions, gaming, gambling, pursuing hobbies, listening to music, watching videos, engaging in chats, following sports, and surfing other pastimes. The convergence of personal computers and television illustrates the growing importance of the Internet as an alternative 'entertainment channel' (Sigel, 2006)."

Existing early research clearly indicates that the Internet enables the consumer to experience a much more comfortable (products and services can be purchased any time from anywhere and are delivered to any target destination) as well as informed (information about products and services can be analyzed, compared and neutral feedback can be reviewed) purchasing process (Keeney, 1999; Bakos, 1998; Teo et al. 1999). This comfort is diluted by a high degree of anxiousness and distrust as to the consequences of the decision process. During every purchase decision process, the consumer is influenced by certain conscious and unconscious factors that shape his opinion. One of the conscious factors is the underlying 'need' for the undertaken product search; the aspect of 'trust' is an example of an unconscious factor and plays a major role in Internet marketing (Tiangsoongnern, 2007). Using the Internet also adds a sense of neutrality or even invisibility to the consumer's action. Directly and quickly comparing product prices, reading independent reviews and analyzing customer's comments appears more comfortable than asking a sales person directly if the product is available

cheaper elsewhere or what downsides the potential offer has (Haugtvedt, 2009). An Internet article or Web site about alcoholism, drug problems, fertility issues, skin problems, sexuality or marriage problems are also likely to be read more than any books or magazines about the same topic (Vollmer, 2008).

The existing literature considering scientific psychological or consumer-behavior aspects derived from an Internet marketing strategy is not very extensive (while consumer behavior and Internet psychology research in general is a well documented area). The main works (beyond the previously mentioned references), their focus and also potential reference to strategic considerations, are illustrated in the appendix B.7. The consolidation from Zinkhan (2000) and illustrations from De Vries (2008) describe general consumer behavior in the Internet, but in regards to a strategic model do not conclude with the strategic impact, KPIs or specific work packages. Haugtvedt et al. (2009) and Vollmer (2009) provide insight into specific consumer characteristics within specific technical implementations (e.g. online forums, advertisement in online games, Web site design) and not in strategic environments. Also Mills & Law (2006) and Kammer (1998) describe specific consumer industry behavior (e.g. in the travel industry (Mills & Law, 2006)) without reference to corresponding supply strategies (Kammer, 1998). As indicated several references describe how the findings of those studies can be leveraged via short term tactics (e.g. Vollmer (2009); Haugtvedt et al. (2009), Weinschenk (2009), Hoekman (2006), Hoekman (2008), Von Duyne / Landay (2006), Lindstrom / Underhill (2008)), but none concludes on how to integrate the analysis in an overall Internet marketing strategy. The consolidation of tactical methods from Veloso (2009) provides a short reference to potential objectives (AIDA model), but without describing the relationship to the illustrated tactics. Porter (2008) provides a framework (AOF) how to potentially derive a strategy in three phases, but does not illustrate a strategy as such. The assessment of related research was not entirely exhaustive, and only selected references could be analyzed, but the overall picture did not provide a consistent outline towards strategic considerations. The quoted references indicate that the role of psychological aspects on Internet behavior is largely explored; the consequent relationship towards subsequent 'strategic' models is not manifested. As indicated in section 3.1 also current primary strategic models are not consistently reconciled with consumer behavioral studies. This immediate consideration has to become part of a new comprehensive and sustainable Internet marketing framework.

Furthermore to studies of psychological motivators of consumers (and the impact on Internet marketing strategies) there is also basic research on the opposite perspective. Consolidating the existing literature, mainly four reasons can be crystallized explaining why consumers do not use or transact via the Internet:

- No access to Internet
- No knowledge or awareness of availability
- No pleasure in online transactions
- Anxiety / Lack of trust

The first reason why members of the target group may not use the Internet is due to limited access to the media. In some cases the consumer does not have access to connected devices in general or the access mode is restricted to certain unfavorable timeframes (expensive dial-up in the evening, just during working hours in the office, just in school or public library premises). Even if the target group has technical access to the Internet, in many cases the consumer might not be aware that the products and services are available over this channel. Considering that many professions do not require any exposure to computers (e.g. in food and beverages, production, transport industries, like taxi- or bus-drivers, gardeners, cooks or security personal etc.), this awareness can be fostered probably via offline marketing communication. An additional reason for not using the Internet is the social perspective of going out for shopping. A housewife potentially wants to see other people after staying at home all day, teenagers may want to join their friends to verify peer perception of purchased products; adults maybe combine a shopping requirement with a visit to a coffee shop with a friend (Capgemini, 2003). In a lot of cases consumers also want to be able to touch especially physical or fresh products before a purchase decision (e.g. groceries, cloths, jewelry, and furniture). Finally one of the most significant reasons why consumers do not use the Internet to initiate transactions is general anxiety about the medium. For many consumers the Internet consists of an unstructured and incomprehensible chaos of Web sites. Within this largely uncontrolled network everything is - by essence - virtual. Products are not physically visible, sales people are absent, no cashiers – not even cash – is required. Within this "unnatural" environment many consumers are inherently anxious that offered products, services and prices might not be real, certain quality attributes might not be ensured or that the

products and services will not be delivered (Doolin et al., 2005). The sentiment of insecurity is nurtured, especially as prominent publications continuously inform about fraud and improper business practice in the Internet. The experienced natural anxiety against online transaction is a crucial subject of Internet marketing. The resistance to purchase goods and services which can not be received directly during the purchase process or to submit personal details online (including banking or credit card information) is a substantial challenge for POs. Interestingly consumers from different cultures and countries are confirmed to have a different level of trust towards online transaction. This 'Internet maturity' is mainly based on the technical experience and social background. The purchase decision process of a consumer is a cognitive selection of a specific action among multiple alternatives. The entire decision process has been structured in 5 steps (Tutor2u, NN): Need recognition or problem awareness, information search, evaluation of alternatives, purchase, post-purchase evaluation. The process steps follows economic, psychological and consumer behavior models and is highly biased (e.g. selective search, perception and premature termination of search for evidence, inertia, recency or anchoring). "The assumption of a perfectly rational economic factor is unrealistic. Often we are influenced by emotional and non-rational considerations (Simon, 1947)".

A reasonable amount of research has been conducted to examine consumers' concerns regarding the privacy of personal information in relation to online purchasing behavior (Featherman et al., 2008, Bush et al., 1998; Caudill & Murphy, 2000; Culnan, 1999; Gauzente, 2004; Hoffman et al., 1999; Reisig et al., 2009, Korgaonkar & Wolin, 1999) and the trust to online purchasing in general (Shen & Chiou, 2009, Belanger et al., 2000; Chellappa & Pavlou, 2002; Luo, 2002; Metzger, 2004; Palmer et al., 2000; Shim et al., 2004, Crespo et al., 2009). The direct impact of those findings on a strategic Internet marketing approach has not been explicitly analyzed (Tiangsoongnern, 2007). The table below summarizes the findings of relevant studies in regards to perceived risk and trust in online transactions over the last 10 years:

Scope of evaluation	Author	Findings
Books	Jervenpaa et al. (1999)	Trust in supplier decreases perceived risk and increases the consumer's willingness to purchase online
Different consumer products (e.g. books, clothing, electronics, food, hygienic, music, sporting goods, toys)	Miyazaki & Fernandez (2000)	Overall prevalence of privacy and security statements was not related to perceived risk. However, percentage of privacy and security statements in a category was positively related to category-purchase intention.
Website's features (privacy and security practices)	Miyazaki & Fernandez (2001)	Perceived risk of online purchases was negatively related to the rate of online transactions. Concern about system security was negatively related to the rate of online transactions.
Website's features (privacy practices)	Kim & Montalto (2002)	Perceived risk of privacy invasion significantly reduced the probability of use of online technology
Music & Entertainment	Heijden et al. (2003)	Reduced perceived risk increases trust, and attitude towards online purchasing which increased a buyer's intention to purchase online.
Books	Dilon & Reif (2004)	Consumer risk and shopping experience perceptions influenced experienced online purchasing decision more than customer service
20 consumer products (e.g. books, software, travel, movies, music, clothing, gifts, toys)	Doolin et al. (2005)	Perceived risk was negatively related to the amount of frequency of online purchasing.
Ease of use vs. online security methods	Shen & Chiou (2009)	Preference towards ease of use for short-term transaction, and preferences towards security in long-term transactions

Usability and security	Featherman et al. (2008)	"consumer beliefs that the e-service will be easy to use and that the e-service provider is credible and capable reduce privacy risk and its effects, thus enhancing adoption likelihood"
Credit Card payments	Reisig et al. (2009)	"consumers with higher risk scores spend significantly less time on the Internet and make fewer purchases from Web sites, yet financially impulsive respondents fail to engage in such risk-reduction strategies"
Experience	Crespo et al. (2009)	"importance of the risk dimensions considered in the study, the economic and performance facets are the ones that have a greater influence on e-commerce adoption, while social and time dimensions are the less relevant"

Table 9 : Literature review on psychological research on Internet behavior (based on Tiangsoongnern, 2007)

The information highlighted in the selected above references clearly indicates the potential to increase online transactions via the incorporation of psychological / cognitive consumer considerations. Based on those studies there are several researchers concluding detailed interpretations on empirical studies on the relationship of purchase risks and consumer psychology. Crespo (2009), Pires et al. (2004), Kim et al. (2000) and Doolin et al. (2005) describe the perceived risk focusing on the frequency of online purchases, Heijden et al. (2003) and Tan (1999) focus on the attitude towards online purchases in general, Ha (2002) on the relationship towards online purchase information, Shen & Chiou (2009) Featherman et al. (2008) and Kim & Montalto (2002) on online usability and technology, Miyzaki & Fernandez (2001) on privacy and security considerations and Jervenpaa et al. (1999) on the consumer's willingness to purchase from the specific supplier. A detailed illustration of the references is attached in appendix B.8. Tiangsoongnern (2007) – who examined the perceived risk and trust as determinants of online behavior in general – concludes (based on the above and additional references) that while the correlation of

psychological factors and online purchasing has been largely validated, the most effective strategy to be deployed based on those studies is as yet unknown (Tiangsoongnern, 2007).

The facts and references illustrated above provide evidence that psychological pattern of consumers have a significant impact on (Internet) marketing success and require consideration in corresponding strategies and tactics. The details of this impact and particular correlations have been explored in extensive studies and are summarized in numerous references also providing tactical Internet marketing conclusions. On the other hand the consolidated findings of this research do not conclude with a determined framework for a sustainable Internet marketing strategy based on particular (changing) consumer behavioral characteristics. Without such a strategic framework or guidance via a technical or operational structure, the illustrated tactics remain sensitive to market and technology changes and therefore potentially unsustainable. This limitation – failing to describe how to effectively and efficiently embed psychological considerations in an overall Internet marketing strategy (and not just derive tactical initiatives) and how to manifest a technical and procedural structure to continuously improve the appreciation of psychological pattern – has to receive dedicated attention in the new structure of a strategic framework.

This thesis attempts to explicitly incorporate and rightly position psychological aspects in a strategic (implementation) framework. Furthermore, the findings from the illustrated research presented above invoke a high level of customization of the Internet marketing strategy towards the motivation of very specific target groups. This customization attempts to increase the sustainability and adaptability of the approach towards the continuing evolution of the virtual marketplace.

3.2.2   Supplier-centric literature

The supplier within the virtual marketplace of the Internet positions its products and services via different Web sites. To successfully leverage the Internet as a strategic marketing instrument requires a solid understanding of the underlying technology and specific design principles. The supplied platform can become the competitive advantage towards alternative products and services as well as roadblock for opportunities and

growth. This section illustrates the rather mature environment of technical and design research at the same time than highlighting the low level of structural integration within an overall Internet marketing strategy. This low level of integration between business objectives and technical implementation becomes the repetitive theme of the analysis of the status quo and a subsequent contribution of the new approach.

A Web site is technically a set of files stored on a server which can be downloaded via requesting them using a URL. As those URLs can become quite complex and cryptic – consisting of a server IP and the whole folder structure – domains create memorable short-cuts to those files. The domain becomes the consumer's entry point to request certain either static or executable files from a Web server. This translation of the domain to the specific URL is done automatically on the user's request facilitated by domain name system (DNS) server. The choice of the domain, the consumer's reference to ones product and service information, has a major impact on the Internet marketing strategy (Elias & Gima, 2001). The impact of the domain name as a brand name within a marketing strategy has been illustrated by Lim et al. (2000). Equivalent to the choice of a brand name in general the choice of a domain name underlies many criteria and is limited by the availability of the desired choice (Kesmodel, 2008). Due the limitation, domain names are traded goods on a new market (Morse, 2008; Kesmodel, 2008). Attractive domains can cost several hundreds of thousands of euro while registering a normal top level domain can be procured for around 10 euro per year. The domain has a tremendous impact on the positioning in search engines and other directories or libraries. Domain names including a specific product or service itself appear to indicate an appropriate match for a corresponding search; a consumer searching for "Contact lenses" would probably associate www.contact-lenses.com as more a relevant site than www.whatever.com ceteris paribus. As libraries and indexes are often sorted alphabetically (e.g. dmoz.org) the domain www.123-sportcar.com or www.a-sportcar.com will be shown before www.sportcar.com. The selected main authors illustrating the relationship between the domain and Internet marketing are attached in appendix B.9. Kesmodel (2008), Morse (2008), Elias & Gima (2001), Rony & Rony (1998), Rowley (2009), Wass (2003), Jones (2000), Maley & Baum (2009), Heinz et al. (2010) and Lenz (2006) all indicate the importance of the domain in terms of branding, but no reference links the technical implementation to an overall strategic model. Further to those references, the publications illustrated above include small or implicit aspects about the

selection of domains and the impact on the overall marketing strategy. Finally none of the identified references displays an explicit focus on this area with dedicated explanations on the relationship to an overall Internet marketing strategy.

Also the Web server – as a technical component – has an impact on the Internet marketing strategy. First of all the performance of the server may influences the consumer's satisfaction navigating on the site; a slowly loading Web page may lead to the user abandoning the site (Blackmon et al., 2005). Due to this also search engines consider the server's and the surrounding network performance for the ranking of Web sites (Blankson, 2008). An underlying indicator for this performance is "Time to First Byte" (TTFB) or full loading time. "With most users today surfing the Web on high-speed broadband, Web site developers have been developing what is known as 'rich media'" (Brown, 2007). Considering the network bandwidth also those rich media can be loaded rather quickly. The server, usually hosted within a professional hosting environment of a data center, also determines the IP of the domains. Those IP can be used by indexing algorithms of crawlers to identify potential unnatural (triangular) link schemes (Searchenginewatch, 2005). In a lot of cases certain IPs or IP-areas are flagged from search engines to consist spam Web sites and all domains in the same segment are negatively impacted (Blankson, 2008). To improve the loading of the Web pages the used data center should be located in the center of the potential target group to avoid latency. Certainly the required technical capacities of the server in terms of RAM, CPU and hard disk space have to be carefully evaluated according to the requirements of the developed Web site and expected traffic. The features and configuration of the technical infrastructure also determine the marketing possibilities. Based on the Web server's operating system and main applications special modules have to be available to run consumer interactive scripts. Databases, daemons or security settings have an impact on the user interaction and offered services. The infrastructure also influences a significant portion of the running costs (Lim et al., 2000). The running costs for providing the infrastructure are an investment which has to be put into relation to the Internet marketing objectives and value created. The spectrum of literature focusing explicitly on the technical infrastructure in consideration of Internet marketing is rather limited. The main (potentially reliable) references have been consolidated in appendix B.10. Also those illustrations, e.g. Larson & Stephens (2000), are entirely disconnected from any kind of strategic Internet marketing framework.

growth. This section illustrates the rather mature environment of technical and design research at the same time than highlighting the low level of structural integration within an overall Internet marketing strategy. This low level of integration between business objectives and technical implementation becomes the repetitive theme of the analysis of the status quo and a subsequent contribution of the new approach.

A Web site is technically a set of files stored on a server which can be downloaded via requesting them using a URL. As those URLs can become quite complex and cryptic – consisting of a server IP and the whole folder structure – domains create memorable short-cuts to those files. The domain becomes the consumer's entry point to request certain either static or executable files from a Web server. This translation of the domain to the specific URL is done automatically on the user's request facilitated by domain name system (DNS) server. The choice of the domain, the consumer's reference to ones product and service information, has a major impact on the Internet marketing strategy (Elias & Gima, 2001). The impact of the domain name as a brand name within a marketing strategy has been illustrated by Lim et al. (2000). Equivalent to the choice of a brand name in general the choice of a domain name underlies many criteria and is limited by the availability of the desired choice (Kesmodel, 2008). Due the limitation, domain names are traded goods on a new market (Morse, 2008; Kesmodel, 2008). Attractive domains can cost several hundreds of thousands of euro while registering a normal top level domain can be procured for around 10 euro per year. The domain has a tremendous impact on the positioning in search engines and other directories or libraries. Domain names including a specific product or service itself appear to indicate an appropriate match for a corresponding search; a consumer searching for "Contact lenses" would probably associate www.contact-lenses.com as more a relevant site than www.whatever.com ceteris paribus. As libraries and indexes are often sorted alphabetically (e.g. dmoz.org) the domain www.123-sportcar.com or www.a-sportcar.com will be shown before www.sportcar.com. The selected main authors illustrating the relationship between the domain and Internet marketing are attached in appendix B.9. Kesmodel (2008), Morse (2008), Elias & Gima (2001), Rony & Rony (1998), Rowley (2009), Wass (2003), Jones (2000), Maley & Baum (2009), Heinz et al. (2010) and Lenz (2006) all indicate the importance of the domain in terms of branding, but no reference links the technical implementation to an overall strategic model. Further to those references, the publications illustrated above include small or implicit aspects about the

design has to be done very carefully to ensure a good performance. Based on the different programming languages, databases, servers and design approaches, a huge variety of Web site architectures have been developed. The topic of software architecture is subject of substantial technical theory and further details will not be illustrated as part of this research. The main requirement is to limit the application logic to the logic tier - and to thereby allow the Web designers a flexible adjustment of the GUI to consumer navigation pattern. An example of another common Web site architecture trying to balance application architecture and application performance is ajax. Ajax is a Web development technique used for creating interactive applications with the intend to make pages feel more responsive by exchanging small amounts of data with the server without reloading pages each time the user requests a change. Ajax is asynchronous in that XML data loading does not interfere with normal HTML and java-script page loading. The disadvantage of such potentially more attractive models (better marketing impact) is that application logic is moved from the logic tier into the presentation tier. In case of application changes the application and presentation tier may have to be adjusted; also if solely browsers technology changes, applications might not run properly. This example of complexity may result quickly into higher maintenance and subsequent overall marketing cost. Also specific information architecture and distribution processes are a key driver of efficient Internet marketing implementation. Technical concepts to make certain elements like data (e.g. texts, pictures, videos) or functions available for the use on own or remote Web sites are well defined in exiting research (Bray et al., 2006). The marketing value of technical concepts like XML, used to encode documents and serialize data, is to include interesting external information on the own Web site as well as creating awareness for the own content in external networks. Equivalently service oriented architecture (SOA) allows this integration and distribution of functions or services. SOA is an architectural concept that guides all aspects of creating and utilizing business processes, packaged as services, throughout their lifecycle, as well as defining and provisioning the IT infrastructure that allows different applications to exchange data and participate in business processes loosely coupled from the operating systems and programming languages underlying those applications (Newcomer & Lomow, 2005). SOA represents a model in which functionality is decomposed into distinct units – called services -, which can be distributed over a network and combined together and reused to create new business applications (Erl, 2005). XML and SOA extend the opportunities of creating Internet based applications that add more value to the consumer than competing alternatives. The efficient and effective

utilization of the two technologies require a specific technical and operational framework. There are selected authors which illustrate Web site and information architecture in general and the relationship towards Internet marketing. The main references are attached in appendix B.11. Schloassnagle (2006), Rosenfeld & Morville (2009) and Van Dijck (2003) provide principle information on design methodologies for Web site architectures. Brinson et al. (2001) focuses on technical Web site architecture for e-commerce Web sites and Reiss (2000) on architectural considerations for Web design as such. While the references illustrate technical and tactical descriptions of good Web site architecture and corresponding development processes, the concepts are disconnected from an overall strategic approach. The approaches focus on all aspects from the technical perspective similar to the main criticism formulated in section 3.1.

The most common Web browsers as well as their market share are illustrated in Figure 12. While different statistics exist (based on the scope of assessment) the figure provides an indication that specific browsers have a dominant positioning. Same applies to other technical determinants of Internet marketing strategy.

Figure 12 : Web browser market share (April 2010)[5]

As a Web browser is for example responsible for formatting the information transferred from a server via HTTP, the layout of a Web site can and marketing message differ between browsers. It terms of appearance also different displays (e.g. 21 inch screen up to small mobile phone browsers and resolutions) have to be considered. To avoid deviations of the layout in different Web browsers or to even effectively use those differences (Safari users might belong to a different target group than Microsoft Internet Explorer user) browser specific style-sheets or html-code can be developed. Guidance on

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[5] http://marketshare.hitslink.com/report.aspx?qprid=0

writing html-code which is compatible with all browsers is provided by anybrowser.org. A Web browser has a large set of configurations and uses additional plug-ins which further increase the technical possibilities but also complexity of the system. Those configurations and plug-ins have a major impact on the functionality of the Web site. Very often macromedia flash or java-script is deactivated and cannot be illustrated. Those two technologies are also commonly used to build more interactive elements. The impact of computer and browser settings on Internet marketing is indicated in the case study of Cold Storage, illustrated by Teo and Lim (2000):

"In the case of technology, problems arise partly because customers are sometimes not aware that their computer settings are incorrect. As a result, they are unable to complete their shopping successfully since certain features and functions may not be accessible. The problem may even be as simple as not being able to log on (Teo and Lim 2000)."

The impact of browser technology on the Internet marketing implementation becomes visible on the examples provided above. Also references, e.g. Teo and Lim (2000) provide evidence of the relationship. The explicit documentation and integration of this relationship within a strategic Internet marketing concept is still outstanding. Specific references focusing on this correlation have not been found.

The Web design is a central, largely independent, element of the Internet marketing strategy. The design determines predominantly how consumers can use the Web site, which technologies have to be used (and subsequent maintenance and cost structure) and what channels can be targeted to create awareness. This section illustrates with many references how current Internet marketing strategies and tactics consider overall design, layout, texts, pictures and animations. As indicated in section 3.2 consumers have different motivations to use the Internet. Depending on this motivation, the corresponding Web design determines how comfortably and efficiently the target group can satisfy its specific underlying need or desire. Certain characteristics of the relationship between Web design, usability and Internet marketing success has been roughly described by several researchers. The attached passage provides on of the first opinions about the correlation of (Web) design and usability from one of the leading experts in industrial design (recent references are illustrated further below):

"Look at the example of a subway system. The Boston subway system has several routes that bisect the city, reaching a large part of the population. The subway's infrastructure is generally well planned, well labeled, consistent, and predictable. No small feat for the

nation's oldest subway system, which (like many Web sites) grew over time.

To make the subway as easy as possible to use, its designers used color to help differentiate routes. There is a Red Line, a Green Line, a Blue Line, and so on. Cars are painted in the color of their route, to help riders make connections. Subway maps showing the various routes and their colors are prominently displayed in station stops. Walls, signs, and stairwells are also appropriately colored. While the Boston subway system has its quirks, it's relatively easy to figure out where you need to go. Architecture (the system's logical structure) and interface (visual cues and guidance) work together to help the subway's riders make decisions and plan routes. If the subway provided visual cues that were at odds with its architecture - for example, if Red Line trains were occasionally used to service the Green Line - there would be confusion. Many Web sites do the equivalent of running Red Line trains on the Green Line, though. These sites construct environments in which logical structure is not supported by visual cues. Instead, these two important ways of organizing information contradict each other, and there is confusion. How can this be? Some people will tell you that a solid site architecture will stand on its own. I don't believe it can. Even in an "undesigned" site (which is hard to imagine, since virtually all sites have some level of design), there must be a relationship between visual messages and logical structure. How large are headers? Are some items indented? How are fonts and styles used? What content appears first? How we present information - unintentionally or by design - sends messages about its relationships and context (Fleming, 1998)."

Fleming also already elaborates on examples how design elements, size, placement, color, shape and movement can support a marketing message (Fleming, 1998).

Relative Size	Relative size can communicate information about the importance of one item over another. Large items will generally draw attention first and will be seen as the more important elements on screen. Headers, for example, are almost always larger than text, which communicates that they have weight and importance. When these clues are not available, sorting through information can be an overwhelming experience for users.
Placement or position	Placement or position of elements can also communicate their relative importance or the sequence in which we are meant to digest them. In English, we're accustomed to reading and writing from left to right and from top to bottom. The way we approach the screen is the same. Items to the left and top of center tend to be noticed first, and are usually considered more important than other items. The famous left-hand navigation panel took off partially because of its natural, comfortable location. Grouping or placing elements in proximity also provides information about their logical relationships.
Colors	Color and contrast also show relationships between items, establish importance, and most importantly draw attention. A highlight color on a page, such as yellow or red, draws the eye because of its difference from the other elements. A high-contrast black element used on a light-colored page has a similar effect. Color is also an excellent way to show a continuing path, since we can interpret color information rapidly and with a high degree of precision (yellow brick roads are as useful in life as in film). Using the full rainbow of colors without meaning or association-- a common occurrence on the Web--makes for poor visual hierarchies.
Movements	Movement draws our attention, an unfortunate instinctive reaction for anyone faced with a page full of eye-popping animated ads. If everything on screen is vying for attention in a Las Vegas-style glitter of color and lights, it becomes difficult to make decisions about information paths or judge relationships among content elements. Used judiciously and with purpose, animation can be an exciting and effective way to communicate information.

Table 10 : Impact of certain design elements (Fleming, 1998)

The above quoted information illustrates the early identification of the impact of design on the Web site's usability. If and how the consumer can use the Web site and services remains a result of professional Web design (Beaird, 2007; Sklar, 2008). In case of proper software architecture, the Web design is rather independent from the underlying architectural and programming technologies (Robbins & Gustafson, 2009). On the other hand the Web design influences how fast pages can be loaded and functions executed (Robbins & Gustafson, 2009; Cederholm, 2007). In case a lot of pictures are used in the design or bigger flash applications have to be loaded the potential customer might feel distracted by a slow response to his navigation requests. As illustrated above the Web design might be strongly influenced by the used Internet browser and their security settings. It is also a major task of the Web design approach to integrate content smoothly without creating visual interruptions as illustrated by Fleming (Fleming, 1998; Beaird, 2007). In a lot of cases the reformatting of external content like XML streams or RSS feeds require major architectural considerations. As previously mentioned the Web design - especially text formatting and overall site structure has a significant impact on the ranking of search engines (Saieh, 2008; Miller, 2009; Moran & Hunt, 2008; Ledford, 2009; King, 2008; Viney, 2008; Kent, 2008; Jones, 2008). Web design is therefore a determinant for search engine traffic. The design of each component of a Web site is determined by the overall layout of the site (Sklar, 2008). A functional layout of an entire Web site can be illustrated on the concept of an attention map (Beaird, 2007). An attention map describes focus areas of eye movements on the computer screen. This focus of different users on a Web site strongly depends on the target user's profile. While consumers who use the Internet frequently have a more structured pattern in finding the relevant elements of a Web site, other users get distracted more easily from advertisement or other useless elements. As mentioned already by Fleming also the reading and writing habits of the cultural background (write from left to right or right to left) have a main impact (Fleming, 1998). Appendix D illustrates a (western) attention map and hot spots on a Web site. An attention map for cultures which write from right to left is a direct opposite (vertically mirrored) to the example illustrated. Based on the attention map illustrated above, specific areas are likely to receive more awareness than others. In terms of consumer specific Web design, those areas can be effectively used to position certain elements. Two examples of this setup are illustrated in Figure 13. First of all both companies have chosen the typical overall layout of 3 columns. In both examples the left column (area 1

and 4) - as well as a small row on the top (area 2) - is used for the main navigation. This positioning of navigation areas is quite common for Web sites. The area 8 includes mostly company information and hyperlinks to disclaimer and contact pages. Area 1 is usually used for the logo of the company and area 6 for advertisement.
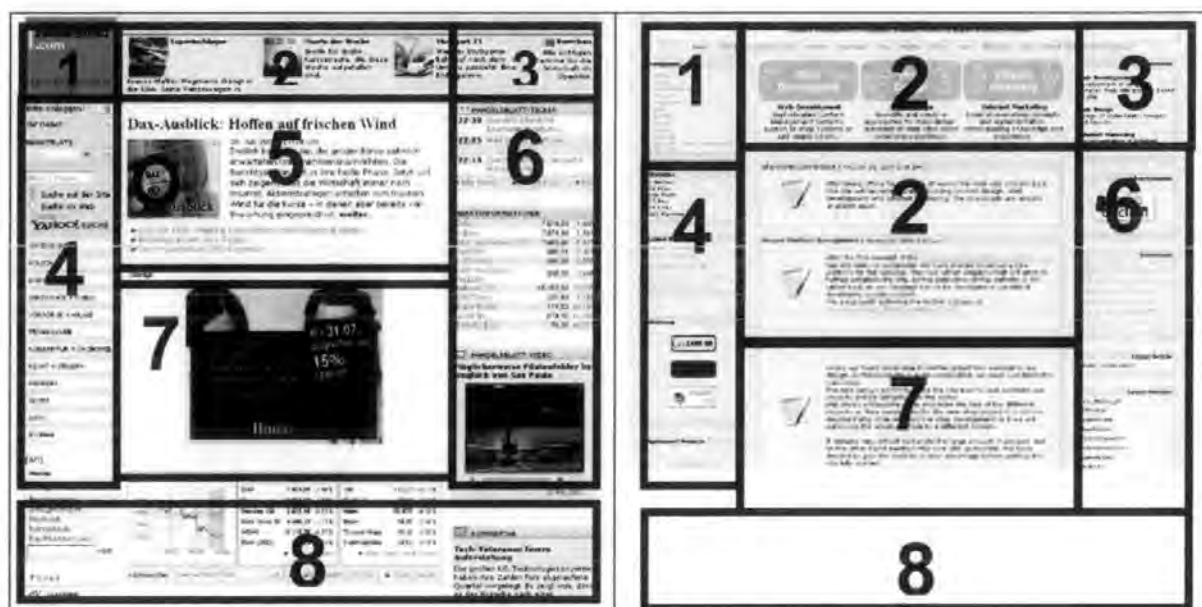
Figure 13 : handelsblatt.de and php-styles.com screenshots

Besides the Web site layout the formatting scheme is of major importance. The formatting screen includes mainly fonts and colors. The fonts used in the Internet are very limited (mostly Arial and sans-serif). Even though there is more variety regarding the color schemes the most common combination is also black text on a white background. The font size is mainly 11-14 even though most browsers allow increasing or decreasing the sizes. The main texts are certainly a very important element of each Web site. Just a good structure and formatting can become a unique selling proposition of a Web site (Sklar, 2008; Beaird, 2007). Besides texts pictures have an important role in Internet marketing and Web design (Lloyd, 2008; Robbins & Gustafson, 2009; Beaird, 2007). Considering that the products can not be seen or touched directly good images are a requisite for certain products like cloth or electronics. Additionally images make most designs much more attractive than plain text pages (Cederholm, 2007; Sklar, 2008; Beaird, 2007). In parallel the improper utilization of images causes most of the performance issues experienced on a majority of Web sites. Professional Web design means using good images with a high-quality resolution and small file-size. For this different file formats can

be used to optimize the balance between image quality and image size. An alternative approach to improve the loading of larger images is to cut bigger pictures into smaller elements to facilitate a faster loading. Furthermore, on most Web sites icons are used to allow a quick orientation and navigation. Not just on the computer desktop or smartphones, but also on Web sites icons are used to create additional visual structure. As illustrated in the examples below icons can be found everywhere in the Internet but they mostly do not fulfill the above mentioned objective of creating visual orientation because they are either so small and/or to complex (Robbins & Gustafson, 2009). As part of the Web design development a clear understanding has to be established for what and how icons should be used. As a lot of POs want to provide information about physical products over the Internet, pictures of those products are published on the Web sites (Beaird, 2007). Similar to the requirements to print catalogues the quality of those pictures is of vital importance. Web sites make increasingly use of advanced content. Audio content, small animations or videos can be downloaded on demand or are already automatically executed upon visit of a certain page (Cederholm, 2007). Especially due to the load time of this advanced content the elements have to be carefully integrated. In terms of customer impact those elements can establish a competitive advantage. A company which is leveraging this approach extensively is Microsoft which offers a lot of videos and animations about the software products they offer. Within the videos the full range of functionality can be illustrated trying to develop the desire of a potential customer to purchase the product. Also interactive features allow the potential customer to experience the new products and develop a sense of desire or need (Cederholm, 2007). Even though certain organizations can use the advanced content to create more attractive product and service information, not everybody can benefit from this opportunity equally. During the development of the supply approach the topic of advanced content has to be conclusively discussed to evaluate the potential benefit for the PO. The table attached in appendix B.14 illustrates major book publications in the last two years in regards to Web design. Even though the large amount of existing references describes many different technical supply concepts, none of the publications is derived from a higher strategic or product-specific psychological approach. This finding again highlights the weaknesses illustrated in the previous sections on how strategies are currently "reverse-engineered" based on technical implementations and not the other way around.

The illustration and selected references above describe the high maturity of Web design,

software development and architectural principles which can be applied to the technical implementation of Internet marketing activities. While related research could just be evaluated selectively, the constantly lacking description of the relationship between technical aspects and an overall strategic marketing approach in prevalent literature supports the claim that current implementation concepts remain tactical and vulnerable within an environment of continuous adjustments. The absence of an overall technical and processing framework, which pre-assumes the requirements to be sustainable over a longer period of time (iterative strategic process), results in inefficiencies and potentially ineffectiveness of all investments or activities. This limitation highlights the major challenges of Internet marketing already stated in the introduction (and referenced survey results) – the translation of general marketing objectives into technical implementations is one of the most significant breaking point of the current environment (McKinsey Quarterly, 2008; Econsultancy, 2009; Asian Productivity Organization, 2000).

A comprehensive Internet marketing strategy and implementation concept has to allow deriving a technical framework which remains sustainable towards changing Internet marketing priorities. It should furthermore facilitate an operation model of the technical components to adjust towards the evolution of the overall approach. A new framework that accommodates those two aspects will subsequently answer precisely the questions of companies with the "lack of knowledge where to start" (APO, 2000) or "insufficient [internal and external] capabilities" (McKinsey Quarterly, 2008) as highlighted in the introduction (Chapter 1).

3.2.3   Intermediary-centric literature

The properties of the Internet – as introduced in section 2.2 from Strauss et al. (2003) and Afuah & Tucci (2001) – change how participants can interact within the current marketplace. The tremendous opportunity of removing intermediates in this interaction, via creating new direct channels, is one of the primary focus points of online marketers. Tassabehji explains this concept of "disintermediation":

"Disintermediation is the removal of one or more layers in the value chain to increase efficiency, improve responsiveness and reduce costs. Internet and Web-based businesses have been able to shrink the value chain by offering services or products directly from the supplier or producer to the customer (Tassabehji, 2003)."

On the other hand the development of the Internet and major participants in this media created an environment of re-intermediation:

"Re-intermediation refers to the reassembly of buyers, sellers and other partners in a traditional value chain in new ways and introducing new stakeholder in the value chain. [...] Arguably, there is re-intermediation in the process of service and product development and design. The Internet and the Web enable immediate feedback from users or buyers, which can filter back into the product or service development lifecycle. Software developers in particular act upon the feedback from users of beta (trial version) software, which improves any problems in the software (Tassabehji, 2003)."

Search engines, portals, social media and other dominant Web sites are those new partners of re-intermediation – new (Internet) marketing channels over which the majority of awareness and targeted traffic is generated. Within those channels paid and unpaid references to the other Web site are promoted. While the technical placement process of references on standard portals and other dominant Web sites is quite easy to comprehend, the placement in search engines underlie sophisticated algorithms. On portals and Web sites banner or text messages can be manually integrated. The technological integration can be done either by changing the HTML source code directly or using the Web site management system. The disadvantage of this approach is that first of all for the integration certain fees have to be paid upfront as well as the overall approach is not very sustainable towards changes and continuous growth. In terms of social media specific communication strategies can be applied to multiply advertising messages within the platforms with a very limited amount of cost. The existing approaches are illustrated in the section below. Also search engine optimization provides a cost efficient approach to position products and services within the intermediary environment. To understand the functionality of a sophisticated search engine and impact of search engine technologies on sustainable Internet marketing, popular optimization strategies and their shortcoming for the currently most dominant intermediary, Google, are illustrated. The entire environment is critically evaluated under the perspective of strategic and sustainable Internet marketing.

Due to the prominence of new community based Web sites and services (social media) there is a large amount of new publications exploring marketing opportunities within this environment, especially in 2008 and 2009. The selected main publications, summarized in the table attached in appendix B.12, stress and position the significance of social media

as an important intermediary. As an instrumental intermediary, the publications and focus of social media based advertisement naturally remains largely operational, e.g. Evans & Bratton (2008 – work plan of 14 operational work packages over several weeks for social media campaigns), Tuten (2008 – description of using advertising in friend portals, games and product reviews), Shiffman (2008 - how to deploy marketing tools to gain recognition) and Hay (2008 – how to create a blog, podcast, RSS feed, social bookmarking (Technorati, del.icio.us, Digg, Propeller), media sites (like Flickr, YouTube) or social networking sites (like Facebook, MySpace)), and disconnected from an overall strategic or sustainable approach. Several other references focus on specific technical platforms, e.g. Holzner (2008) on Facebook and Comm et al. (2009) on Twitter. The references exhaustively discuss all aspects on how to use social media as an independent tactic (not embedded in an overall strategy) to multiply marketing messages and potentially create community-based customer loyalty. The main overall challenge of social media is perceived to be the management of the time-intensive process of administrating the information distribution within the dynamics of the different platforms. Subsequently this process has to become part of a later technical and operation model which facilitates those tasks and links back directly to the priorities in the overall Internet marketing strategy. Furthermore, none of the selected references provides a conclusive analysis on the sustainability of social media promotion activities in a larger strategic context. While social media as a marketing tactic is already largely explored, the new strategic framework has to demonstrate how a technical and operational structure can be derived which can make use social media intelligently.

Evaluating the effective and efficient utilization of social media are largely determined by psychological considerations (as described in section 3.2.1) understanding the consumer's fundamental motivations of using the different online platforms. While the objective of using search engines is explicitly the identification of information objects (including products and services), social media remain primarily communication and entertainment platforms (Safko & Brake, 2009; Tuten, 2008). As consumers, approaching the channel with the motivation to communicate with friends and colleagues, potentially have a different perception of marketing / subversive advertising, the implementation has to be tailored to those expectations.

While the technical principles of social media are quite simple, search engine optimization

strategies require the understanding of the underlying technologies and algorithms. Those technologies and algorithms, as well as modifications of those, largely determine short term and long term Internet marketing approaches. Due to this importance of especially understanding the potential impact of algorithm changes on sustainable Internet marketing models the most dominant representative, the Google search engine technology, and corresponding marketing strategies are the main focus of intermediary centric Internet marketing literature and are very briefly explained below. The first component of the Google algorithm is the PageRank (PR) which was developed by Page and Brin (Google, 2005) based on the BackRub search engine as well as works of Marchiori (Marchiori, 1997) and Kleinberg (Kleinberg, 1999); the concept as such is patented under U.S. Patent 6,285,999 (United States Patent and Trademark Office, 2001) and analyzed in several publications. The PR represents a Web site's importance within a set of pages (e.g. Internet) and has a major impact on the positioning of Web sites within the search engine result pages (SERP). However, as the general PR has no connection to content specific information, it remains rather useless as long as no additional content specific factors are considered within the positioning of results on the SERP. This consideration is done by the RS, which measures the relevance of a Web site to a specific query based on a large set of indicators, e.g. keywords appearing in URL, title, meta-tags, headlines and body text of the Web page. From a search engine ranking optimization perspective, those elements are called onsite-factors and a very large spectrum of publications focuses on the optimization thereof. For a specific query, Google uses onsite-factors to select a first subset of relevant matches (RM; example 10,000 pages) from the total number of matches (M; example 100,000 pages) from the large repository. This subset RM is determined by approximately 2 simple indicators (for example title-tag and keyword density (ratio of the number of occurrences of a particular keyword or phrase to the total number of words in a page)). The subset RM is then sorted applying the whole RS combined with the PR. From the sorted subset RM, the first 1,000 are shown on the SERP ordered by their rank. As explained, the onsite-factors are highly important for Web pages in such an algorithm; a high PR is totally insignificant in case the Web page does not fulfill the requirements for being included in RM. This non-PR threshold determines a set of different search engine ranking optimization strategies (Ridings & Shishigin, 2002). The literature agrees that a significant PR, one of the important factors for the overall ranking, can be built up mainly by continuously acquiring more inbound hyperlinks (references mentioned below). As programs and simple strategies facilitated to speed up

this process of spreading hyperlinks, the whole idea of valuing inbound hyperlinks independently from any additional factors became disrupted. The significance of PR for the overall ranking has stressed the necessity of distributing inbound hyperlinks within the Internet. Trying to spread inbound hyperlinks quickly lead to strategies like simple link-exchange and artificial link-farms as explained below. This manipulation of references severely distorted the identification of valuable natural votes. Another weakness of the PR system was that it is continuously polarizing the popularity. A highly ranked Web page will naturally receive more and more inbound hyperlinks which promote the Web page with an even higher rank. In spite of the good algorithm, one of the biggest problems of Google was that many low quality Web sites ranked high on the SERPs. The shortcomings of the technical algorithm were used to design effective Internet marketing strategies. The application of those strategies required the search engine operator – in this example Google – to readjust the algorithm. With the adjustments of the algorithms the newly designed Internet marketing strategies failed to substantiate success and in many cases even lead to hefty (ranking) penalties. This development indicated how unsustainable search engine optimization strategies can become. The literature relating to search engine optimization is even more established and extensive than resources in regards to social media. As search engine optimization has been a tool for over 10 years already, the corresponding approaches have developed over time. The table attached in appendix B.13 consolidates the newest references focusing on search engine optimization approaches, the illustrated concepts and considerations of strategic sustainability or long-term maintenance: The consolidation in the table indicates that the aspect of overall strategic sustainability is currently not a prevalent feature of SERO strategies.

Several publications make reference to the importance of changing intermediary technology. To provide an example for the significance of those changes, the impact of an adjustment in search engine technology is illustrated below. One of the most significant changes of search engine algorithms theory is the concept of the Topic Sensitive Page Rank (TSPR). As implemented by Gerasoulis (Gerasoulis, 2000) a ranking algorithm has to determine the subject-specific popularity (Teoma, 2005). Thies states correctly that the random walk principle, which is applied for the PR, is only applicable in case the Internet would cover a single subject (SEO Search Lab, 2005). Another method is the hypertext induced topic selection (HITS) as described by Kleinberg in the U.S. Patent 6112202 (United States Patent and Trademark Office, 2000); the concept of TSPR as such is

documented by Haveliwala (2002). The TSPR adds a bias to the random walk theory by underlying a specific intent to the users walk within the Internet. Equivalent to the previously introduced PR algorithm, the calculation can not be applied to all matches in the database. Therefore, the final algorithm is only used on a subset RM as described within the PR concept. The subset RM is then sorted by the query's topic sensitive importance score combined with a RS. The implementation of a TSPR method in certain search engines remains an assumption of specific researchers and is neither publicly confirmed from any company nor of any interest for this research. (The search engine Teoma already officially uses similar technologies of subject-specific popularity (Ask, 2006), which they call Expert Rank). This section does not attempt to validate or invalidate the assumed implementation by a search engine provider, but will just illustrate the effect of algorithm changes to Internet marketing strategies. The impact of such a modified ranking calculation can be easily described in two scenarios. Within the scenarios two different hyperlink structures (ceteris paribus for onsite-factors) are illustrated. While the Web site W_1 (scenario A) had inbound hyperlinks $M(p_{i1})$ from Web pages with different topics (T>3), Web site W_2 (scenario B) had inbound hyperlinks $M(p_{i2})$ from similar topics (T<3). Within scenario A, W_1 had a PR determined by formula F_1. The PR was applicable for all concentrations of the onsite information. Under the new algorithm, W_1 suffered heavily as the inbound hyperlinks $M(p_{i1})$ did not focus on a specific topic. The total PR is literary distributed to all topic categories (T) and not concentrated on the Web pages' content. A mismatch of T_{W1} and the T of the Web pages with the outbound hyperlinks would lead to fatal slip in the SERP. Within scenario B, W_2 had a comparable general PR before the algorithm adjustment. After the changes, the content-specific hyperlinks from $M(p_{i2})$ were concentrated on 2-3 specific topics. W_2 would rank rather high within the SERP. The illustration above indicates how changing search engine technologies can change entirely the success of search engine optimization strategies, a major part of current Internet marketing activities. Over the last 10 years "thousands of criteria" have been implemented to improve the quality of search results changing the underlying algorithm (Cutts, 2006). Those continuous changes and their potential impact on the Internet marketing implementation leads to the clear conclusion that search engine optimization has to remain a tactic of a larger strategy, which can accommodate for those adjustments.

The Internet as a marketing channel is highly determined by two major intermediaries:

social media and search engines. Social media provide access to a large volume of potential consumers for market research and product placement to create awareness for products and services. The integration of marketing messages in currently dominant social media platforms follows specific technical and psychological approaches which have been largely documented in the existing literature. The long term effect of marketing and brand building approaches (e.g. 10 years) can not be substantiated at this point of time due to recent manifestation of social media as such. Also the elasticity of success within changing parameters can not be analyzed for a longer time series. Search engines, as the second main intermediate, underlie rather complex technical algorithms to illustrate desired marketing messages to specific user. Also for this intermediate specific approaches have been largely explored by empirical and explorative research. Similar to social media the current technical tactics remain highly vulnerable towards continuous changes of the underlying ranking algorithms or technologies. The conducted literature review provides a strong indication that the current approaches for both intermediates are not linked to any overall strategic Internet marketing framework. Without following the guiding principles highlighted in Chapter 2 also intermediary centric Internet marketing initiatives remain tactical and the technical platform dependent on potentially costly continuous fundamental adjustment. The new strategic Internet marketing framework has to consider intermediaries as a significant component of the strategy implementation. Intermediaries determine important marketing characteristics like visibility, marketing costs and turn-around times. The responsibility of the marketing function is to ensure that those intermediaries are sustainably, and not opportunistically, integrated within the technical backbone. The new strategic framework has to facilitate the direct translation of the structure into a technical implementation.

3.3   Summary

Strategic management and Internet marketing comes with very clear principles. Those principles have to be reflected in an adequate Internet marketing approach. The multi-disciplinary environment of current Internet marketing approaches covers a broad spectrum of different perspectives. This chapter summarizes the extensive literature research conducted and crystallizes substantial limitations of current Internet marketing approaches towards the basic principles highlighted in Chapter 2. Based on this exhaustive analysis of the entire environment the statistics introduced in Chapter 1 can be

confirmed and the following limitation clearly stated:

- Current Internet marketing models are insufficient and a comprehensive framework for an overall strategic and sustainable Internet marketing does not exist

The survey results illustrated in Chapter 1 – indicating "missing capabilities", "lack of knowledge where to start", "no understanding of benefits", "insufficient metrics", "lack of resources and skills" - suggested the lack of and need for a consistent framework how to use the Internet for marketing purposes (McKinsey, 2008; Econsultancy, 2009; MIC, 2000). The assessment of current Internet marketing approaches provides further evidence to this suggestion. A consistent overall Internet marketing framework has not been established. While specific tactics are explored, a technical and processing structure derived from such an overall Internet marketing strategy are also largely insufficient.

Considering those limitations current Internet marketing approaches are per se deficient. As initiatives and investments are not directly deducted from predetermined objectives, they potentially deliver no adequate value to the PO. This inconsistency may also create frustration and distrust of senior management and marketing managers. The lack of an appropriate structure of KPIs (fully aligned to very specific objectives) to measure the value contribution further complicates the right allocation of marketing resources and justification thereof. Based on those findings, this thesis now proceeds to introduce a new strategic framework and implementation approach considering the key determinants identified in the literature research. The new approach fully accommodates the indicated shortcomings and is evaluated and validated in the following chapters to substantiate the approach. Furthermore, this new approach will enable a PO to focus on activities that deliver the most value and are in principle balanced and sustainable.

4 New framework for sustainable strategic Internet marketing
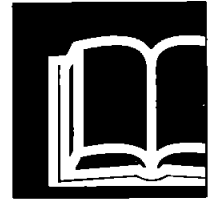
"Management by objective works - if you know the objectives.

Ninety percent of the time you don't. "

(Drucker, P. - American Economist)

The exhaustive assessment of the current environment has provided evidence of the lack of, and necessity to, create a comprehensive framework for sustainable strategic Internet marketing. Following the principles summarized in Chapter 2 this new framework has to be based on a consistent and balanced structure of objectives that clearly adds value to the PO's business model. Once those objectives are determined corresponding KPIs / metrics and subsequent work-packages can be derived in an iterative approach. The new framework is the result of an iterative research approach with constructive (Chapter 4 and Chapter 5), explorative (Chapter 6) and empirical components (Chapter 7). As highlighted in the introduction just the final result is illustrated in this thesis.

Following the basic principles of strategic management and Internet marketing, this chapter illustrates a novel coherent and generic strategic structure which allows sales organizations to successfully utilize the Internet for marketing purposes. As mentioned, the overall approach – objectives, KPIs as well as work packages (see section 2.4 - page 35) has to be balanced cautiously to ensure no single initiative compromises the achievement of other activities (Kaplan & Norton, 1992; Niven, 2006; Niven, 2008; Kaplan & Norten, 2006; Tyagi & Gupta, 2008; Keyes, 2005). This new framework will increase the effectiveness and efficiency of Internet marketing activities and improve the transparency in terms of impact and benefit to ensure a high level of commitment from the management team to engage into this domain.

The new framework follows the three components of strategic management (section 2.1.2). Clearly defined objectives, corresponding KPIs and subsequent work packages are conceptualized in one balanced structure and are illustrated as vertical dimension in Figure 14. Furthermore the objectives of marketing become the overall determinant for the horizontal perspective (section 2.2.2). Based on those two determinants derived from the

basic principles of strategic management and marketing – summarized in Chapter 2 – the entire framework can be established:
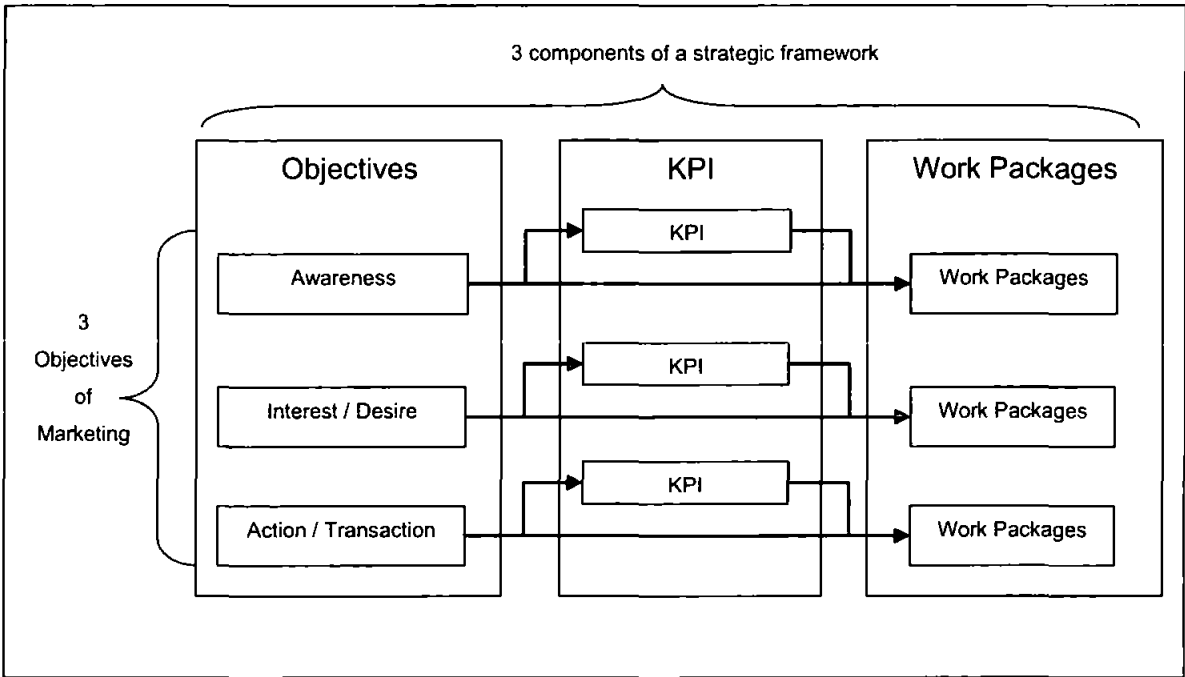
Figure 14 : Model for strategic Internet marketing

The figure above illustrates that, based on the objectives of marketing, corresponding KPIs have to be derived and subsequent work packages have to be defined. The work packages are determined by the objectives directly as well as the underlying KPIs. While the objectives of Internet marketing are derived from the overall objectives of marketing and the KPIs as well as work packages are derived from the objectives, the overall new framework has been developed in an iterative process. Earlier versions went through peer reviews, presentations as well as a first survey to determine the final model. This chapter just describes the final model.

4.1 Objectives of Internet marketing

The objectives of Internet marketing are the first component of the strategic framework. The structure of the three Internet marketing objectives is derived from the overall objectives of marketing and is further elaborated in the figure 15:

Create Awareness	As MUCH as possible
	As FAST as possible
	As EFFICIENTLY as possible
Create Desire	As STRONG as possible
	As FAST as possible
	As EFFICIENTLY as possible
Create Transactions	As MANY as possible
	As EASY as possible
	With the HIGHEST RETURN
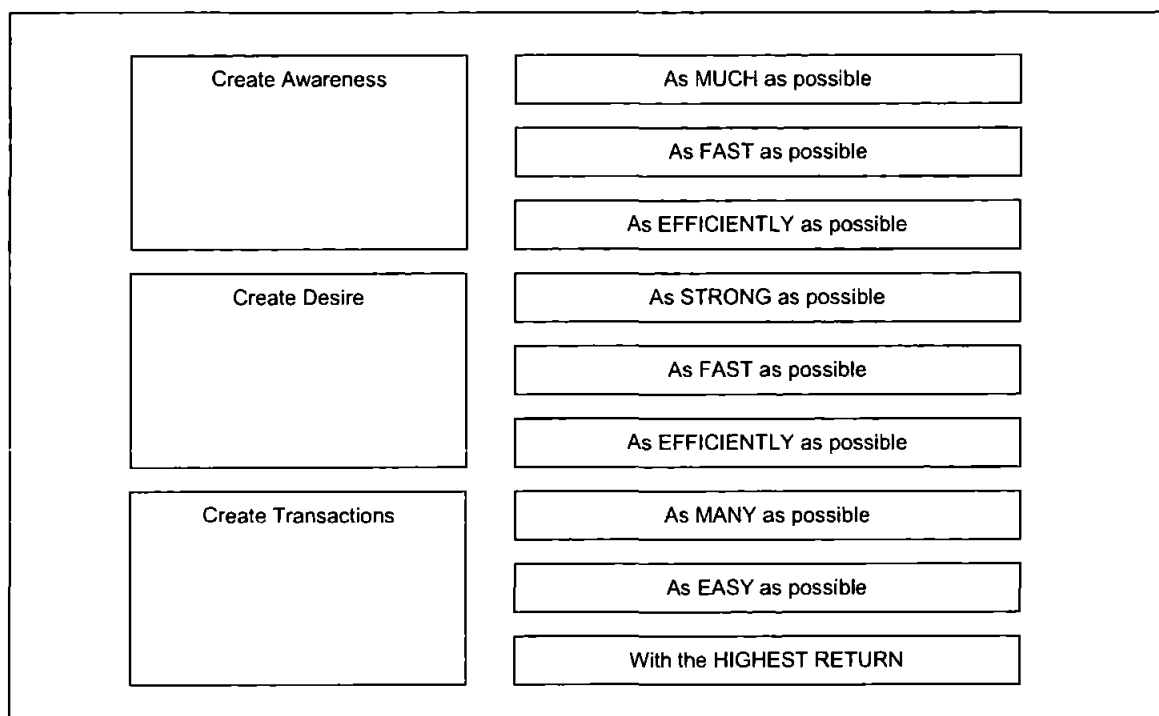
Figure 15 : Generic objectives of Internet marketing

The 3 objectives, as illustrated above, are generically applicable but might be prioritized differently within different sales organizations. For example the marketing of price inflexible commodity products might require a different approach than price flexible products having a dominating USP. The specific focus and structure of the objectives is determined by the principle assumptions of the overall business strategy. Finally those three objectives have to fulfill the characteristic of being balanced. Awareness for example might be created easily if products and services are promoted to be under the market price; on the other hand this approach may result into a low return (part of create transactions). Also a strategy focusing to yield high margins in transactions may have a negative effect on creating desire for the underlying products and services. This balance has been established by including potential conflicting drivers of performance in one model (for example balance of "as much" and "as fast" awareness with "as efficiently"). This model of three conflict drivers has been adapted from the project triangle (fast, good, cheap), which highlights the constraints of projects as much as any human undertaking (Bethke, 2003, Lewis, 2005). Considering this structure the overall framework becomes self-similar and complete.

The following sections illustrate the generic objectives as well as underlying definitions and considerations in detail.

4.1.1   Create awareness within specific target groups

The existing market transparency – created by the Internet – enables potential or existing private and commercial consumers to choose products and services from a larger selection of available sources (Brynjolfsson & Smith, 2000). While scanning these sources, the consumer searches for the best available offer. No matter if the transaction itself is finally performed via the Internet or not, the PO has to create awareness for its company, brands or products and services. For small and midsize online shops with price inflexible commodity products, awareness might be the key success factor. As described from Ward & Morganosky (2002) creating awareness with providing solid Internet product information also increases the likeliness of purchase in other offline channels (Ward & Morganosky, 2002). For a pharmaceutical corporation on the other hand awareness might be simply required to communicate with potential partners, customers or multipliers and not to sell products online itself.

The objective of creating awareness within the competitive environment of the Internet has equivalent significance as within alternative communication channels. Creating visibility of the products and services in the Internet, shelves of a super market or a trade fair is a common challenge of the marketing implementations. Considering the focus of this research on POs, it has to be critically questioned, if just creating awareness for a brand, product or service is not just an unnecessary tactic leading to the final objective of generating sales. This argument remains valid within a rather short-term – and potentially unsustainable – sales strategy, in which delayed purchases, cross-sales, recommendations, customer loyalty and retention are excluded from considerations. As indicated within existing research, simply the recognition of a special offer or a new product or service can be valuable for the marketing campaign (Wheeler, 2006; Delano, 2001; Bedbury & Fenichell, 2003; Light & Kiddon, 2009).

To clearly define and balance the objective of Internet marketing the characteristics illustrated in Figure 16 – and described below – provide further detail into the objective:

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┌──────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────────────────────────────────────────────┐      │
│  │                     CREATE AWARENESS                          │      │
│  └──────────────────────────────────────────────────────────────┘      │
│  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐                  │
│  │      as      │  │      as      │  │      as      │                  │
│  │    MUCH      │  │    FAST      │  │  EFFICENTLY  │                  │
│  │  as possible │  │  as possible │  │  as possible │                  │
│  └──────────────┘  └──────────────┘  └──────────────┘                  │
│  ┌──────────────────────────────────────────────────────────────┐      │
│  │                     of the right                             │      │
│  │                     TARGET GROUP                             │      │
│  └──────────────────────────────────────────────────────────────┘      │
└──────────────────────────────────────────────────────────────────────┘
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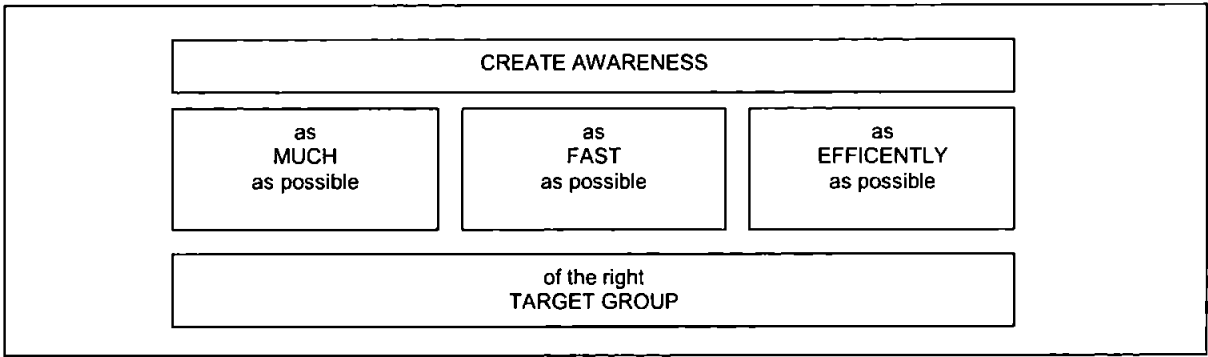
Figure 16 : Characteristics of creating awareness

As much as possible:

First of all awareness can be created for a brand (a product group or overall PO) or specific products and services. Brands are mainly associated with specific "symbols" like a logo or slogan (Kotler & Pfoertsch, 2006; Miller & Muir, 2004; Olins, 2003). Product and service offerings on the other hand have to be packaged to be demarcated and clearly defined. Within this definition, product and service attributes have to be highlighted which create a comparative advantage of visibility towards available alternatives. This comparative advantage may be the unique selling proposition (USP) which has to be communicated effectively or just a specific position and design of the marketing message to create awareness. A banner, title or abstract on a frequently visited Web site, on search engine result pages, a portal or in social media can try to emphasize the full USP of the product or service attributes. Alternatively advertising elements can become effective if used simply as exciting teasers or in a way that makes the consumer interested / curious to see more details. Overall the PO will seek for creating as much awareness as possible for this specific brand or offering as the initial volume of visitors determines how many can be converted into subsequent transactions.

The right target group:

Creating awareness effectively means addressing the right target groups. For every identified target group awareness can (and potentially should) be generated differently. Identifying and addressing the specific pattern of behavior and interests of the target group is a key success factor to create a successful customer lead generation process. Certain target groups may be especially interesting because they can transport or multiply

the message, which the sales organization tries to invoke, into their own – potentially extensive – network.

As fast as possible:

POs may not always depend on creating awareness very quickly, but effectively the speed determines the potential strategic flexibility of the marketing entity. Developing a sustainable strategy which creates a strategic advantage has to establish stable and reliable channels to flexibly distribute information as required. The flexibility encompasses the capability to add new brands, products and services, or attributes thereof, into the used platforms as well as adjusting communicated information. In some cases a short turn-around time for creating awareness can become a competitive advantage, for example during the phase of a product launch.

As efficiently as possible:

To create awareness a multitude of Internet channels can be utilized in different ways. Search engines for example can be paid for high positioned text hyperlinks; Web sites can also be optimized to automatically rank higher in search engines. Social media can be continuously penetrated with new information. The selection of those channels and penetration approaches largely determines the success to create awareness. In parallel, this selection is also one of the main determinants of the Internet marketing (or specifically awareness) cost structure. Internet marketing channels can be differentiated in paid and unpaid channels. Paid channels are for example advertisement in search engines or banners on other Web sites; unpaid channels are for example standard search engine or directory entries, article publishing, link-exchange or newsletters. Further examples of Internet marketing channels are illustrated in the lists below:

Awareness Channels	
Paid	**Unpaid**
- Paid Hyperlinks	- SE entries
- Banner	- Link-Exchange
- Google AdWords	- Newsletter
- Spot leasing	- Forum entries
- Splash Screens	- Chat room communication
- Emailing	- Social media / Blogs
- Affiliates / Partner programs	- Article publishing
- Product Placement	- News feeds
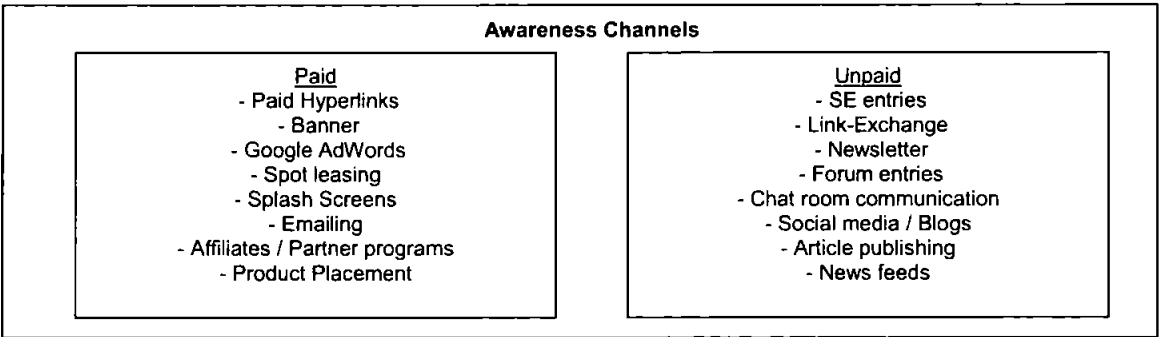
Figure 17 : Examples of awareness channels

A very detailed comparison of different marketing channels (TV, radio, magazines, newspaper and Internet) has been consolidate by Meeker (Meeker, 1997) and commented by Turban et al. (Turban et al., 1999). Those rather historic illustrations have to be extended by new Web 2.0 representatives (Bell, 2009; Shuen, 2008).

The value of achieving this objective is to raise the popularity of the brands, products and services and to support online and offline sales activities. Awareness is especially important during the company establishment or introduction of new product or service. Awareness is key to potential sales of generic products or within extremely competitive markets. Awareness created online furthermore complements offline marketing strategies. Summarizing, the first objective is to create as much awareness, as fast and efficiently as possible for the brand, products and services by the relevant target-group. In some cases achieving this first objective is completely sufficient to satisfy a substantial and material business case. The Internet can be an excellent tool to create awareness, but awareness can also be created completely without traffic of potential partners, customers or multipliers on the own Web site. That means based on this objective different implementation approaches can be applied.

4.1.2   Create desire for products and services

The pure awareness for a company, brand, products or services is primarily free of a judging evaluation of the consumer. To positively influence this subsequent evaluation process the PO has to position a set of convincing argumentation strategies. The implementation of those strategies is strongly connected to the area of awareness (an advertising component displayed on a high-traffic Web site firstly creates awareness, but simultaneously the layout and message triggers a first evaluation). From a marketing process perspective it makes sense to differentiate the two aspects (awareness and desire) as both objectives focus on a different marketing function of the PO. Creating awareness is a communication management function, while creating desire for a product or service depends largely on the product design (Ferrel & Hartline, 2005; Geml & Lauer, 2008).

Similar to the objective of creating awareness, the desire for a product or service can be

fostered entirely without an own dedicated Web site. Efforts and resources invested to establish awareness or a desire might be even completely useless for particular sales organizations. For example dominant large-size market leaders (e.g. fast food chains or public transportation organization) may not have an evident business case to invest in additional awareness activities through the Internet. A more attractive business case for an established brand might be to shift public perception of own policies or principles with open and comprehensive public relations. Enhancing the reputation of the overall brands or specific products and services of the sales organization can have a large impact on existing and potential new customers.

To clearly define and again balance the objective of creating desire for products and services the characteristics illustrated in figure 18 – and described below – provide further detail:
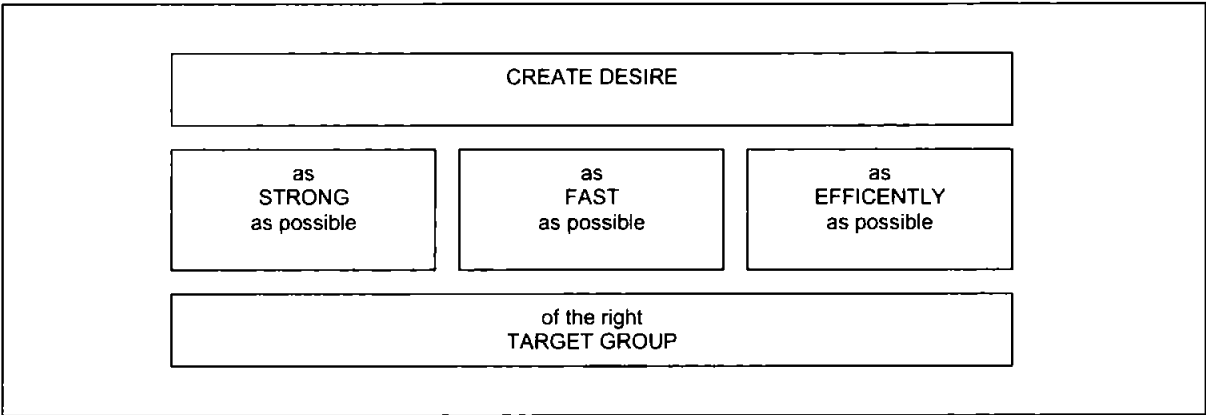
Figure 18 : Characteristics of creating the desire for products and services

As strong as possible:

Every product and service has a specific value curve (called "strategy canvas") with a set of factors ("industry factors of competition") to create a sense of desire of private or commercial consumers (Kim & Mauborgne, 2005). Those factors have to be properly positioned to create as much desire as possible for initiating potential online or offline transactions. The stronger the desire developed, the more likely is an initial or repeated transaction decision by the consumer. The specific configuration of the value curve and positioning strategies are determined by the target groups.

Target group:

Different target groups have different personality, behavioral and interest patterns. Those different patterns can be addressed appropriately to create a sense of desire for the offered products and services. A teenager is potentially more focused on a low price for a new MP3 player, while maybe the parent's purchase decision is based on the delivery / payment process or how trustworthy the Web sites looks. In this example the value curve or factors of competition for the two target groups are entirely different. Furthermore the desire of certain target groups might multiply within their own social or digital network, while groups may not carry a multiplication characteristic.

As fast as possible:

The overall life cycle of the products and services highly influences the way desire can and should be created. The interesting aspect of an old MP3-player model might be more the price while the desire for new models might be determined by the design and functionality. A PO certainly targets to convince a potential private or commercial consumer as quickly as possible about the offering. The more appealing the unique selling proposition, the faster a consumer will create a high level of desire and initiates a potential transaction or multiply the marketing message in his network. In certain situations creating desire might be too early for the overall product life cycle. Also in this situation the right timing for the awareness strategy has to be investigated. Overall, planning a successful Internet marketing strategy and creating awareness for products and services requires the right timing. Timing means identifying the right moment for certain activities within the overall product life cycle. Once the right moment is identified the time to market has to be as short as possible. The following illustration shows the classical product live sales and profit curve:
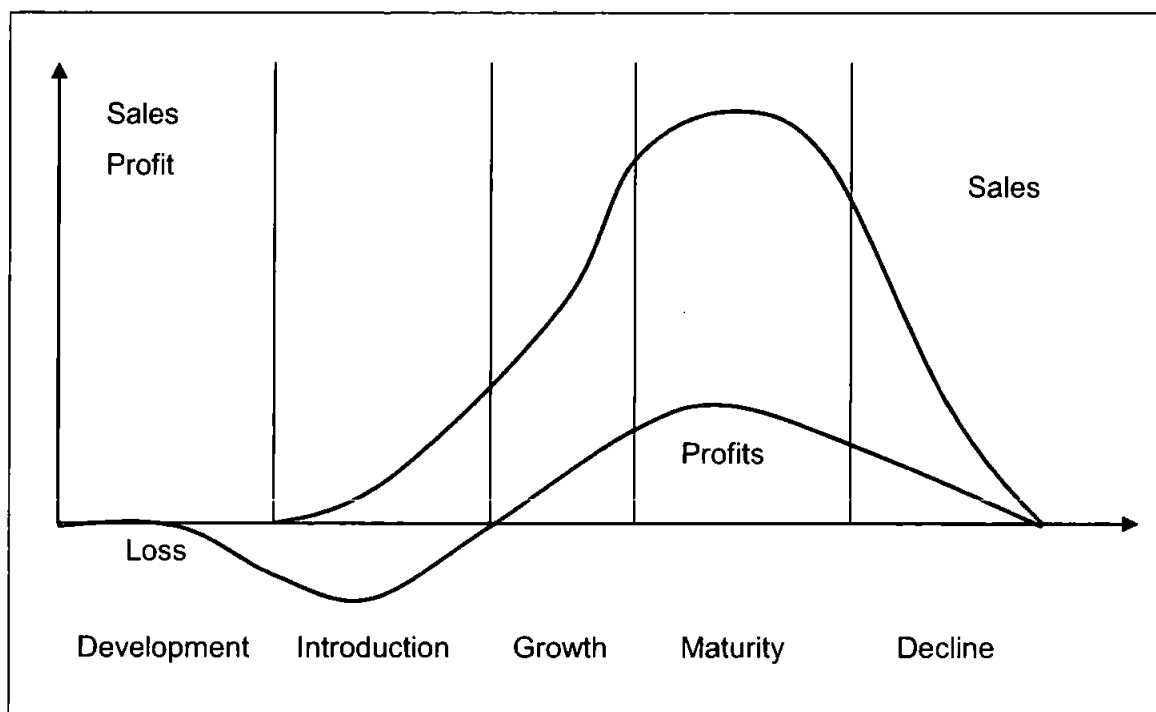
Figure 19 : Product Life Cycle (Day, 1981)

Throughout the illustrated product life cycle different marketing activities can be utilized to effectively capture the full potential of market opportunities. In each phase, as illustrated in the figure above, different Internet marketing strategies may complement the overall market approach. During the introduction phase additional awareness which is generated via the Internet can contribute significantly to the overall success of the product or service and shorten the time of unprofitability. During the decline or maturity phase certain self-service or value added services offered via the Internet can potentially extend the product's life cycle and therefore a profitable cash flow.

As efficiently as possible:

A majority of companies are experienced in utilizing psychological methods to create the desire for certain offerings. The symbiosis and theoretical research on general marketing and psychology has created a broad spectrum of techniques which can be explored and properly deployed. Packaging the right product and services attributes – and positioning them efficiently – determines if the attractiveness of the offer requires a lot of financial subsidization (e.g. discounts or low margin pricing) or evolves from the product and service itself. Optimizing the navigation and availability of key functionality can also

enhance the efficiency on how desire can be created and converted.

Creating desire means to convince potential or existing customers, partners or multipliers of favorable product or services attributes. It is required to market unknown product types and can build a brand image. Furthermore activities can attempt to alter the company reputation or support other public relation objectives. Focusing simply on awareness (or visits) with an Internet marketing strategy might not be sufficient to convince critical members of a senior management team to promote an Internet marketing strategy. As unqualified leads remain just shortly on the Web site, show poor click-through rates and therefore low conversion rates such an approach is not sustainable (Johns, 2007). To balance this potential criticism, the second objective is to create as much desire as quickly and efficiently as possible within the right target group.

4.1.3   Generate value adding transactions

The scope of discussed Internet transactions is commonly reduced to the area of sales (see Chapter 3.1). As this focus excludes a large spectrum of complementing strategies, it has to be explicitly mentioned that the underlying understanding of transactions in this research considers a much broader spectrum. A PO which wants to develop customer interaction or seeks product feedback possibly evaluates a positive entry in an online forum or guestbook as a beneficial transaction. A platform for dating or email-services maybe seeks primarily registrations during the Web site launch and not particularly sales. Even though awareness (section 4.1.1), created desire (section 4.1.2) and non-financial transactions are strategic success factors for a PO, most organizations will target to finally convert those into financial return. The sales organization has to induce a transaction from the potential or existing partner, customer or multiplier, which translates into profitability in terms of the long-term overall business strategy. Based on this consideration the objective, as well as the underlying KPI, includes the financial return of Internet marketing activities.

To clearly define and balance the objective of generating value adding transactions the characteristics illustrated in Figure 20 – and described below – provide further details into this aspect.
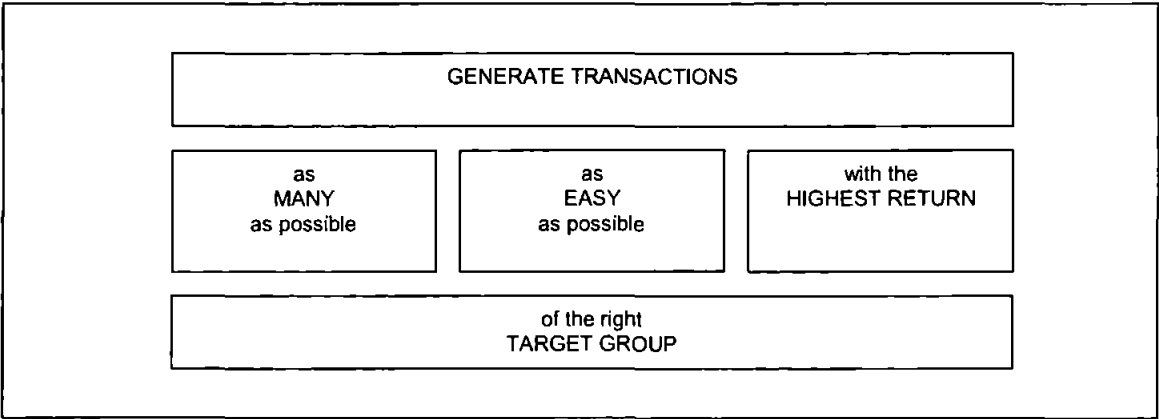
Figure 20 : Characteristics of generating transactions

As many as possible:

The scope of Internet transactions covers a tremendous spectrum of different services, continuously expanding in the environment of Web 2.0 and especially social media. The identification of which transactions provide the most value to the PO's marketing approach has to be derived from the detailed Internet marketing objectives to be achieved as well as products and services offered. A list of generically applicable transactions that a PO might offer has been consolidated in Table 11:

Product and Service search	Browsing categories, Keyword search
	Research related products and services
Enquiries / Questions	Submit questions, Answer questions, Comment on answers
	Read FAQ or forum entries
Registration / Login	Specify and verify personal details
	Authenticate to personal details
Product and service selection	Compare product and services options
	Create watch-lists, shopping baskets and wish lists
	Create list of desired products and services
Purchase, Payment and Delivery	Purchase products and services
	Specify and verify payment options and details
	Specify and verify delivery and invoicing details
Feedback / Rating	Submit product specific or general qualitative feedback
	Quantitative rating of products and services
Exchange information	Initiate topics in online discussion forums
	Comment on topics in online discussion forums
	Chat with others
	Publish / share files (e.g. photos, documents, audio, videos)
Subscription / Notifications	Subscribe newsletters, podcast or blogs
	Request notification on certain updates

Table 11 : Scope of Internet transactions

The different transactions to be used on the Web site determine the Web site's architectural complexity as well as required components of the later technical framework. The potential cost and possible value of each transaction has to be carefully investigated. Each transaction offers a certain tangible or intangible value to the consumer and the PO. Evaluating the economic value added of a feedback feature on the Web site may remain an extremely theoretic exercise. Even if the added value is difficult to quantify, transactions have to be consequently prioritized and valuated to decide if they are offered or not. Simply enabling all possible transactions is certainly not an efficient approach considering that most transactions require not just a one-time technical implementation

effort (e.g. technical programming of an online chat) but also operational response (e.g. staff answering feedback) and maintenance processes (e.g. cleaning up an online forum). A right blend of transactions has to be integrated that provides the most value to the customer and PO. Finally a maximum of those valuable transactions are targeted to be triggered via the Internet platform. Furthermore, the planning of an effective strategy to generate valuable transactions has to consider the current positioning of the product or service within its product life cycle. Over the entire product life cycle different transactions may provide value for the PO. Before a product launch newsletter subscriptions, user registrations or forum entries might be interesting (to pre-determine the consumer pattern) while directly after the launch purchases might be of major importance.

Target groups:

Differentiating the target group from a transaction perspective allows the PO to fully concentrate on the most important customers or intermediaries. Those business partners can be targeted and retained through special campaigns and offers, additional features or services, loyalty programs or other benefits. Similar to descriptions above (section 4.1.1 and 4.1.2) the target group has to be understood to be much broader than customers who purchase a product and service. Loyal customers of a certain product are potentially equivalently valuable as frequent visitors to an online forum.

As easy as possible:

Compared to traditional interaction channels, the Internet creates a new level of complexity in terms of the overall transaction chain. Transactions require several potentially technical or psychological complex steps and can be performed after local working hours, on the weekend, or even when products are out of stock. Managing the transactions chain properly – and to reduce the technical and psychological complexity as much as possible - requires thorough attention to the entire chain of different transaction steps as indicated below.

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│              Example Purchase Transaction Chain Elements                  │
│                                                                           │
│   ┌────────────┐ ┌────────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐   │
│   │Registration│ │  Product   │ │ Payment  │ │ Delivery │ │ Feedback │   │
│   │            │ │ selection  │ │          │ │          │ │          │   │
│   │          - │ │            │ │          │ │          │ │          │   │
│   └────────────┘ └────────────┘ └──────────┘ └──────────┘ └──────────┘   │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```
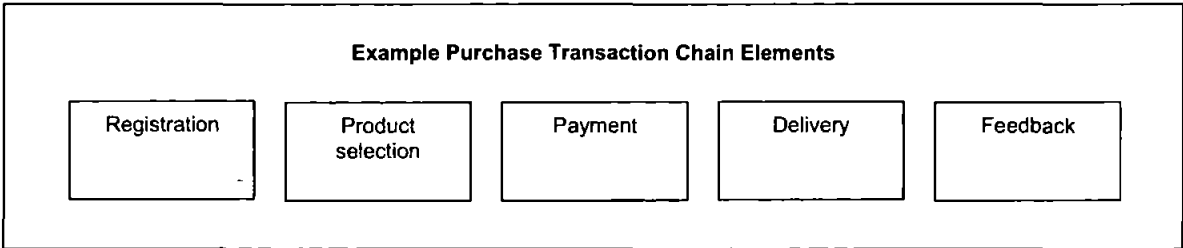
Figure 21 : Overview of purchase transaction chain elements

With the highest return:

The financial perspective has to part of an Internet marketing approach for a PO. The absence of financial objectives and underlying KPIs will not just foster continuous questioning of the overall strategy, but also make it difficult to justify specific investments. Certainly also non-financial transactions can be of significant marketing value, but the return on investment is the necessary balance towards all Internet marketing activities.

A Web site can certainly also reduce operative costs by implementing and streamlining automated costumer and business partner services (Kyle, 2007). This perspective has been excluded from further illustration as the focus on e-commerce, supply and delivery process automation are not part of this research. The value of this third objective covers many aspects from generating revenues, increasing the margin or enhancing customer relationship management. Online transactions can make the organization more independent from pre-existing intermediaries and allows gaining flexibility in margins and sales volumes. Furthermore online transaction can facilitate the collection of customer and partner information and feedback.

4.1.4   Balance of objectives

Internet marketing means creating awareness for products and services, creating the desire within the target group and to finally acquire value adding transactions. Those three objectives become the guiding framework for the following sections.

Based on the outlined objectives the current status and progress has to be made measurable via KPIs. Depending on this status of those KPIs, work packages have to be planned, implemented or adjusted.

The structure of objectives illustrated above includes the aspect of internal and holistic balance. Creating a lot of awareness is quite simple (as much awareness as possible), if costs are no consideration (efficiency of awareness) (example of internal balance). Also transactions will be substantial if the underlying return is of no importance (example of internal balance). Not just within one objective the characteristics are balanced but also overall. In most cases awareness or desire has to translate into transactions (example of holistic balance). The confidence in the Internet marketing approach might erode for senior management if the achievement of certain objectives does not lead into material benefits.

Unlike existing concepts the newly designed definition of Internet marketing objectives clearly focuses on creating value for the PO following the overall guiding principles of general marketing. After a first survey the initially identified objectives required very little refinement. The feedback elicited via an explorative survey (Chapter 6) describes certain dynamics and stresses the focus on creating awareness for products and services via the Internet. This focus also justifies the subsequent concentration of KPIs and work packages in this area.

4.2   Key performance indicators of Internet marketing

Implementing a strategy means to consequently execute a comprehensive program of activities to achieve each objective as defined by the PO. To measure and validate the effectiveness of this implementation and to prioritize corresponding work packages, a scheme of key performance indicators has to be established and sensitively calibrated (Kaplan & Norton, 1992; Niven, 2006; Niven, 2008; Kaplan & Norten, 2006; Tyagi & Gupta, 2008; Keyes, 2005).

Measuring the KPIs continuously is a necessary process to steer the implementation of a sustainable strategy. The selected KPIs have to provide a clear status of the overall performance of the PO; in parallel the indicators have to be easily measurable. KPIs can measure causes as well as effects of performance; the right choice and blend of indicators requires experience to evaluate how to use the indicators throughout the long term strategic process. This collection of 9 KPIs in this section tries to balance the aspects of

clarity, measurability as much as focus on PO's objectives; the system is also optimized in providing the information about causes and effects. The suggested new framework of 9 KPIs is fully based on the 3 objectives as defined in the previous section. Certain KPIs have a certain overlap which is a result of the integrity of the concept. They are illustrated separately anyway to enable a PO to pick and chose the required components individually based on the identified strategic priorities. Understanding the objectives of marketing as the basic principle for Internet marketing, the subsequent KPIs become the main reference model of all existing metrics.

Following the definition of the objectives in section 4.1, every objective was translated into a KPI. Potential KPIs were evaluated based on the criteria mentioned above. Based on the feedback of an initial survey (appendix M) the suggested structure of KPIs was largely refined. The final structure of 9 KPIs derived from the objectives is illustrated in figure 22 and the following section:

Objectives		Key Performance Indicator
Create AWARENESS	as **MUCH** as possible (of right target group)	Visits (by target group)
	as **FAST** as possible	Awareness TURN-AROUND TIME
	as **EFFICIENTLY** as possible	Awareness COST
Create DESIRE	as **STRONG** as possible (of right target group)	Conversion (by target group)
	as **FAST** as possible	Conversion TURN-AROUND TIME
	as **EFFICIENTLY** as possible	Conversion STEPS
Generate TRANSACTIONS	as **MANY** as possible (of right target group)	Transactions (by target group)
	as **EASY** as possible	Transaction TURN-AROUND TIME
	With the **HIGHEST RETURN**	Transaction RETURN

Figure 22 : Model of Internet Marketing KPIs

All KPIs illustrated in the figure above are defined in the upcoming sections below. Again, the entire framework follows the principles of internal and holistic balance (see section 4.1.4).

4.2.1   Measure the awareness

Creating awareness for products and services via the Internet is a widely accepted focus area of Internet marketing activities. To consistently measure the success of those

activities is an element requirement to ensure an efficient and sustainable approach. This section describes the 3 indicators visits, awareness turn-around time and awareness costs derived from the objectives. The figure below illustrates the model:

Objectives		Key Performance Indicator
Create AWARENESS	as MUCH as possible (of right target group)	**Visits (by target group)**
	as FAST as possible	**Awareness TURN-AROUND TIME**
	as EFFICIENTLY as possible	**Awareness COST**
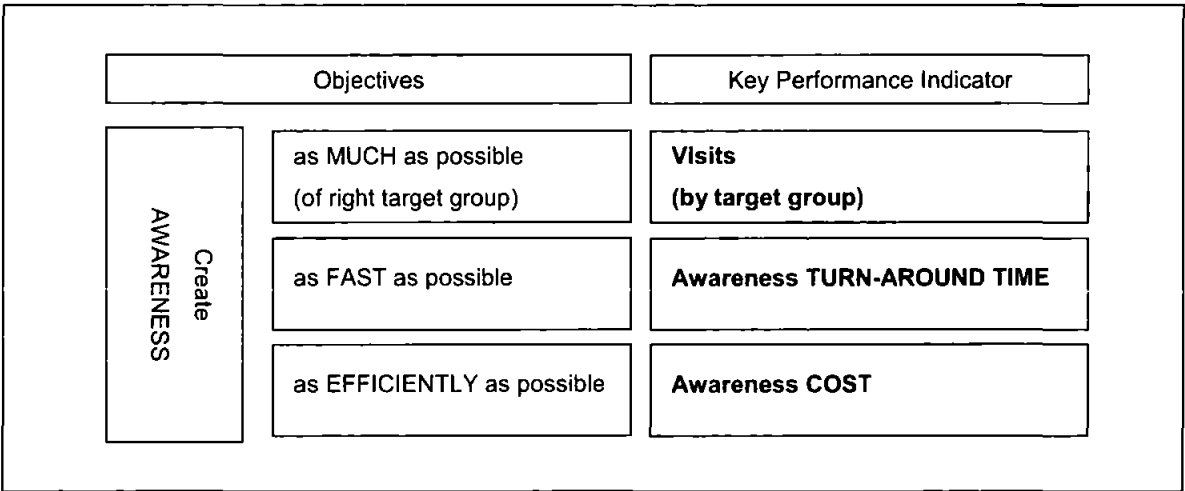
Figure 23 : Awareness KPIs in overall framework

The KPIs are described in the sections below.

4.2.1.1   Visits

The characteristics of the objective of creating awareness has been defined as to create as much awareness as quickly and efficiently as possible. The KPI of visits provides a good indication of how much awareness has been created. Every individual visit is a result of implicit or explicit awareness activities. The metric provides the sales organization a simple and relevant figure of the contribution of the Internet towards the overall marketing strategy.

The number of visits primarily focuses on the own Web site and is very easy to measure via the used Web site management system, server logs or Web analytics tools. Potential exposures generated via other channels than the own Web site might not be always available. In case intermediaries promote the brand, product and services the specific platform of this partner may provide statistics of views as well. Dominant intermediaries like ebay shops, amazon or expedia.com provide visit information for the specific

promoted brand, product or service. Visitors may have different roles from a marketing perspective. Certain visitors might be wholesaler, multiplier or B2B partner or end customer. Based on this understanding the KPI of exposed visitors should be structured in a way to cluster different target groups to evaluate the effectiveness of the awareness strategy. On the one hand it is rather simple to structure the overall traffic into certain segments which are demarcated by technical settings and Internet utilization pattern (e.g. previously visited Web sites, browser, operating system, location and time of access). This information can be analyzed via site or network centric analyzes. On the other hand it might be quite difficult to differentiate the traffic into the sales organization's specific product and service consumer clusters. Allocations according to martial status, professional experience, education, preferred food / travel locations / hobbies or age can be supported by professional Web analytics agencies like Nielsen, ComScore and HitWise which provide user centric data points (largely focused on just the US market). On the Web site of the PO a specifically designed Web site navigation structure or navigation can provide additional insight into the visitor groups. The following examples describe two very simple scenarios which exemplify this approach.

Scenario 1:	Scenario 2:
Reference: www.google.com	Reference: Banner "Become affiliate of mobile-phone.com"
Keyword: Nokia 3310	
First click: Online shop	First click: B2B information

Table 12 : Scenarios for click streams

The navigation pattern of scenario 1 potentially indicates a retail customer. Scenario 2 looks like a potential partner, affiliate or multiplier.

Also timing information can be used to enhance the classification of consumers. Learn2go.de for example addresses German students and school kids as well as adults with specific products. A visitor on the Web site of this PO at 10.00 am on a working day is more likely to be an adult, as students and school kids between 8 and 18 years have just limited access to the Internet at this time.

Note:

Initially an additional KPI for the framework was developed as part of this research. This KPI quantified the spread of the sales organization's brand, product and services. The spread was targeted to measure hyperlinks and banner to the own Web page as well as indexed Web sites and search engine result page rankings. The KPI has not been considered in the final structure as it solely indicates the potential of awareness that can be created via the Internet, but not the finally achieved awareness. A higher spread does not measure a higher awareness within the relevant target group.

4.2.1.2   Awareness turn-around time

The definition of the Internet marketing objectives clearly stressed the importance of how fast awareness can be created within the relevant target group at certain points in time in the product life cycle. It has been illustrated that creating awareness for products and services is very often time sensitive. A dominant high position on search engine result pages during the time of a product launch for example is a tremendous opportunity. But also in general the flexibility and pace of creating product and service spread can be a significant competitive factor for the sales organization.

The awareness turn-around time measures how fast product and service information and corresponding references can be presented in the Internet. For such a presentation a new Web site or marketing message has to be created, content formulated or supporting design components developed. This process takes time based on the flexibility of the technical setup and underlying operational processes. Secondly the question has to be answered how fast a banner will be illustrated on major Web sites or from which moment on products and services can be found over a search engine. Generally each PO with serious Internet marketing ambitions should establish a set of channels to communicate within the marketing place. The table below is an example of the time-to-market to create awareness. Within this or an equivalent overview the PO has to define realistic target values and track the progress on achieving them for the most significant channels.

Channel	Time-2-market	Major determinants
Own Web Site		
- Content Development	1 day	Text complexity
- Web site live	1 day	Content Management System and approval processes
Search Engine Index		
- Google	7 days	Indexing frequency
- Yahoo	14 days	Indexing frequency
- MSN	14 days	Indexing frequency
Banner		
- GMX.DE	2 days	
- WEB.DE	4 days	
- HEISE.DE	10 days	
...		

Table 13 : Awareness turn-around time

A majority of the values for this KPI might have to be assessed manually. Certain tools provide information on how fast new content is indexed and ranked in search engines. Also advertisement service providers deliver transparent information on when new banner are illustrated within the marketing network.

4.2.1.3   Awareness Costs

Creating awareness has to be done as efficiently as possible. As illustrated in the previous sections awareness can be created via different paid or unpaid channels. To create awareness efficiently the performance of utilized channels has to be evaluated to potentially adjust the strategy. To evaluate the efficiency of the available and utilized channels the number of visits has to be broken down into the different channel alternatives. This breakdown of visits has to be put into correlation of the corresponding cost for the specific channel. The following table illustrates an hypothetical example of the consolidation of those metrics into one overall measurement:

	Channel	References / month	Cost	Cost per visitor
A	Google Adword "Nokia 3310"	1,000	10 EUR	1 cents
B	Google Adword "Plasma TV"	10,000	1,000 EUR	10 cents
C	Yahoo: "Sony MP3 player"	5,000	0 EUR	0 cents
D	Banner on Web page X	3,000	3,000 EUR	100 cents
	TOTAL	19,000	4,010 EUR	21 cents

Table 14 : Channel effectiveness

The figures are for illustration only and show two main perspectives. First of all, the total awareness costs are consolidated; secondly, the costs per visits are calculated. While the total cost provide an insight into the overall marketing expenses for creating awareness over the Internet, the cost per visits allow identifying the most efficient channels. Based on this specific example channel B creates the highest awareness for the Web site. Considering the occurring expenses related to this traffic it has to be questioned if option B is the most effective way of creating this kind of awareness. Possibly the traffic for "Plasma TV" creates more value due to a higher conversion rate in sales or the overall marketing strategy, but based on this key performance indicator search engine optimization for more keywords in yahoo seems to be a better strategy. The overall result can be illustrated in a simple matrix to create a graphical overview of the most efficient channels:
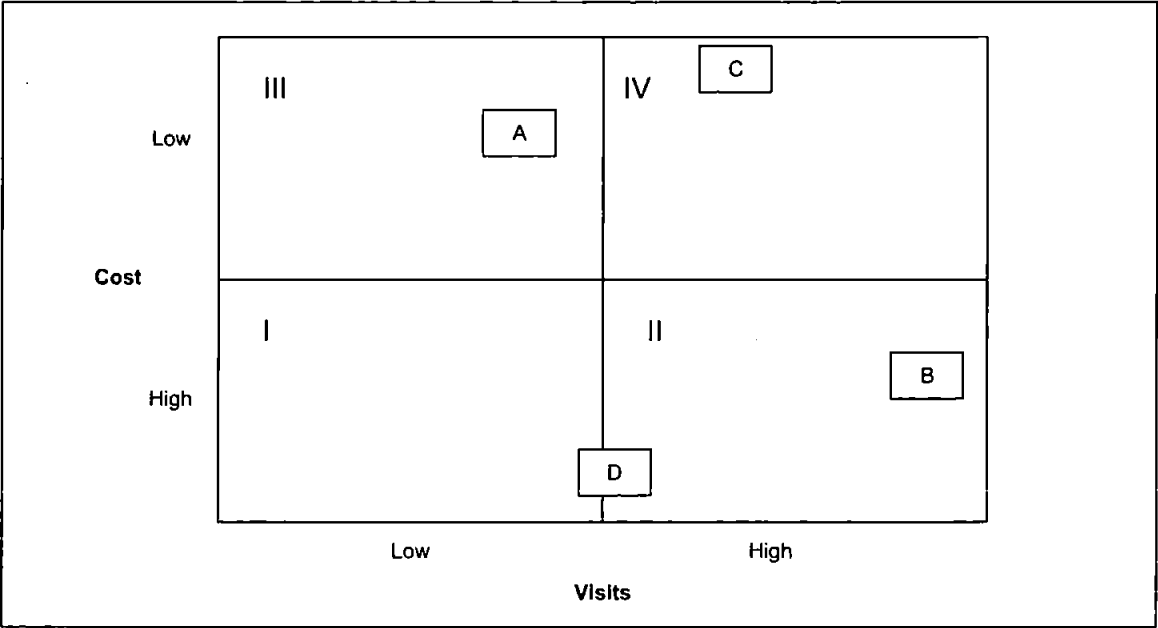
Figure 24 : Awareness Cost matrix

Within this matrix, activities within area (I) should be eliminated as the costs are high and visits generated are low. Activities from area (II) should also be evaluated very carefully if the created awareness justifies the higher cost base. Activities in area (III) are not as efficient as items in sector (IV) but due to low cost base might be acceptable. Items in area (IV) are the most efficient and should be extended if more awareness is targeted to be generated.

This KPI awareness costs can be used to optimize the overall awareness strategy considering the success rate and underlying investment into a specific channel. The awareness costs, the later described conversion rate and transaction return provide the key information for the overall Internet marketing business case.

4.2.2   Measure the created desire

Creating awareness for the products and services of a PO is a fundamental starting point of successful Internet marketing. Once a potential customer has been made aware, he has to be convinced why he should purchase the products and services or perform any other transaction. As described in the previous sections, creating the desire for products

and services can be greatly supported via Internet marketing activities. This also means that even though the customer might not purchase the products and services over the Internet (usually measured in the conversion rate), the objective might be met, having created a motivated customer who purchases or recommends the products and services via any other channel.

The following section describes 3 KPIs derived from the second objective to measure the success of the strategic work packages. The following overview describes the three objectives and their link to the objective:

Objectives		Key Performance Indicator
Create DESIRE	as STRONG as possible (of right target group)	**Conversion (by target group)**
	as FAST as possible	**Conversion TURN-AROUND TIME**
	as EFFICIENTLY as possible	**Conversion STEPS**
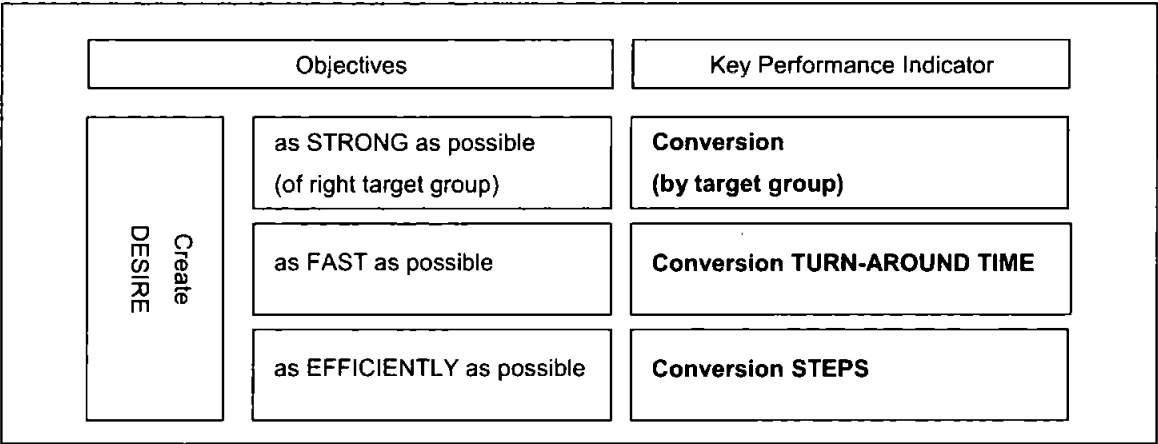
Figure 25 : Desire KPIs in overall framework

4.2.2.1   Conversion

As illustrated above the number of visits is an important KPI to evaluate the created awareness for products and services. To explore how attractive the products and services are, the number of conversions complements the KPI framework. This amount has to be differentiated by the specified target group clusters as structured from the PO.

In principle there are two perspectives of conversion:

- Total number of conversions
- Conversion rate (transactions divided by all visits)

To measure the desire created via the Internet the conversion rate (item number 2) is

more appropriate. The total number of conversions (item number 1), e.g. 100 conversions, is also important to know – and will be measured further below with the indicator transactions (section 4.2.3.1) – but does not provide an insight into the progress of the work packages focusing on creating desire. In case the above-mentioned 100 conversions are based on 100 visits – meaning all visitors initiated a transaction – the offer appears to be very desirable. If the 100 conversions are the result of 10 million visitors, transactions might not be evaluated to be as attractive as in the first scenario. Based on this understanding, and following the objective of measuring how strong the desire created via the Internet really is, the focus will be limited to the conversion rate. (As indicated the total number of conversions is equivalent to the KPI transactions of section 4.2.3.1).

Equivalently to the description of the objective, it has to be clearly highlighted that Internet marketing is not just focused on generating direct sales. Following a more holistic understanding of value adding transactions, the conversion rate can be calculated for any kind of transaction that has been identified by the PO. The following figure is an example of potential measurements:
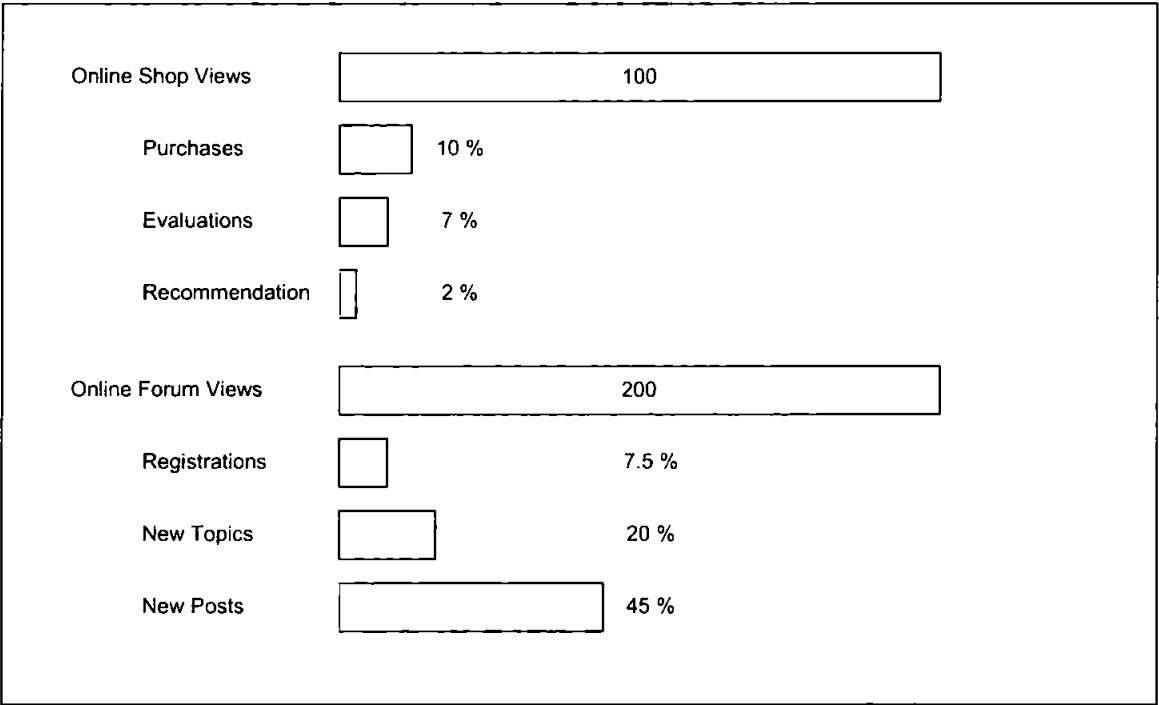
Figure 26 : Possible areas to measure conversion rate

The example illustrates a conversion rate of 10% from online shop visits to purchases and 2% to recommendations. That indicates that 10 % of all visitors create a desire to purchase, much more than the conversion to perform recommendations. The 45% conversion rate of forum views to new posts can be interpreted that almost half of all visitors to the forum create the desire to leave an entry. Those figures have to be put into correlation of industry benchmarks or tracked over a period of time to evaluate improvements.

The conversion rate primarily indicates if the packaging of product and service attributes as well as the supporting descriptions and illustrations are convincing enough to trigger a consumer's transaction. The KPI also indicates if the PO is successful in staying interesting for existing customers and to create a sense of loyalty within members of the targeted customer groups.

Similar to the KPI visits (section 4.2.1.1) this indicator has to be differentiated by target group. As this process follows an equivalent approach as illustrated above – potentially even easier as certain transaction data can be captured to categorize the consumers – no further elaboration appears to be necessary at this point of time. Overall it is technically also quite easy to consolidate the information about the amount of conversions on a Web site. Also splitting this number into new and retained customers is possible and provides an insight of the created desire for the products and services as well as target group characteristics.

4.2.2.2   Conversion turn-around time

The objective of creating desire for products and services has been further specified to convert visitors as quickly as possible. Convincing the consumer with striking product and services attributes, leading to a direct transaction, reduces the risk of the consumer investigating and selecting competing alternatives or session break-ups. Especially larger investments or purchases which lead to future responsibilities or obligations require potentially more time to conclude (De Vries, 2008). The turn-around time is also determined by the product as such. While the conversion turn-around time for products with standard attributes may be determined by more price research (on different Web sites), products with diverse attribute combinations result in more time on one specific

Web site. Those characteristics determine the absolute level of conversion turn-around time, while the corresponding work package and objective is to continuously reduce this period (relative development over period of time). How much time is required can be illustrated on a time scale, again evaluating potentially different transaction types.

Measuring the conversion turn-around time can focus on transactions within one session (visit) or over several sessions (visits). Both perspectives indicate the attractiveness of an offering, while the conversion turn-around time in one session is usually measured in minutes and seconds and the turn-around time over several sessions in days and months. The first perspective focuses more on an immediate conversion perspective of potentially rather low-cost or very prominent products and services. The second perspective might be more a longer term view and potentially reflects on the overall marketability of an offering in its product life cycle. Considering the guiding principle of keeping the KPIs as simple as possible the first perspective (single session) has been identified to receive the main focus of attention within this framework. The second perspective (several sessions) is just illustrated as an additional note and due to new technical indicative measurement concepts via specific measurement tools (e.g. google analytics – loyalty metrics).

The first perspective is quite simple to measure as long as the transactions are performed on the own Web page or if the facilitating intermediate provides statistical information. The turn-around time includes the timeframe from the first visit of the site until a transaction is initiated (not completed). The time required for the transaction itself is a measurement of the transaction complexity (not of the desire for products and services) and will be illustrated in the transaction turn-around time (section 4.2.3.2) The table below illustrates a example data of conversion turn-around times in one session over two consecutive months:

Purchasing		Average – Month 1	Average – Month 2
	Product 1	140 seconds	140 seconds
	Product 2	230 seconds	230 seconds
	Product 3	490 seconds	310 seconds
Forum entries			
	Topic 1	220 seconds	210 seconds
	Topic 2	580 seconds	530 seconds

Table 15 : Examples of conversion turn-around times

The hypothetical example data above indicates in Month 1 that the conversions to purchase product 1 is significantly faster than for product 3. A similar structure is visible for new forum entries for topic 1, which is much faster than on topic 2. Assuming similar navigation models and appropriate labeling / categorization, those figures provide a clear indicator which products/topics generate more desire / motivation to transact than others. Evaluating the figures over a period of time (e.g. month 1 vs. month 2) provides an additional insight into the attractiveness of the Web site's components. Changes in conversion turn-around time may be observed based on adjustments in the way the product and service are illustrated. In the example above product 3 significantly improved its conversion turn-around time potentially due to changes in product / services attributes or corresponding illustrations and descriptions.

The measurement of the conversion turn-around time has to be part of the session management of the underlying technical framework of the Web site's software. Technical logging – and the provisioning of automated reports – on the time from the first visit up to the transaction initiation is technically quite simple. The example below illustrates how the conversion rate may develop for a specific transaction over a longer period of time (several sessions):
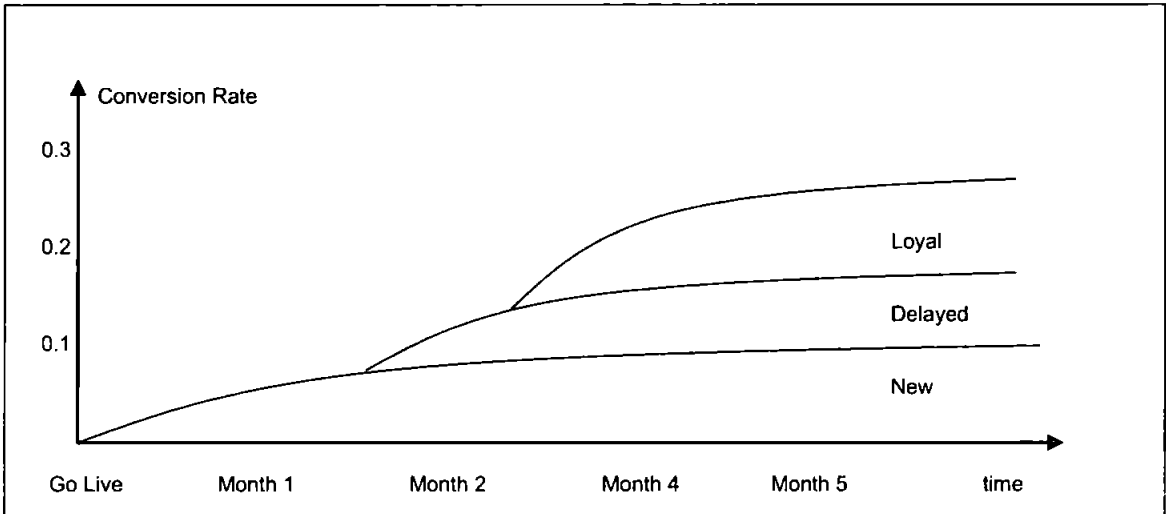
Figure 27 : Timeline of transactions

The graph in the example illustrates that after a growth period after go-live the number of conversions stabilized on a certain level. Those conversions were based on new visitors which created the desire to initiate a transaction immediately. After some time visitors, who could not make a decision upon the first visit, became part of the traffic to the Web site and initiated transactions as the group of "delayed" users (costumers which purchase just after a certain time). This new structure of overall traffic changed the overall conversion rate graph. In a final stage certain consumers created loyalty to the products and services and initiated additional transactions, which again changes the overall traffic mix and conversion rate. The illustration also shows that based on the delayed and loyal customers the conversion rate could be improved significantly. This understanding (not necessarily the measurement) has to be brought forward into the generic work packages and implementation of the strategy. The measurement of this KPI requires the storage of certain manually, or mostly automatically, assessed user centric data to match different session over a period of time. As this assessment and storage of data may conflict with legislations in certain countries it is not further pursued and does not become a substantial part of the strategic framework.

4.2.2.3   Conversion Steps

The objective of creating desire stresses the importance of doing so as efficiently as

possible. Efficiency in terms of conversion therefore means a minimum of navigation steps for consumer. This KPI follows this understanding and similar to the conversion turn-around time it measures the number of steps from the first visit of the Web page until a start of a specific transaction. Following the holistic understanding of valuable transactions the transaction steps can be measured equivalently to the conversion turn-around time. Mapping key transactions and underlying conversion steps indicate the complexity for consumers to be converted. To fully understand the conversion steps different click stream analysis can be performed.

Figure 28 presents an example of a navigation tree matched with a simple visits statistic:
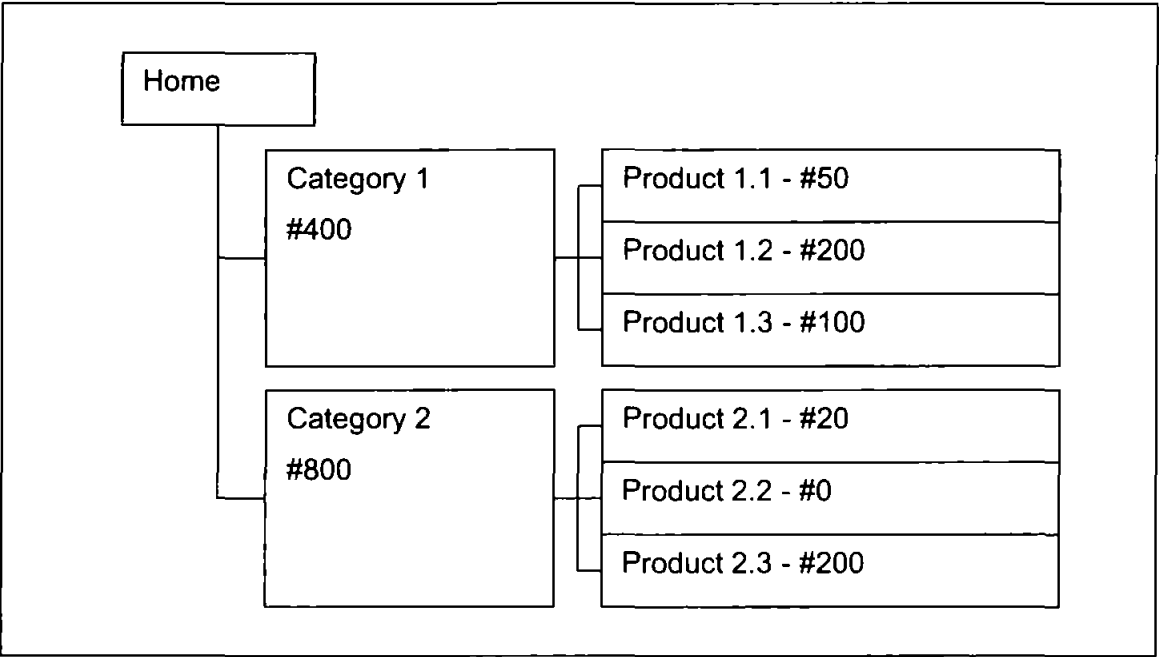
Figure 28 : Example navigation tree and number of visits

The example above provides a very interesting insight into the attractiveness of the different elements of the Web site. While more consumers are navigating to category 2 from the start page, the products are obviously not as interesting as the products in category 1. This behavior might be related to either the products in category 2 directly or to the descriptions and pictures of the products on the category 2 page. Also product 2.2 and 1.1 receive very little attention from consumers, which should be analyzed in detail. The pages with the highest attention are for product 1.2, 1.3 and 2.3. If those products

also provide an attractive profitability for the sales organization direct short-cuts from the homepage to those products might improve the amount of value adding transactions. Following this navigation path and click stream analysis, optimization for the conversion steps / funnel can be identified. An example is illustrated below:

Example:

The bestselling product of a PO is a specific MP3 player. Based on the click stream analysis it is clearly visible that most users click from the start page (1) on the category overview for MP3 player (2), choosing the MP3 player (3), add a specific bag for the player (4) and then check out. Optimizing this funnel means to maybe put the specific MP3 player including the bag on the start page with a direct link to check out. This saves the consumer navigational complexity and potentially avoids loosing certain customers which get distracted in the lengthy click stream.

The measurement of the conversion steps requires the utilization of a sound session management on all Web pages. Additionally or alternatively Web analytic tools provide information about conversion steps and funnels.

4.2.3   Measure the transactions

The Internet marketing objective of a PO is to generate as much transactions as possible, which are easy to perform by the user and provide the highest return. Based on a much broader definition of valuable transactions than focusing on sales (as indicated in the previous sections), the measurements assessing the performance of transaction follow this holistic understanding.

The following overview describes the three objectives and their link to the objective:

Objectives		Key Performance Indicator
	as MANY as possible (of right target group)	**Transactions (by target group)**
Generate TRANSACTIONS	as EASY as possible	**Transaction TURN-AROUND TIME**
	With the HIGHEST RETURN	**Transaction Return**
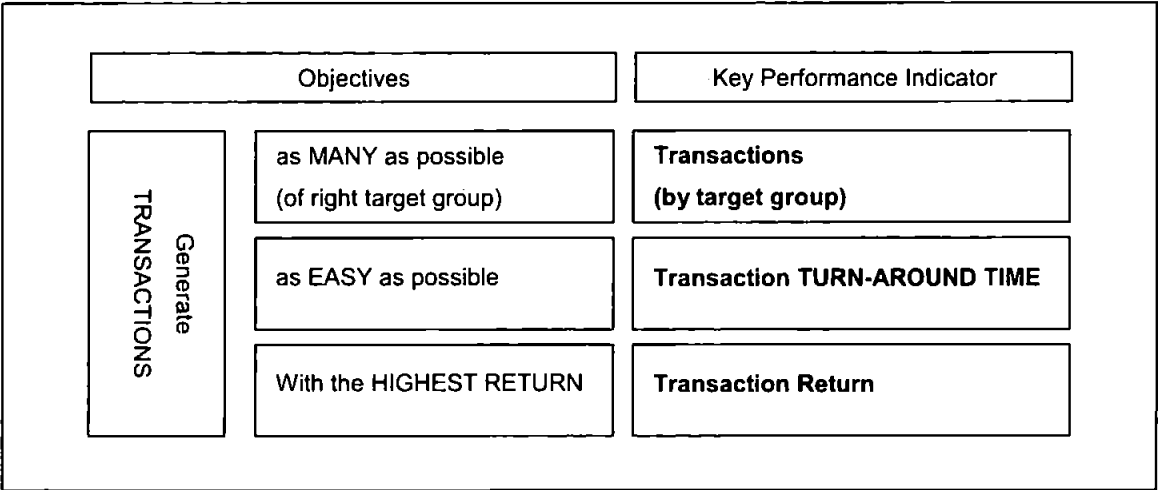
Figure 29 : Transaction KPIs in overall framework

The KPIs are described in further detail in the following sections.

4.2.3.1   Transactions

The assessment of the transactions is based on the complete spectrum of (prioritized) possible transactions. The main challenge is to structure and prioritize the list of demarcated relevant transactions; the measurement as such is mostly quite simple. For each prioritized transaction target values (e.g. per day, per week, per month) can be determined to benchmark the current performance. Over the same timeframe the actual values have to be captured. The table 16 summarizes example data for illustration only:

Transaction	Priority	# / day	# / week	# / month
Registrations	3	5	30	110
Orders	1	15	70	200
Payments	2	15	70	200
Deliveries	2	15	70	200
Contacts via Email	3	1	5	19
Forum entries	3	2	6	29
Downloads of driver	3	0	1	5

Table 16 : Overview qualified transactions and actual values

The difference of this KPI to metrics described in section 4.2.2 is that purely the number of transactions, but not the conversion ratio is of interest. No matter if 100 transactions are generated out of 1.000 or 200.000 views, the overall value for a specific PO might be similar (in terms of absolute income). Certainly the awareness costs are probably higher for the second scenario which is based on a lower conversion rate. In case mostly unpaid awareness channels are used – and no significant labor is invested into penetrating those – the absolute figure of transactions appears even more important.

Target Group:

As illustrated several times above, targeting and selling to a specific group of consumers can lead to a more sustainable long term business model. With this understanding the target groups might also be different for different transaction types. For example young Internet users may be more likely to use online forums and online payments (e.g. paypal or moneybookers). Older target groups may focus on certain delivery securities or classical payments methods.

The challenge on this KPI is the technical implementation of a target group specific measurement. On the one hand due to the complexity of allocating one specific user to a certain target group this indicator might not be very accurate and just indicative. On the other hand a majority of transactions require a registration to the Web site providing a set of personal information. Via this registration process certain demarcating factors can be collected. The table below illustrates an example of a breakdown of registrations on a travel portal into target groups:

	January		February		March		April	
	A	T	A	T	A	T	A	T
REGISTRATIONS	300	400	350	450	450	500	600	550
- Students	140	150	150	150	150	150	150	150
- Business traveler	130	150	150	150	150	150	150	150
- Holiday traveler	20	100	50	150	150	200	300	250
- Agencies	10	0	0	0	0	0	0	0

Table 17 : Breakdown transactions by target groups

Via a table as illustrated above the PO can clearly identify which target groups are currently successfully addressed via the Internet. Based on the overall direction of the PO regarding the targeted customer segments, subsequent initiatives can be implemented to leverage the opportunities of developed as well as underdeveloped areas. The developed target groups have to be preserved via retention programs or special communication. Underdeveloped areas probably require further activities to create awareness and desire for the products and services.

To develop strategies optimizing the underlying cost structure resulting from specific transactions a complementing breakdown into different transaction characteristics can be implemented. The example below illustrates the breakdown of payment transactions into different channels per month (actual and targets):

	January		February		March		April		May	
	A	T	A	T	A	T	A	T	A	T
PAYMENTS	300	400	350	450	450	500	600	550	650	600
- Visa	140	150	150	150	150	150	150	150	100	150
- Mastercard	130	150	150	150	150	150	150	150	100	150
- Paypal	20	100	50	150	150	200	300	250	450	300
- Check	10	0	0	0	0	0	0	0	0	0

Table 18 : Breakdown of qualified transactions into channel

The example above illustrates that during the growth period the PO targeted especially online payments (visible in growth of target value for paypal). The actual payments show that even more online payments were transacted than initially planned, while credit card payments stayed under the target. This might be identified as a positive trend due to disadvantages resulting from online credit card payments as experienced by Mustafa Online:

"Credit card frauds have caused significant losses in Mustafa's online business. In face-to-face transactions, payment to the company is "guaranteed" as long as the signatures match. With online payments however, if a client denies having used his card to make purchases, the bank will take the money back from the merchant. The guilty parties are often not traceable because they do their online purchases at cybercafés. As a result of

"kinks" in its payment system, Mustafa has stopped accepting online payment by credit card since 1999. (Hooi et al., 2000)"

Also the cost structure of credit card payments can have major disadvantages for the PO as illustrated by Teo & Kam (2000). The overall analysis in terms of payment channels allows optimizing the income via the fee structure of the different methods. Equivalent break-downs for other financial and non-financial transaction segmentations allow equivalent analysis.

4.2.3.2   Transaction turn-around time

Most Web sites allow consumers to perform transactions directly over the Internet. Based on the development of the underlying software, it can be quite complicated or rather easy to perform those transactions. In order to create the most comfortable process to transact – as described in the Internet marketing objectives – sophisticated but transparent methods for session management, cookies or registrations have to be established. Also the transaction area is by far not limited to the ordering process of the products or services. Payment and delivery process have to be designed, easy methods to provide feedback or to submit additional requests via the discussion forums have to be established.

Based on the complete list of valuable transactions (as created for the performance measure of transactions – 4.2.3.1), a table can be consolidated listing priority, number of steps, target time and average transaction time. The values as such are quite easy to determine. An example is illustrated in the table below:

Transaction	Priority	Steps	Average	Target
Ordering	1	4	7 mins	3 mins
Payment	2	3	5 mins	2 mins
Delivery	2	4	30 mins	10 mins
Contact via Email	3	3	2 mins	2 mins
Forum entry	3	4	8 mins	5 mins
Download of driver	3	5	4 mins	2 mins

Table 19 : Example of transaction cycle times

The initial setup of transactions can always be strongly optimized to enable consumers to have a more seamless and unproblematic experience. Based on the gap between actual and target values, the PO can prioritize on which transactions it wants to focus first.

A lot of transactions can be performed via different channels. A product for example can be ordered via an affiliate, an ebay-shop, a portal or the own Web site. A payment can be done via credit card, online payments (e.g. paypal or moneybookers), direct debit, transfers or checks. To identify the most effective channels combination for each transaction and to optimally leverage those, the transactions turn-around time might be broken down considering certain channel information.

4.2.3.3 Transaction Return

Internet marketing focuses on generating as many transactions as possible, which are easy to perform and create the highest return. Developing a trustworthy financial indicator is an essential element to create credibility for the Internet marketing strategy in front of the PO's management team. Ignoring the financial consideration of the strategy – and maybe even marketing in general – is the second main reason of hindrance not engaging into Internet advertising (McKinsey, 2007). Out of the broad spectrum of different financial KPIs the Return on Investment (ROI) seems to be the best complement to the measurement framework. While pure revenues do not reflect on the underlying cost structure and net income excludes the capital requirements a ratio is perceived to be the most appropriate choice. From the available return ratios ROI is not just largely used and generally accepted, but also the most applicable one (Loveday & Niehaus, 2007;

Rutherford & Knowles, 2007; Harden & Heyman, 2009; Todaro, 2009; Lenskold, 2003).

The calculation of the ROI follows first of all a rather simple calculation scheme of dividing the income of the Internet marketing activities by the required investment. Both components may not be consolidated automatically via the Internet platform, but the figures are standard information of every PO's balance sheet (Powell, 2008; Phillips & Phillips, 2008). This primary ROI excludes the consideration of valuating non-financial transactions (broader understanding of value). In the modern calculation of this KPI the definition goes away from net income to value (Powell, 2008; Phillips & Phillips, 2008). The risk of including non-financial transactions into the measurement is to potentially dilute a very solid figure and loose credibility in front of the management team. Considering this conflict, the transaction return should be calculated at least providing the clean ratio, without non-financial transactions (ROI(F)). Furthermore the non-financial transactions can be quantified and added in a second ROI figure (ROI(NF)). Due to the theoretic valuation of non-financial transactions the figure can just be indicative. Even though this approach seems very theoretic, similar approaches are used in normal accounting and controlling, for example for brand value (Lassar et al., 1995; Aaker, 1996)). An example calculation for ROI (F) and ROI (NF) is illustrated below:

	Volume	Value	Total
Total Revenues	1.000	90	90.000
Product Cost			
- Production Cost	1.000	50	50.000
- Delivery Cost	1.000	1	1.000
- Other Cost			2.000
Internet Marketing cost			
- Awareness Cost			5.000
- IM platform Cost			2.000
Total Cost			60.000
Profit			30.000
ROI (F)			50%
Newsletter subscription	100.000	0.10	10.000
Positive Product Evaluations	10.000	0.20	2.000
ROI (NF)			70%

Table 20 : Calculation of Transaction Return

The example calculation illustrates not just the non-financial ROI but also the consideration of non-financial transactions. While the figures are certainly just examples, it is visible how non-financial transactions can significantly influence the overall ROI. As the valuation of the non-financial transaction did not follow any research methodology, the KPI can be questioned and might reduce the credibility of the overall framework. The utilization therefore depends on the valuation process and management style of the PO.

4.2.4   Additional KPIs

Existing research has developed a broad spectrum of different Internet marketing metrics. The selection of the KPIs used within the new strategic framework has been based on three criteria: a) clear and direct value contribution to the organization or reference to objectives, b) easy to understand also for non-technical management and c) easy to measure. Furthermore the overall structure is based on the principles of balance; balance in terms of cause and effect as well as resource constraints. Certainly additional KPIs can be utilized if helpful within the managerial direction of the Internet marketing strategy, but in general the developed structure should encompass all relevant areas. Other established metrics are illustrated in the table below with a short description how they dissolve in the framework:

Metric	Measurement	Potential deficiencies
Overall onsite duration	Time spent on the entire Web site	Might be distorted from tab browsing May indicate interest or confusion More relevant measure would be the conversion to indicate the attractiveness of the content
Average time on Web page	Time spent on one specific Web page	Might be distorted from tab browsing May indicate interest or confusion. Again, more relevant appears to be the conversion rate
Clicks per visit	Clicks per visit (same page may count several times)	May indicate interest or unclear navigation funnel More relevant would be conversion steps or turn-around times
Pages / visit	Visited pages per visit	May indicate interest or unclear navigation funnel More relevant would be conversion steps or turn-around times
Total Investment	Cost of Internet presence or marketing activities	No relationship to corresponding value contribution. Helpful if segmented for specific areas, e.g. Awareness activities

		More relevant would be transaction return (ROI)
Errors	Number of error messages shown	No direct link to Internet marketing objectives. Valuable to improve Web site
Onsite search terms	Keywords searched in onsite search function	No relationship to Internet marketing objectives. Valuable to identify good keywords and consumer interests
Bounce rate	Percent leaving the Web site after visiting a specific page	Weak relationship to Internet marketing objectives. Can be used to improve clickstream. More relevant measure would be conversion steps and turn-around times
Bailout rates	Percent of users stopping transactions on specific break points	Weak relationship to Internet marketing objectives. Can be used to improve clickstream. More relevant measure would be conversion steps and turn-around times
Registrations	Number of users registering on Web site	Relevant just for specific Web sites Measured in the KPI 'transactions'
PageRank	Numerical representation of Web site popularity	Technical number which has no direct reference to Internet marketing objectives. Increased PageRank may create more visits (KPI of the framework)
References / Backlinks	Hyperlinks to the Web site	Technical number which has no direct reference to Internet marketing objectives. Increased backlinks may create more visits
Indexed pages	Web sites indexed in specific search engines	Technical number which has no direct reference to Internet marketing objectives. Increased indexed pages may create more visits (KPI of the framework)
Download time	Time to download Web page	Technical number which has no direct reference to Internet marketing objectives. Decreased download time may create better search engine positioning, consumer convenience and subsequent visits or

		conversions
File Size	Size of html files	Technical number which has no direct reference to Internet marketing objectives. Decreased file size may create better search engine positioning and subsequent visits
Keyword density	Utilization of meta keywords within body text	Technical number which has no direct reference to Internet marketing objectives. Right keyword density may create better search engine positioning and subsequent visits (KPI of the framework)
w3c compliance	Adherence to html standard syntax	Technical number which has no direct reference to Internet marketing objectives. Compliance may create better search engine positioning and subsequent visits (KPI of the framework)
Code to text ratio	Percentage of text in total html source code	Technical number which has no direct reference to Internet marketing objectives. Improved ratio may create better search engine positioning and subsequent visits (KPI of the framework)
Alexa Traffic Rank	Ranking from Alexa.com based on estimated traffic	Comparative value with no significance to Internet marketing objectives.

Table 21 : Additional metrics used in the area of Internet marketing

4.2.5   Measurement – Tools & Services

It should be noted that measurement tools and services were not a focus point of this research. The KPIs of the new framework have to remain independent from specific technologies and service provider, and all have been selected to ensure that they are simple, not just solely in terms of the measurement process, but also to ensure they are understandable and appreciated by senior representatives of the respective sales organization. Unfortunately several KPIs require specific internal information of the

organization and therefore can not be provided automatically from the technical marketing platform (e.g. ROI (considering product cost structure), Awareness TAT (considering offline preparation), awareness cost (considering internal effort / labor)). Even though, there are several tools and services which provide detailed information about specific aspects of the Internet marketing strategy. The Table 22 summarizes prominent services and tools as well as their scope of measurement:

Tool / Service	Scope of measurement
Nielsen NetView	Measures Unique audience, page views and time spent—as well as loyalty indicators, demographic information
Nielsen AdRelevance	Actual Internet population usage
Nielsen Homescan Online	link consumers' online behavior with offline consumer goods purchasing activity
Nielsen NetEffect	measure online advertising effectiveness by measuring the impact of online advertising on offline purchases
Nielsen MegaPanel	Click-stream analysis
Nielsen SiteCensus & Market Intelligence	Tracking and analysis of your Web site users, site performance, product placement, visitor loyalty, search engine performance and visitor behavior.
Nielsen VideoCensus	audience consumption of—and engagement in—streaming media
Nielsen TotalWeb	PC and mobile Internet usage
Alexa	Web site traffic details
Google Analytics	Visits, Clicks, Click-stream (Funnel), Usage duration, segmentations (geographic, technical), references, returning visitors, benchmarking,
Google Webmaster tools	Positioning of Web sites towards specific keywords
Piwik	Visits, Clicks, Returning visitors, usage duration, segmentations (geographic, technical, ..), References
Sitemeter	Visits, Clicks, Returning visitors, usage duration, segmentations (geographic, technical, ..), References, Exit points, click-streams
StatCounter	Visits, Clicks, Returning visitors, usage duration, segmentations (geographic, technical, ..), References, Exit

	points, click-streams
Webalizer	Server log analyzer, visits, references, clicks, data transfer
Analog	Server log analyzer, visits, references, clicks, data transfer
Weblog Expert	Server log analyzer, visits, references, clicks, data transfer
AWStats	Visits, clicks, duration, segmentations,
Clicky	Visits, Clicks, Returning visitors, usage duration, segmentations (geographic, technical, ..), References, twitter analysis, disabled java script
Mint	Visits, referrals, searches, segmentations
Yahoo WebAnalytics	Visits, Durations, click path / funnel, segmentations, behavioral repots (other web sites used from visitor)
Omiture	Visitors, segmentations, funnel, multi-channel analysis
Lyris HQ	Visits, Clicks, Returning visitors, usage duration, segmentations (geographic, technical, ..), References, Exit points, click-streams
Webtrends	Visits, Clicks, Returning visitors, usage duration, segmentations (geographic, technical, ..), References, Exit points, click-streams

Table 22 : Measurement tools & Services

All of the above mentioned tools and services may have advantages and disadvantages for the PO. While server- and site-centric tools are limited in the spectrum and sophistication of the data assessed (e.g. largely focused on technical user information), tools from major Internet service provider are largely dependent on java-script or plug-ins. As mentioned a detailed comparison of the main analytics tools has not been part of the research due to the focus on creating a strategic managerial framework. An indicative external reference is attached in appendix K; several other overviews are available in the Internet, e.g. Marketinghub (2007).

4.2.6   Balance of KPIs

The measurement of KPI is a vital function to enable the prioritization and steering of the

strategy. The new framework of 9 key performance indicators allows this prioritization and steering based on the new definitions of Internet marketing objectives.

Similar to the relationship between the initial objectives, the subsequent KPI follow the principle of providing an overall balanced structure. This balance replicates the principles of internal and holistic consistence as explained in section 4.1.4. Furthermore the KPIs provide information about cause and effect of success. While the number of transactions gives an indicator of the effect of how many transactions are performed, the transaction turn-around time indicates the potential cause of this number. Also conversion steps illustrate the potential cause of conversion turn-around time and finally conversions. This balance of cause and effect enables the PO to adjust the overall strategic and tactical measures appropriately. Being directly derived from the self-similar structure of the objective the KPIs follow this self-similarity.

4.3　　　Strategic work packages of Internet marketing

The clear understanding of the Internet marketing objectives and underlying KPIs are the main prerequisites to develop an effective and sustainable structure of work packages to implement a strategy. This section describes a set of 9 strategic work packages which are based on the objectives and KPIs illustrated above. Similar to the previous elements of the framework the work packages can be followed generically during the implementation of an Internet marketing strategy. The following section illustrates concepts and examples how to implement specific areas of those generic work packages. In case the PO decides for a different set of Internet marketing objectives the strategic work packages would have to be adjusted accordingly.

Also the work packages are a direct translation of the objectives into workable initiatives. Similar to the objectives and KPIs also the work packages were subject of a first survey on which the final model was developed. The 9 work packages have each impact on the specific KPI and objective. The overall structure of work packages within the strategic framework are illustrated in Figure 30:

Objectives		KPI	Work packages
Create AWARENESS	as MUCH (of right target group)	Visits (by target group)	Create highest visibility for target group
	as FAST	Awareness TURN-AROUND TIME	Shorten Awareness TAT
	as EFFICIENTLY	Awareness COST	Use Channels effectively
Create DESIRE	as STRONG (of right target group)	Conversion (by target group)	Create amazing product & service attributes
	as FAST	Conversion TURN-AROUND TIME	Convince with amazing information and illustration
	as EFFICIENTLY	Conversion STEPS	Create intuitive and interesting navigation
Generate TRANSACTIONS	as MANY (of right target group)	Transactions (by target group)	Increase transactions per visitor
	as EASY	Transaction TURN-AROUND TIME	Reduce technical and psychological complexity
	With the HIGHEST RETURN	Transaction Return	Increase return per transaction

Figure 30 : Strategic work packages in Internet marketing framework

The following sections provide further detail of the strategic work packages. The different work packages are described with different levels of detail, based on how much reference can be made to existing approaches which can be applied in the strategic model.

4.3.1 Creating as much awareness, as quickly and efficiently as possible

Generating awareness for brands, products and services of a PO has a long history and includes a broad spectrum of used channels; a very elaborate system has been illustrated

by Mohr & Nevin (1990). In the course of the performed research the spectrum has been limited to Internet channels. To create awareness the PO has to establish the highest visibility for the specific target group. This process of creating awareness should to be done as quickly and efficiently as possible. The figure below illustrates 3 strategic work packages and how they fit into the overall framework.

Objectives	KPI	Work packages
as MUCH (of right target group)	Visits (by target group)	Create highest visibility for target group
as FAST	Awareness TURN-AROUND TIME*	Shorten Awareness TAT
as EFFICIENTLY	Awareness COST*	Use Channels effectively

(The leftmost column spans all three rows with the vertical label: Create AWARENESS)
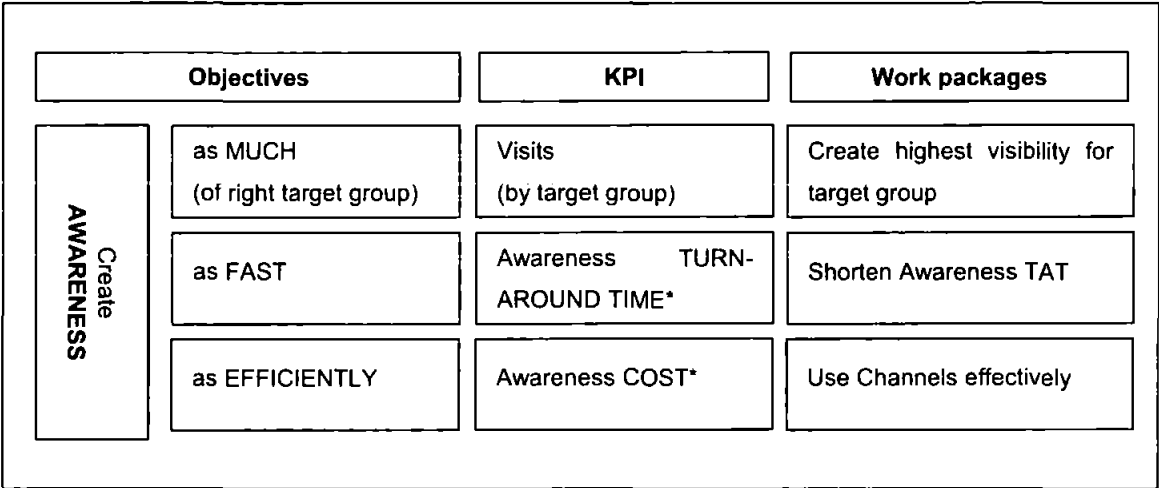
Figure 31 : Strategic work packages for awareness in Internet marketing framework

Creating the highest visibility for the specific target group will have a direct impact into the number of visits. Shortening the awareness TAT will create the strategic flexibility of the organization to create awareness for new products and services according to their product life cycle. Using the Internet marketing channels effectively will reduce the awareness costs while also creating more visits. The individual work packages are described in further details below.

4.3.1.1   Create highest visibility for target group

Understanding the target group of the Internet marketing activities is of major importance to identify how to achieve a maximum of awareness or visits. This understanding can be developed by first of all segmenting potential customers into logical groups (McKenna, 1988). The target group segments are hereby largely determined by the products and service being offered. Product and service independent segmentation approaches for promotion in offline media are extensively explored in the classical marketing literature

(McDonald & Dunbar, 2004; Wedel & Kamakura, 2000; Weinstein, 2004/1993; Myers, 1996; Dibb & Simkin, 2008). Four examples of possible Internet specific segmentations are listed below:

Segmentation Method	Segments
Role	Customer Multiplier Agent
Internet behavior	Searcher Surfer
IT & Internet skills	IT savvy Non-IT savvy
Attitude (Citrin et al., 2000)	Internet lovers Anonymous Internet lovers Anonymous info seekers Functionalists

Table 23 : Internet marketing specific target group segmentation

Segmentation by role: The first segmentation by role structures 3 groups: "customer", "multiplier" and "agents". While "customers" are the direct private or commercial consumer of the offering, "multipliers" are also private individuals or commercial entities who do not transact themselves but refer the products and services voluntarily in their own social network or environment. "Agents" are business partner of the PO who are specialized into promoting products and services via own technical networks and are compensated for their task. The three groups have different interests and navigation pattern which can be actively appreciated and targeted within awareness activities.

Segmentation by behaviour: The segmentation by Internet behavior just structures 2 groups: "Searcher" and "Surfer". Searchers are consumers with a very specific need searching for the required product or service. Surfers in general are not focused on a specific product or service during this specific session. They are using the Internet more for entertainment purpose. Both groups differ on how they navigate through the Internet. Based on those differences the PO can try to appeal the one or the other navigation

pattern. A surfer uses the Internet browsing more or less unstructured from Web site to Web site. The objective of a surfer is more to find interesting texts, pictures, videos or other kind of entertainment. As described the surfer is rather undetermined in the navigation pattern. He is therefore more aware of interesting banner, clicks more openly on text-links, tries special features or uses topic specific portals. A searcher is focused in terms of navigation, uses specific search engines and generally does not pay attention to banner, cross topic hyperlinks or special new interactive features. From an Internet marketing perspective both target group segments can be interesting to address. To create awareness for a searcher, search engine optimization is most likely the best strategy. A surfer can be addressed better via attractive banner on portals, text publications and special features.

Segmentation by IT skill: A third segmentation structures users by their IT or Internet skills. While consumers who are IT and Internet savvy are aware of common Web sites structures, portals, search engines and social media, Non-IT or Internet savvy users have a different navigation and utilization pattern. Non-IT or Internet savvy consumers are more likely to be distracted by advertisement and have different eye movements on the Web site itself (Emincubation, NN).

Segmentation by attitude: The last segmentation in the table is an established model from Citrin et al (Citrin et al. 2000). In February 2000 the Academic Centre for Interactive Marketing of Vlerick Leuven Gent Management School conducted a study on target groups in the Internet. They approached this study from two perspectives: what target groups are surfing the Internet (with regard to attitude towards the Internet) and what is the attitude and behavior of respondents towards specific target group sites. The results of this study indicate among others the presence of four important groups on the Internet: the Internet Lovers (24%), the Anonymous Internet Lovers (27%), the Anonymous Info Seekers (17%) and the Functionalists (32%). While the percentages have probably moved within the last years since the survey was conducted, the segmentation remains a potentially valuable structure. "Internet Lovers" are positive about all aspects of the Internet (contact, fun, information, multi-media). They do not mind registering on a Web site, which means revealing personal information; they do not mind receiving e-mails from companies and they are not bothered by Internet advertising (e.g. banners or pop-ups). In this group the younger age categories (14 – 18 year olds) are highly represented and

significantly more respondents are more than 3 hours a day online. The "Anonymous Internet Lovers" have almost the same profile as the Internet Lovers. They are nevertheless not that positive about registering on a Web site, receiving e-mails from companies, and Internet advertising. Again, the younger age categories are highly represented within this group. "Anonymous Info-Seekers" use the Internet as an information source. They prefer staying anonymous which results in a negative attitude towards registration, receiving e-mails from companies and also Internet advertising. The "Functionalists" are primarily interested in customized and personalized information. As a result they are positive about registration and receiving e-mails from companies. The "Anonymous Info-Seekers" and the "Functionalists" represent significantly older age categories.

To create as much awareness as possible "Internet Lovers" have to be addressed differently than "Information Seekers" or "Functionalists"; equivalently customers have to be addressed differently than agents and multiplier. Also searchers (consumers with a specific demand searching for a product or service) have to be targeted in a different way than surfers (who are not focused on a specific product or service). In the process of describing and defining the customer segments, it has to be considered that products and services offered via that Internet are generally available for any consumer, competitor or partner in the world. Based on this consideration it might be appropriate limiting the distribution network geographically to avoid the complexity of different language, tax and legal concerns. In case global customers are part of the targeted consumer group the financial impact of this complexity has to be recognized within the overall business case. On the other hand, each target group segment and individual person thereof provides a different (financial and/or non-financial) value to the PO. To manifest sustainable growth, the most valuable segments have to be identified based on this holistic understanding. The holistic value (incorporating the non-financial benefit) of specific target group segments is sometimes difficult to quantify. Furthermore quantifications methods might dilute the solidity and tangibility of the metrics. Besides finally the financial profitability, a target group might primarily promote the other objectives. A consumer who is (just) creating a lot of awareness for the products and services in his own network without conducting transactions himself might be more valuable than a single customer.

Based on the understanding of the motivations and Internet pattern of the defined target

groups, the available marketing channels have to be analyzed to position the products and services effectively. To create awareness effectively on other Web sites the used illustration and text has to be aligned to the specific channel. A searcher is focusing on the short abstract provided on the Web site or search engine result pages to identify a potential product or service. In case the PO is selling animal food, a fish portal should advertise fish food, not general animal or even dog food. To create an eye catching positioning on search engine result pages and other Web sites certain simple methods can be considered. On search engine result pages or other indexes there are generally dedicated sections for advertisement which are demarcated in different colors, see examples below. Those sections create additional awareness for some target group segments, but might not be used from other segments as they are clearly indicated as advertisement.
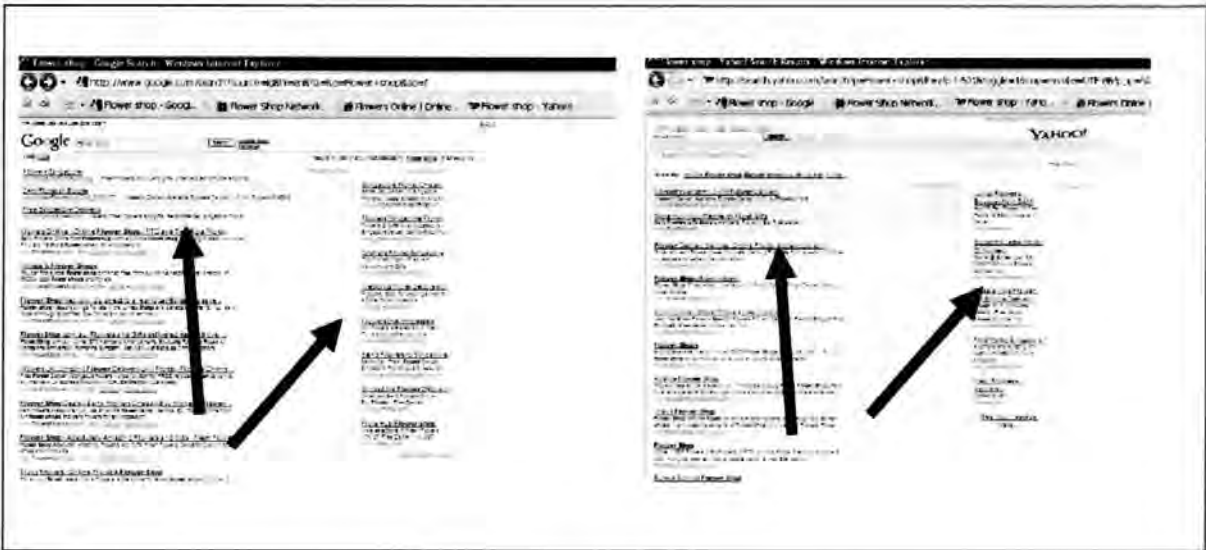
Figure 32 : Google (left) and Yahoo (right) advertisement areas

Especially on Web sites – not on major search engines any more - texts are illustrated in different font formatting. Text can be made bold, italics, underlined or in capital letters to highlight certain sections. Also references from other Web sites follow this model of directing the attention on specific areas. Additionally other Web sites often integrate images or logos which can serve as a means to create additional awareness. The screenshot in Figure 33 illustrates an example from eBay. The products with an image seem to be more attractive to evaluate than the entries without a picture.

List View | Picture Gallery

Sort by: [Time: ending soonest ▾] Customize Display

Item Title	Bids	Price*	Shipping to USA	Time Left ▲
Shakespeare Christopher Marlowe-HAMLET MACBETH etc BOOK	P	$8.99	$4.00	8m
THE COMPLETE WORKS OF WILLIAM SHAKESPEARE	1	$3.53	Not specified	15m
WILLIAM SHAKESPEARE Complete Works	5	$4.76	$3.00	4h 37m
CLIFFS COMPLETE Snakespeare's THE TAMING OF THE SHREW	P	$0.99	$2.55	5h 31m
Twelfth Night by William Shakespeare (1989)	P	$0.99	$3.75	6h 11m
WORKS OF SHAKESPEARE. 2 VOLS. VIRTUE & CO. LONDON.	P	$19.80	Not specified	6h 32m
WILLIAM SHAKESPEARE HISTORIES/COMEDIES 1958 2 BOOKS	-	$19.95	Calculate	6h 43m

Figure 33 : Illustration of offers on eBay.com

Furthermore some search engines use the html title tag as a snippet on the search engine result page some other search engines do not (see appendix C). As this short text is of major importance to create visibility, it has to be formulated precisely considering the target groups interests and navigational pattern. The psychological effectiveness of advertising is illustrated conceptually by McGuire (1978) and mathematically by Wilkie (1986). Describing purely the process from the presentation of a message (as illustrated above) towards an action on this message (from visibility to awareness and a click on the hyperlink or banner) is entirely media independent. Different media and psychological or social developments simply change mathematical probability of getting from one stage to another stage, but not the structure of stages itself (Peterson & Merino, 2003; Pires et al., 2006). In the hierarchy of advertising effects McGuire (1978) describes six elements:

Stage	Factors	Abbreviation
1	Presentation of message	P
2	Attention to message	A
3	Comprehension of message	C
4	Yielding to conclusion	Y
5	Retention of new belief	R
6	Behavior on new belief	B

Table 24 : The hierarchy of advertising effect (McGuire, 1978)

To create visibility the information has to be presented in way that the consumer pays attention to it. It has to be comprehensible and yield to a specific conclusion. Considering the six factors and assuming in an example calculation a 50% probability of each stage's success a likelihood of 1.6% of a visit can be extrapolated (based on Wilkie, 1986).

$P(Purchase) = P(P) \times P(A) \times P(C) \times P(Y) \times P(R) \times P(B)$

$P(Purchase) = 0.5 \times 0.5 \times 0.5 \times 0.5 \times 0.5 \times 0.5$

$P(Purchase) = 0.0156$

Based on this example above the advertising element would translate into 1.6% of visits. Increasing this rate requires an improvement of the probability of a positive outcome of the six factors mentioned above. This approach, focusing on the six factors with appropriate action, can be translated into one function of the marketing team to create the highest visibility for specific target groups.

4.3.1.2   Using Internet channels effectively

Several paid and unpaid channels can be used to create awareness via the Internet. How those channels are utilized has a major impact on successfully achieving the objective to creating more awareness than anybody else as well as to do so in an efficient way. The choice of channels is highly dependent on the selected target group as well as product and service positioning. As illustrated by Nielsen, less than 33% of traffic of www.eastgate.com is generated via all search engines while Google alone accounts for 76% of the traffic of www.useit.com even though both sites are similarly search engine ranking optimized (Nielsen, 2004). The figures illustrated from Nielsen are from different years and the rising popularity of search engines, especially in the last years, might explain part of the different observations. Even though, the figures just serve as an example that different channels result into different traffic streams for different Web sites. Similarly a small hotel Web site may receive more awareness via travel-portals (for example tripadvisor.com or expedia.com) than from a search engine compared to major hotel chains. Based on the current Internet environment the following Internet marketing channels can be grouped:

Channel	Description	Examples
Search Engines	Show certain Web sites based on an end user's query of specific keywords	www.google.com, www.yahoo.com
Directories	Consolidation of references categorized by different subjects	www.dmoz.org
Portals	Provide an overview of a specific topic including references to other Web sites	www.heise.de, www.chip.de
Web Sites	General Web sites which include references to other Web sites	www.besserkauf.de, www.axado.de
Social media Networks	Community created (information) platform	www.tripadvisor.com, www.facebook.com, www.twitter.com

Table 25 : Internet marketing channels

The different Internet marketing channels can be penetrated in a particular approach concentrating on the relevant platforms for the identified brands, products and services for the specific target group. The details about how to penetrate the different channels is illustrated in the table below:

	Channel	Penetration methods
A	Search Engine	Search engine submission Paid keyword advertisement Search engine ranking optimization
B	Directories	Directory submission
C	Portals	Paid advertisement Article submission Affiliate marketing
D	Web Sites	Banner or link exchange Affiliate marketing
E	Social media networks	Paid blogger service Registration and advertisement

Table 26 : Internet marketing channel penetration

As indicated in the beginning of this section, the importance of the individual Internet marketing channels might differ for every PO. Additionally there are several approaches to increase the efficiency of the channel via specific technical implementations. As described in section 3.2.3, search engine optimization is for example primarily based on onsite and offsite optimization. Both topics continuously advance but they are still based on a certain amount of basics as documented by different authors (e.g. Brown, 2007; Jenkins, 2006; Ledford, 2007; Grappone & Couzin, 2008). Furthermore to simple concepts of onsite and offsite optimization, more sophisticated concepts can increase the effectiveness of the Internet marketing channel. As stated within the previous descriptions in section 3.4, onsite-factors have been of primary importance to get into the subset RM. Onsite optimization, as the first SEO-strategy, mainly focuses on the domain and URL selection, title-tag, meta-tags, header-tags, bold-tags and keyword-density. While the onsite optimization raises the relevance score over the threshold value, also the PageRank has to be built up continuously by acquiring inbound hyperlinks. To increase the effectiveness, customized Web site structures can be deployed to highlight specific Web pages and maintain a high PR on the Web sites. The structures of the Web pages have an important impact on the PR distribution. The illustration below describes 6 different scenarios:
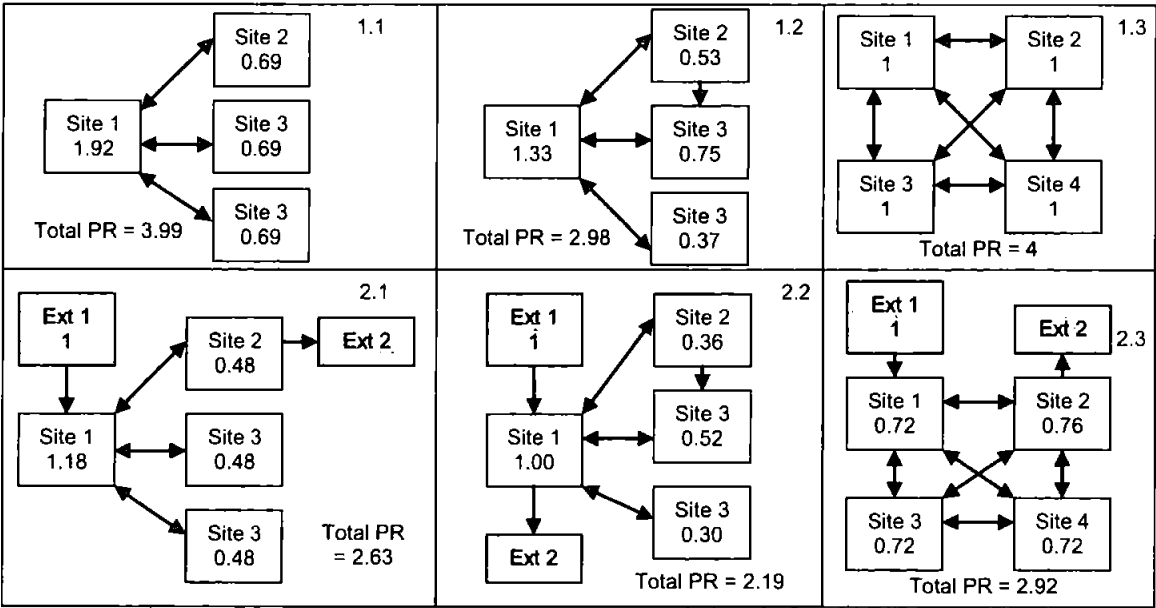
Figure 34 : Calculation of PR in Web page systems (appendix G)

Within scenarios 1.1-1.3 (closed system), it is clearly visible how to concentrate PR on specific Web pages in order to achieve a high ranking for competitive keywords (keywords with a lot of search queries). While scenario 1.1 maximizes the PR of Site 1, scenario 1.3 distributes the PR equally on all pages. Scenario 1.2 creates a loss of PR. Within the open system (hyperlinks from and to external Web pages) of scenarios 2.1-2.3, it is visible that an outbound link from site 1 (in practice the home page) within the (common) tree structure causes a huge loss of total PR. As the scenarios 2.1-2.3 are closer to reality, the network structure (scenario 2.3) seems the most efficient to maintain a high PR on the own Web site. The scenario above focuses on how to utilize a specific Internet marketing channel more effectively by simply optimizing the internal hyperlink structure. Certainly the structures can be highly customized for more complex scenarios.

Massa and Hayes state, that creating hyperlinks underlies an explicit intention by human intelligence (Massa & Hayes, 2005). While it is true that active editors link more often to good content (positive hyperlinks), this first statement is false and can be utilized by SEO service provider. (In case of linking to distrusted sites (negative hyperlinks) the attribute "rel" can be used within the anchor-tag with a value "nofollow" (Technorati, 2005) – alternative approaches are described by the W3C (W3C, 2001)). As more and more interfaces allow software developers and Web designers the (non-iframe) integration of offsite content on their Web pages, a feasible strategy for further improving the effectiveness of search engine optimization is Trojan Link Distribution (TLD) (active and passive). While passive TLD optimizes a Web page W_1 to get integrated by another Web page W_2, active TLD spreads hyperlinks by self-requests or black-boarding in online communities or other open platforms. One example of passive TLD is to leverage automatic inclusion scripts of other Web sites. Many inclusion scripts pull information from general indexes and it might be possible to rank high in this index. On the other hand active TLD means posting specific URLs in discussion forums (via texts or signatures), guest books or articles. Passive TLD is good method to raise link popularity, active TLD can be considered as spamming (Black Hat SEO). Simple link exchange can be easily identified by the indexing algorithm of modern SE. The identification is based on the topic-comparison of W_1 and W_2 or the structure/position of the hyperlinks. A working link-exchange strategy now has to be closer to the natural process. Hyperlinks have to be surrounded by enriched content, placed on Web pages with favorable topic categories and finally referred from distributed network locations (IP). The Enriched, Categorized,

Distributed Link Exchange (ECD-Link Exchange) is a simple but feasible extension of common link exchange programs. Within the ECD concept, building enriched hyperlinks means to embed them into an environment of equivalent and descriptive content. It has to be evaluated in further studies whether a surrounding text of several words is sufficient for this approach or whether the whole Web site's content cluster determines the SE's consideration as a valuable reference. While the first research shows that a short description of the hyperlink already has a large impact on the SE ranking, this does not comply with the existing knowledge about the strategies of SE implementation. The aspect of categorization simulates the natural behavior of a consumer. Identifying qualitative hyperlinks means to determine if the hyperlink is set to refer to more information about a specific topic. If Web site A is within the content cluster "Arts" and links to another Web site B of the content cluster "Arts", it looks like a natural reference for the consumer who is interested in the topic "Arts" to look for more information about the topic on the Web site B (scenario 1). Hyperlinks of the Web site A to Web site C, which is in the cluster "Health", may not help the consumer to find more information about arts (scenario 2). The consumer potentially looks for information about arts; hyperlinks to other arts Web sites are therefore interesting (scenario 1), hyperlinks to non-arts Web sites are irrelevant (scenario 2). In scenario 2 the hyperlink from A to C is not considered as valuable and does not promote the ranking of the Web site C or A. The distribution of the incoming hyperlinks to external Web pages is the final important aspect. External hyperlinks should be in a completely different hosting environment (IP-C or B block) and have different domain registration (WhoIs) details. Currently, most ISPs do not provide the service to distribute links on various locations. This might become a service offered by Internet marketing agencies in the future.

Every channel group as listed above has major representatives which can be used to focus awareness ambitions and potential investments; those representatives are sometimes brand, product or service specific and sometimes generic. As illustrated below the channel group of search engines (a) is dominated by Google and Yahoo which together capture around 70% of all searches. How to achieve the right visibility and demarcation within the search engine result pages is illustrated further below. Commonly available statistics allow determining priorities which channel to penetrate. Based on the attached data, the approach might be to focus on being optimally represented in search engines like Google and Yahoo and not to invest for better positioning in AOL and ASK:

■	86.30% - Google - Global
	5.30% - Yahoo - Global
■	3.13% - Bing
	3.02% - Baidu
■	0.67% - Ask - Global
■	0.44% - AOL - Global
■	0.21% - Other

Figure 35 : Market share of major search engines (hitalink, 2010)

It appears very important to identify major brand, product and service specific portals and Web sites within the area of the offered products and services due to several reasons. Those portals and Web sites are usually dominant matches within search engine result pages. Portals or other Web sites are valuable if they publish favorable comments or independent reviews in combination with corresponding hyperlinks and banners. Those references create awareness as well as enhance search engine positioning. Some Web sites may also offer affiliation programs which can be evaluated; in some cases the products and services even complement each other's offers and form a basis for fruitful partnership. Analyzing and describing the needs of the potential partner and offering value for return is a time taking but maybe effective approach.

Example: A small PO selling goldfish food can analyze the search matches for keywords like "goldfish", "goldfish food" and "fish food". Based on the scope of the identified Web sites, the potential partners can be contacted and possible marketing campaigns discussed.

Most channels have paid or unpaid penetration methods. To create awareness effective and efficiently the right balance of visits and awareness costs has to be found. The search engine channel group offers unpaid methods of awareness (search engine ranking optimization) and paid methods (keyword advertisement). In some cases search engine ranking is more cost effective than keyword advertisement. In some cases keyword advertisement may be better than investing money into search engine ranking optimization. Certainly unpaid models should be leveraged as much as possible as long

as the required effort is not prohibitive. Potentially those models can be complemented with paid methods for channels which are difficult to penetrate via unpaid structures. Furthermore how to use social media effectively as an awareness channel has been researched in the references summarized in section 3.2.3. The KPI awareness cost (explained in section 4.2.1.2) allows evaluating the cost of different awareness channels and to optimize the blend of channel penetration methods.

4.3.1.3   Shorten awareness turn-around time

A major task of professional Internet marketing is to reduce the time to market of campaigns and other awareness initiatives. The capability to create a dominant positioning on portals and search engines before competitors can become a strong competitive advantage. The turn-around time can be reduced by maintaining a high level of Internet marketing know-how within the marketing organization, a good technical and operations model as well as immediate access to selected Internet marketing channels and corresponding penetration strategies.

The primary determinant to reduce the turn-around time of creating awareness in the Internet is the expertise and experience of the responsible marketer. The entire process of creating awareness starts once the new offering is clearly defined from the organization. The turn-around time required to include this new offering into the technical platforms, as well as into the awareness channels, can be significantly reduced if the person has previous experience in doing so. To reduce the awareness turn-around time the organization has to ensure they have access to properly trained experts to conduct specific activities. Furthermore those activities can be documented in standard processes if they reach a certain level of complexity. The institutionalization of processes is especially important for repetitive components of larger Internet marketing campaigns. Secondly, the technical backbone of the Web site determines the awareness turn-around time. Based on the used technical content management and distribution approach information can be published in a certain timeframe. While static Web sites potentially require adjustment with significant manual work load creating the right markup language's source code and a corresponding hyperlink structure, an advanced content management system may allow automating this process. Reducing the turn-around time therefore further means to establish a technical framework, which enables the sales organization to

flexibly create and distribute information. An example of such a technical framework is illustrated in Chapter 5. Thirdly, the penetrated Internet marketing channels have a tremendous impact on the awareness turn-around time. The channels itself, as well as the corresponding penetration method, determine how quickly and what kind of information can be distributed visibly in the Internet. Some Internet marketing channels might not be product and service specific but include just information about the overall sales organization or brand (e.g. directories), while other channels are just product & service specific (e.g. Google products). The table below describes the specificity of Internet marketing channels.

Channel	Specificity
Search Engines	Brand, product and service specific
Directories	Brand specific, not product and service specific
Portals	Brand, product and service specific
Web Sites	Brand, product and service specific
Social media Networks	Brand, product and service specific

Table 27 : Internet marketing channels turn-around time specificity

As indicated the penetration strategy for each channel has another strong impact how fast awareness can be created. Search engines for example can be penetrated via paid keyword advertisement or search engine ranking optimization. While paid keyword advertisement is an immediate penetration method, search engine ranking optimization requires a significant amount of time to integrate new offering into certain search engines. It is certainly advantageous if the overall site is already well positioned in search engines, but potentially to increase the awareness turn-around time a different penetration method has to be utilized. A change in penetration method and underlying awareness costs / efficiency requires balancing with the expected conversion and transaction return.

4.3.2   Create strong desire as quickly and efficiently as possible

Managing the expectations of different target groups is a basic function of marketing. Identifying methods to exceed those expectations, amazing the potential customer certainly creates a strategic advantage towards competitors. A consumer who is amazed

by a product and service offering of a PO is likely to a) purchase / transact, b) become a loyal customer and c) refer the products and services to other potential customers. A truly convincing offering consists first of all of great product and service attributes, but also of impressing information and illustration and a very consumer-centric overall Web site structure. The illustration below describes those 3 areas as strategic work packages and indicates how they fit into the overall framework.

Objectives		KPI	Work packages
Create DESIRE	as STRONG (of right target group)	Conversion (by target group)	Create amazing product & service attributes
	as FAST	Conversion TURN-AROUND TIME*	Convince with amazing information and illustration
	as EFFICIENTLY	Conversion STEPS	Create intuitive and interesting navigation
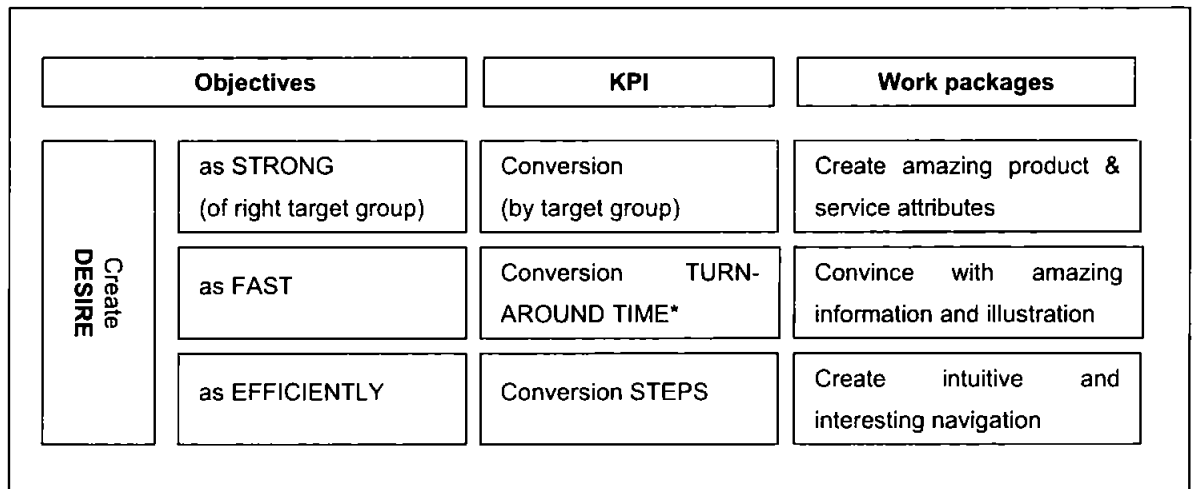
Figure 36 : Strategic work packages for desire in Internet marketing framework

The more attractive the product and service attributes are structured the stronger the desire will be created. Implicitly that will lead to a higher conversion of visitors to customer. Having great product and service attributes also requires comprehensive information and illustration. The better the information and illustration the faster the consumer can make a positive purchase decision. An intuitive and interesting navigation will reduce the conversion steps and create an efficient Web design to convert visitors. The individual work packages are described in further details below.

4.3.2.1   Creating amazing product and service attributes

For each target group segment the value proposition of the products and services can be investigated and confirmed. POs generally spend a lot of time investigating the details of the value proposition they provide to different customers (Kim & Mauborgne, 2005). Important within this process is to confirm the assumed value proposition with direct

feedback from representatives of the targeted segments (Kim & Mauborgne, 2005). Maybe certain value curves can even be extended for specific segments leveraging for example technical opportunities of the Internet or a strategic partnership to create a clear competitive advantage (Kim & Mauborgne, 2005). The Internet as an information and purchasing channel in general provides certain inherent benefits for private individuals and corporate consumers which can be leveraged. The Internet has also some inevitable but manageable systemic disadvantages, which create opportunities to differentiate a creative and innovative organization from its competitors.

Example: Online flower purchasing

Despite overall consumer trends, purchasing flowers over the Internet has been a rather successful business model so far (Capgemini, 2003). Even though it is impossible to see and evaluate the actual flowers, a potentially important aspect of the impulsive decision process for a flower purchase, dominant Internet flower shops have overcome this disadvantage by offering low cost delivery around the world and sometimes a little bit broader variety. The process how flowers are purchased is very different from target group to target group. A customer segment with consumers who just want to send some flowers out of politeness, or who may not have a very personal relationship to the recipient, potentially do not mind ordering via the Internet. Consumers with a very deep personal relationship to the recipient and value the act of giving flowers as a special gift may prefer selecting the flowers themselves. Overseas German or French consumer may use French or German online flower shops to be able to send flowers to somebody in their home country benefiting from the delivery process. Based on the value proposition for the specifically segmented target groups awareness activities for the products and services can be customized.

Every product and service offered to the market has a certain value for potential consumers. This value can be mapped into a value curve outlining the major decision attributes comparing them with other competing products and services. The major decision attributes for online sales have been illustrated by Chen & Dubinsky (2003): valence of on-line shopping experience, perceived product quality, perceived risk, and product price (Chen & Dubinsky, 2003). Those four major areas of Chen & Dubinsky have to be substantiated with a lot of more detailed value factors within further specification. For example delivery time, accepted payment options or return policy are factors for the

overall product quality. The figure below illustrates an example value curve mapping the PO's current situation against the status of the general market as well as future target positioning for the four decision attributes:
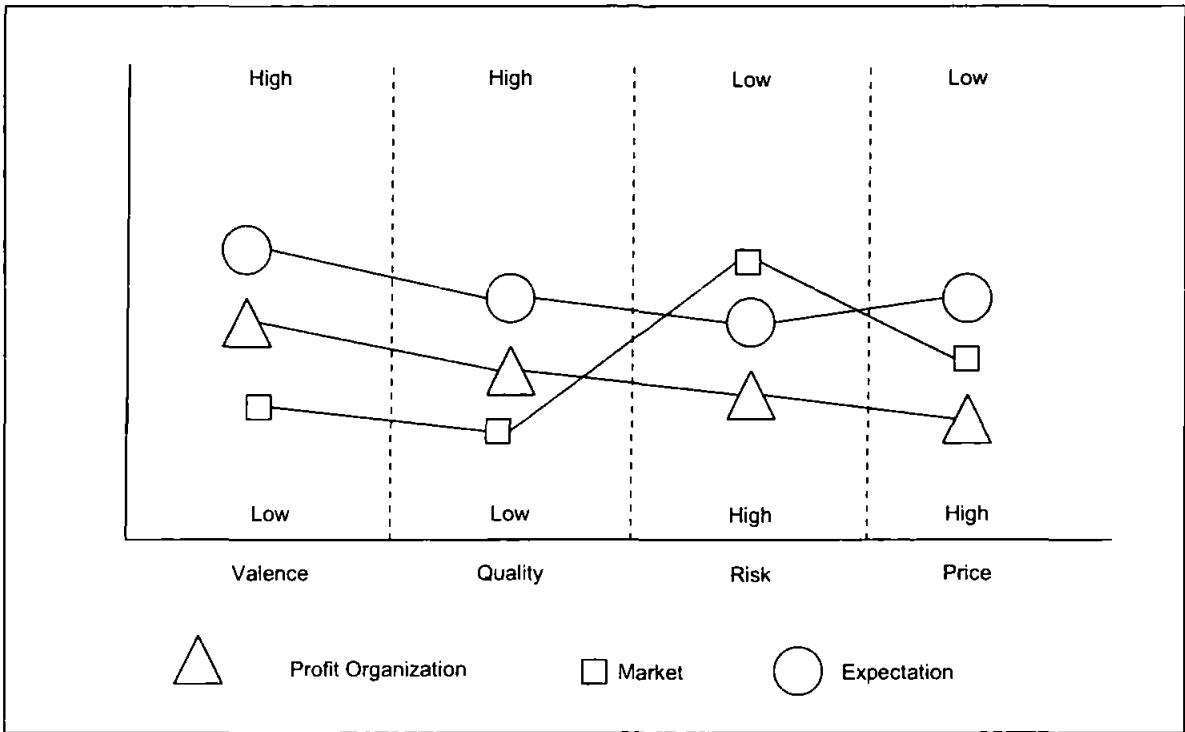
Figure 37 : Example of value curve

Also each potential customer correlates the decision / value factors of a product or service finally with the price. If this correlation satisfies the expectations the customer will be inclined to purchase the product or service. To create a clear competitive advantage and to increase the conversion rate, the expectations have to be analyzed and opportunities to visibly exceed them implemented (amazing the customer, not just satisfying the initial need). Within this analytical process the PO has to differentiate the expectations of inhomogeneous target groups. The expectations for each target group can be translated into a corresponding value curve. Sigel (2006) provides some examples into different shopping behavior which allow customizing the conversion strategy accordingly:

"Online shopping habits generally mirror offline habits for men and women. Both value the Internet for its 24/7/365 time convenience, product availability, product/pricing comparison facility, and shop-at-home ease. Frustrations include shipping charges, spam, and concerns about credit card security. Men are more likely than women to be bargain

hunters online, and men are more likely to fault online shopping because they can't touch or feel what they're buying. They are also more likely to purchase expensive products online, and they appear to have greater trust in Internet shopping generally (Sigel, 2006)."

Based on the understanding of the expectations the products and services components can be customized in a way that the expectations can be clearly exceeded. If for example the standard offer is 100 euro for a specific MP3 player it can be offered for 100 EUR including the delivery and a coupon for downloading 100 songs from online music stores. The additional costs for the PO might be entirely compensated via the additional sales or potential discounts granted previously to buy market share. The cost for the coupon might also be completely subsidized by the online music store in their attempt to create a customer base. Products and services directed to male consumers may higher conversion if promoted as special bargain (referring to the example from Sigel above).

As indicated all qualitative factors are finally balanced with the price. The pricing is primarily determined by the total production and shipping costs (and cost allocations from administrative functions) and expected total future revenues out of the specific purchase. A purchased product might result on the one hand into warranty or maintenance costs but on the other hand to additional sales of accessories or even maintenance income. This long term view of products and services allows a higher flexibility in the pricing structures. The Internet has created a platform on which potential customer can easily compare the prices for products and services; a lot of price-comparison Web sites facilitate this process. Certainly it is of major importance to appear comparatively attractive in terms of pricing. The current price level can be assessed by using the same price-comparison platforms (e.g. google.com/products). This price might have to be either matched or additional value factors have to be positioned to create a convincing offer. The analytical process of the value curve has to consider on which product and service features the PO should try to exceed the customer's expectation. In certain areas an attempt of creating a competitive advantage may result into an unhealthy price war with alternative suppliers. The analysis also helps to determine focus areas of marketing budgets.

4.3.2.2   Convincing with amazing information and illustration

Each Web site consists of different graphical elements, like texts, images, animations and interactive features. Those elements can be used to positively influence cognitive

processes of potential customers and achieve a short conversion turn-around time. Specific design components are used to accommodate a positive user experience and convenient interaction between the human and the technical device. The interaction humans have with a Web site underlies the same psychological expectations than towards other daily personal interactions. The question is if interaction with a computer in general stand for a "responsive technical feature" or if it is synonymous with "good conversation" (Fleming, 1998). Interaction in general is a reciprocal action or influence (Thompson, 1995), an exchange of ideas, emotions, physical objects or words. Also Internet interaction is an exchange of information but with the difference of using technology as a mediator. Reeves & Nass (1996) present some interesting findings about people and technology which can be leveraged for Internet marketing:

"Individuals' interactions with computers, television, and new media are fundamentally social and natural, just like interactions in real life." (Reeves & Nass, 1996)

If an interaction is positive or negative is determined by the perceived level of politeness. Reeves & Nass also found out that consumers are actually polite to computers (Reeves & Nass, 1996). From these findings, Reeves & Nass extrapolated that, based on the definition of interaction being reciprocal, users expect computers to return the favor; the computer will be as polite to him as the consumers are to them.

"When media violate social norms, such as by being impolite, the media are not viewed as technologically deficient, a problem to be resolved with a better central processing unit. Rather, when a technology (or a person) violates a politeness rule, the violation is viewed as social incompetence and it is offensive. This is why we think that the most important implication of the politeness studies is that media themselves need to be polite. It's not just a matter of being nice; it's a matter of social survival (Reeves & Nass, 1996)".

Based on this study the authors Reeves & Nass suggest starting with Grice's Maxims, a set of politeness principles that were set down by the philosopher and psychologist. The principles, as defined by Grice, are listed below:

Quality	Saying true things
Quantity	Saying neither too much nor too little
Relevance	Saying things that relate to the topic at hand
Clarity	Saying things clearly and well

Table 28 : Grice's principles (Grice, 1975)

The four principles mentioned in the table above represent the expectations of human interaction and have been fully replicated into technical environments fostering a positive opinion about the interaction. Also in Internet marketing the descriptions and texts have to be true, should be neither too long nor too short, they have to be relevant and clear. Besides the text and content of a Web site, also images can form a central element of the overall design and have to follow the above mentioned principles. The quality and format of the images can be used in different levels of sophistication. While the used images are an essential part to support the Grice principles as illustrated above, they are also an opportunity to demarcate the created Web site from other Web sites. High quality and fast loading images in a consistent overall Web design are still rather rare, but do not consequently exceed expectations to amaze a potential customer. To create truly amazing illustrations professional designers have to be engaged who implement a consistent scheme. While animations, videos or sounds follow the same principles as illustrated above, they provide even more opportunity to surprise the consumer if implemented properly. Generally animated content appears to be more attractive than static features (Beaird, 2007) the only disadvantage is that the higher data volume requires a longer loading time potentially frustrating a potential customer. Allowing a consistent and uninterrupted user experience quality, quantity, relevance and clarity of the media have to be balanced. Finally interactive content can be used to allow the consumers to experience services or try products online. This interactive approach is so interesting because it simulates the experience a consumer can have in a retail shopping environment. Carefully used interactive elements can significantly improve the user experience and potentially decrease the conversion turn-around time considerably. Provocative Web design on the other hand has always been used (in online and offline media) to create an exceptional level of attention; on some Web sites this has been misused and transpires into practically human hostile environments: bright diverse colors,

chaotic layouts or unfriendly typography (Fleming, 1998).

"What's fun and different in an MTV video or cutting-edge print magazine does not automatically translate well to the Web. If you're designing a band site or a grungy e-zine, you'll certainly have more flexibility than if you're designing a medical information site, since purpose and audience will affect the approach. But even MTV buffs deserve a structured layout. Even the nattiest hipster deserves readable text in an e-zine. Without these basic design values, you're creating art (which is about individual expression), not practicing design (which is fundamentally about communication). It's a crucial difference-- especially to your users, and especially on the Web.
[...]
In navigation design, it's cruel and unusual punishment to offer chaos instead of guidance, self-expression instead of shared communication. Interface design, like many areas of design, is service-oriented - it's in service to the message, the client, the users, and the medium. That makes the work of an interface designer a serious challenge, since it is much harder to understand others' needs than it is to know your own tastes. There may not always be glory in it, but service is the hallmark of good design (Fleming, 1998)."

Section 3.3 described existing approaches of Web site structure, navigation pattern, images, texts or interactive elements. Properly planning all those elements finally also requires a good color scheme. Additionally product-specific psychological considerations have to be embedded. The possible meaning (based on McGregor, 2007) or psychological impact, matching products and services and example Web sites has been consolidated in the table below.

Color	Possible meaning	Examples Products / Services	Example Web sites
Red	Excitement, energy, danger, love, leadership, sense of power, strength	Partner search, Adult products, videos, games, movies	prosieben.de, t-online.de, musicload.de
Orange	Comfort, steadfastness, cheerfulness, courage, confidence, playfulness, friendliness	Community, Consumer-to-consumer	ebay.com, amazon.com
Yellow	Curiosity, brightness, organization, intelligence, joy, amusement, caution	Mailing, logistics	nationalgeographic.com, dhl.com
Green	Harmony, nature, money, healing, health, life, food	Banking, insurance	dmoz.org, godaddy.com, dresdnerbank.com
Blue	Trustworthiness, stability, peace, tranquility, love, acceptance, patience	Entertainment, information	microsoft.com, bbc.com
Black	Sophistication, dramatic, power, formality, style, health, elegance	Fashion, design	chanel.com, emporioarmani.com
White	Innocence, cleanliness, fresh, goodness, easy, simplicity, purity	Electronics	apple.com, facebook.com

Table 29 : Web design colors, meaning and corresponding products

The provided references to industrial research – Reeves & Nass (1996) and Grice (1975) – are largely technology independent. The specific impact of Web design color provides some guidance on platform specific considerations and how to customize a marketing message to create desire as quickly as possible.

4.3.2.3   Create an intuitive and interesting navigation

A Web site can be designed following different structural architectures to optimize the efficiency of conversion tactics. Those structural concepts have their advantages and disadvantages and are target group as well as culturally different (Kralisch et al., 2005, Blackmon et al., 2005). The non-cross-cultural research by Larson & Czerwinski provides evidence that adapting Web sites to the users' cognitive styles and abilities leads to better navigational performance and easier information access (Larson & Czerwinski, 1998). Also positive correlations between navigational performance and user satisfaction were identified in the research of Otter & Johnson as well as Smith (Otter & Johnson, 2000; Smith, 1996). Also different navigation / utilization pattern between male and female consumer have been identified:

One of the first steps of building an interesting navigation is the development of self-explanatory categories. Categorizations are often developed as part of an intuitive process and do not following any dedicated research (Blackmon et al., 2005). Categories may follow product group names, business unit titles or other internal naming conventions. Those structures provide a good orientation for the POs but probably not for the potential customer. The titles of the categories have to be cautiously picked to create an interest in looking for further details. The naming of categories should be done in careful consideration of the marketing impact and target group's perception of the used titles. Finding the right categorization can follow the same research methodology than identifying the right keywords in keyword advertising. Keyword research methods and tools are largely explored and can be found in Lutze (2009), Saieh (2008), Miller (2009), Moran & Hunt (2008), Rognerud (2008), Rognerud (2008) and Jones (2008). Similar to the value curve categorizations should be validated by consumers and click stream analysis.

Creating an intuitive and interesting navigation further means to build the right overall Web site structure (e.g. tree-structure) as well as an according navigation method. These navigation methods or elements have to be positioned in the right location on the Web site. Structures as well as positioning of Web site navigations are well explored especially in Stocks (2009), Sklar (2008), Cederholm (2007) or Beaird (2007) or Timberlake (NN); examples of common representatives based on the mentioned authors are:

- Embedded hyperlinks: Direct references within the illustrated texts
- Bread-crumb trail: Cascaded category path
- Navigation bars: Block of main hyperlinks throughout all pages
- Tab navigation: Breaking into a few primary categories
- Site map: Complete directory of all Web pages
- Mix and match navigation schemes for optimal usability

Some Web sites use specific structural strategies which are known as a) low-depth and b) high-depth hyperlink strategies. Low-depth strategies are used to limit the required clicks a potential customer has to do to find a desired product or service. The objective of this strategy is certainly to avoid that a consumers is distracted during the visit losing interest and exiting the Web site. High-depth strategies are very often used from low-cost providers to hide certain – maybe legally required – information. A lot of service providers hide for example contact details (e.g. phone numbers), ownership information or delivery costs in a complex navigation path to avoid unfavorable consequences of publishing this information.

Existing Web analytic tools as illustrated in section 4.2 allow analyzing different scenarios of categorizations and navigation structures. Similar data can be retrieved directly from the session management data or server logs. As part of the operational framework a continuous review and optimization process can be initiated to adjust categorizations and navigation structures.

4.3.3   Generated independent transactions

Based on the objectives as illustrated above the Internet marketing strategy has to generate as many additional transactions as possible to the existing operation. Those transactions are supposed to be extremely easy to perform and should result in a maximum return.

First of all the holistic scope of transaction has to be appreciated and the right mix of features implemented to increase the engagement of the visitor with the products and services of the PO. The process of performing the implemented transaction has to be

designed in a way to imply a minimum of technical and psychological complexity. Furthermore the PO has to attempt to increase the return per initiated transaction over the Web platform. The 3 strategic work packages and how they fit into the overall framework are illustrated in the figure below.

Objectives		KPI	Work packages
Generate TRANSACTIONS	as MANY (of right target group)	Transactions (by target group)	**Increase transactions per visitor**
	as EASY	Transaction TURN-AROUND TIME	**Reduce technical and psychological complexity**
	With the HIGHEST RETURN	Transaction Return*	**Increase return per transaction**

Figure 38 : Strategic work packages for transaction in Internet marketing framework

Increasing the transactions per visitor has a direct effect on the KPI and objective of the total number of transactions. Reducing the technical and psychological complexity will also reduce the transaction turn-around time and make the transaction process easier. Increasing the return per transaction will also increase the overall transaction return as defined as KPI and objective. The individual work packages are described in further details below.

4.3.3.1   Increase transaction per visitor

The purchase decision process of a consumer is a cognitive selection of a specific action among multiple alternatives. The process follows economic, psychological and consumer behavior models and is highly biased (e.g. selective search, perception and premature termination of search for evidence, inertia, recency or anchoring). "The assumption of a perfectly rational economic actor is unrealistic. Often we are influenced by emotional and non-rational considerations (Simon, 1947)." Every human desire to purchase a product or service is based on a certain substantial or in-substantial need. The most prominent theoretic marketing model of needs is structured in the works of Maslow called the

hierarchy of needs.[6] To maximize the probability of a transaction (as well as number of transactions) it has to be targeted to perfectly align the products and services (components, price, packaging, distribution channels) with the corresponding needs to be satisfied with them. This alignment requires a solid understanding of human needs. The figure below illustrates the pyramid of Maslow:

Self-actualization	Morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts
Esteem	Self-esteem, confidence, achievement, respect of others, respect by others
Love / Belonging	Friendship, family, sexual intimacy
Safety	Security of body, of employment, of resources, of morality, of the family, of health, of property
Physiological	Breathing, food, water, sex, sleep, homeostasis, excretion

Figure 39 : Maslow's hierarchy of needs (Maslov, 1943)

Based on this hierarchy products and services can be allocated to a specific layer of needs. Some selected examples are illustrated in the table below:

Product / Service	Layer
Butter, Bread, socks	Physiological need
Insurance, Helmet, toothpaste	Safety need
Travel, Sofa, kitchenware	Love / Belonging
Chanel Bag, Jewelry, Cars	Esteem need
Donations, arts, cultural activities	Self-actualization

Table 30 : Product / Services and Maslow's layer

To increase the likelihood and volume of a purchase decision, products in different layers

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[6] An alternative model "why people shop" is illustrated by Wilkie, W.L. (1986), page 304.

of the pyramid require different marketing approaches. The design and messages required for the Internet marketing a luxury product, for example a Chanel bag (esteem need), is significantly different than basic commodity products like butter, socks or other products satisfying physiological needs. Products and services on the bottom of the pyramid are very price sensitive, products and services at the top of the pyramid are more determined by how they satisfy the specific need or desire. Translating this understanding into Internet marketing, products and services on the bottom of the pyramid have to focus on the pricing as well as the physiological or safety need in terms of illustration and information.
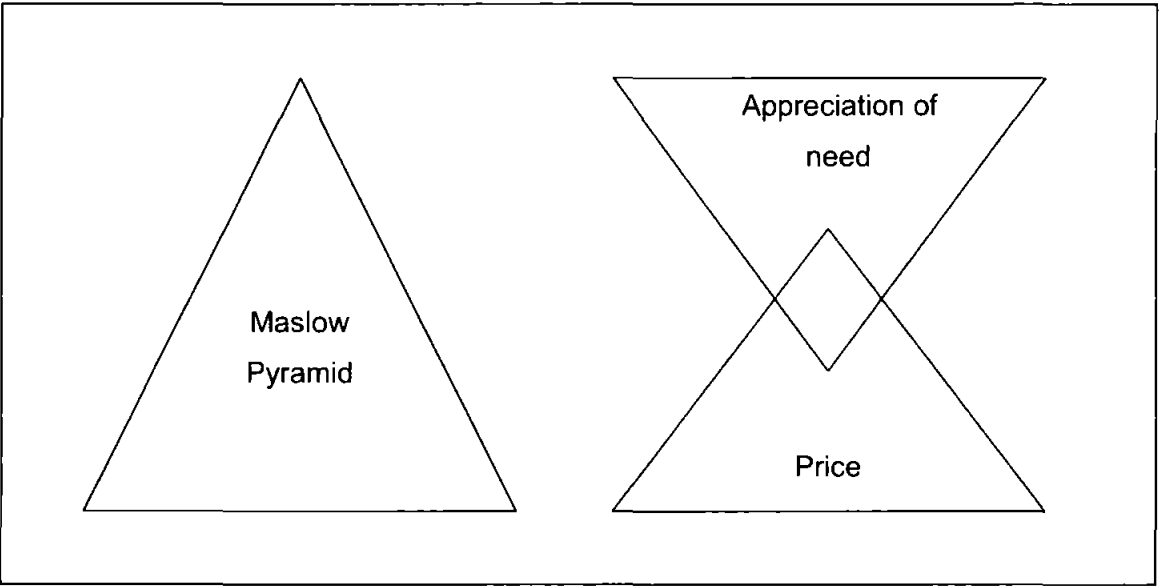
Figure 40 : Satisfaction of needs vs. primary decision factors

Besides the pricing information, product and service on the top of the pyramid may require a sophisticated, attractive and appealing design to attract the desire from potential customers. An example for a price focused design strategy (low cost products and high cost products) is attached in the Figure 41:

Example of low cost products representation www.aldi.de	Example of high cost products representation: www.chanel.com

Figure 41 : High and low cost products and Web design

One Web site illustrates fruit drinks as a low-cost commodity product. The price is the biggest font-size of the visual center (white area with dark blue text). The other Web site shows a luxury product. Clear focus is the high quality illustration of the sun-glasses; the sales price is even completely excluded from the overview. The two simple examples illustrate how to apply human-need based Internet marketing correctly. Drinks satisfy a physiological need and are price sensitive, and so the Web site has been designed accordingly; the sunglasses target the esteem level and the Web site is customized to purely appeal a design-focused customer.

The alignment of the product positioning towards the underlying human need supports the initial conversion of visitors as much as to trigger additional transactions. Especially the promotion of complementary product and service require the analysis of the underlying need of the main product or service. Complementary products which are bundled intelligently into the conversion or transaction steps can significantly increase the transactions per visitor if they satisfy a need a consumer carries while visiting a web site. As illustrated within section 4.3.1 practically all products and services come in bundled packages. Even if not intentionally assembled, products include delivery, warranty or maintenance features. First of all products and services can be bundled with other free,

reduced or chargeable complements available over a period of time which might motivate the customer to return to the Web site or to purchase more during the first visit. A software upgrade service for 12 months, 5 free songs per month for the purchased MP3 player, a free magazine for updating the customer records or additional 1 GB Web space for loyal long-term customers are examples of simple product specific services or complements. Other product and service components may complement the initial choice and offering those during the transaction process might complement the purchasing process and increase the return of a transaction. Other advantages of a first transaction might appeal the consumer to trigger additional activities right away or during a short period of time (e.g. 10% discount if another product is purchased within 1 month). This approach may significantly increase the number of transactions per visitor.

Financial and non-financial transactions are performed from new, revisiting or even loyal visitors. The difference between a revisiting and a loyal visitor is just the amount of transactions over a period of time and attitude towards them. The aspect of loyalty enjoys continuous prominence and focus within the classical marketing literature (Harden / Heyman, 2009, Lee et al., 2000, Schefter / Reichheld, 2000). Based on a two-year research in the area of e-loyalty, also the authors Schefter & Reichheld warn e-business executives of the danger of attracting customers rather than retaining them: they stress the enormous advantages of gaining the loyalty of a core of profitable customers, repeat purchases and focusing on acquiring the right new customers (Schefter & Reichheld, 2000). Also Chen & Hitt confirm that the ability to retain and lock in customers in the face of competition is a major concern for online businesses, especially those that invest heavily in advertising and customer acquisition (Chen & Hitt, 2002). To identify a strategy to effectively foster loyalty the major determinants of Internet loyalty have to be identified. Based on those determinants appropriate action can be described. Lee et al. describe a multi-phased model of customer loyalty. The model is illustrated below and consists of two major topics – trust and transaction costs. Those two areas are determined by each time three factors. The relationships are described with the variable H.
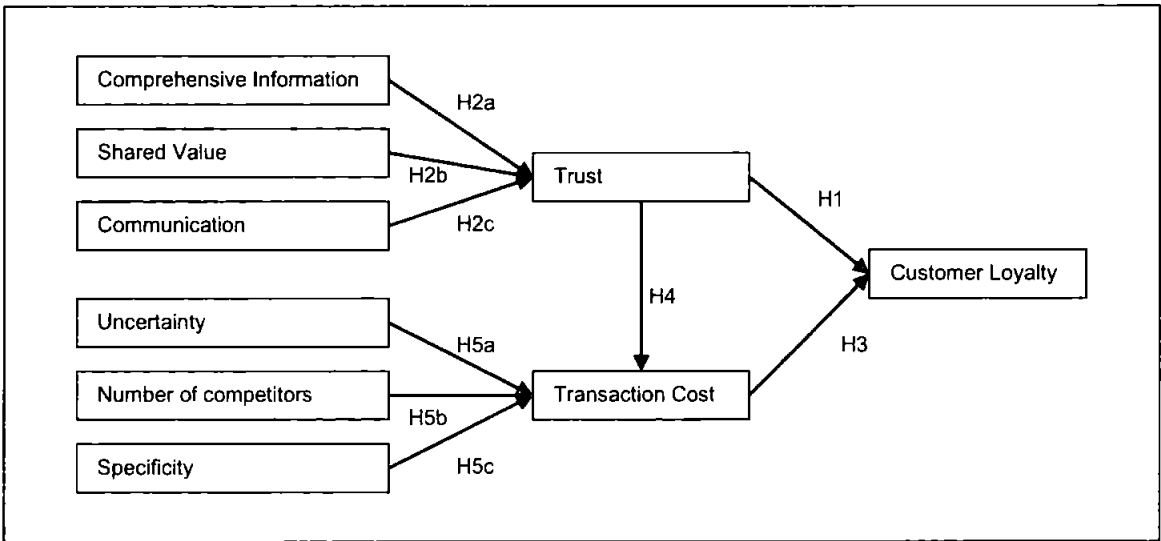
H1: Trust has a positive impact on customer loyalty, i.e. his intention to revisit the store
H2a: Comprehensive information increases the customers' trust
H2b: The perception of shared values (extend to which customer have beliefs in common about type of behavior, goals and policies that are important and appropriate) with the Internet store and its customers will have a positive impact on trust
H2c: The perception of high quality communication (formal and informal sharing of meaningful and timely information between buyers and sellers) will increase trust
H3: Transaction costs have a negative impact on customer loyalty
H4: Trust reduces transaction costs
H5a: Uncertainty (potential of misinterpreting overall product quality) is positively related to transaction costs
H5b: Number of stores is negatively related to transaction costs
H5c: Internet stores specificity (inability of customers to transfer skills, knowledge and value created at the Internet store to other similar Internet stores) is positively related to transaction costs
H6: The level of product involvement will moderate the hypothesized relationship between the transaction costs, trust, its respective antecedents and customer loyalty.

Figure 42 : Multi-phased model of Internet loyalty (Lee et al., 2000).

In an extensive survey this model was confirmed except two paths (H5b and H3). Especially H3 differed based on high or low involvement products (H6). Applying those findings to the strategic work package of creating as much transactions as possible means to evaluate the 5-6 factors and identify how they can be used to foster loyalty. Alternatively also Srinivasan et al. provide a model describing eight factors (8 Cs) that potentially impact e-loyalty (Srinivasan et al., 2002) and can be used to develop a loyal customer base: Customization, Contact interactivity, Care, Community, Convenience, Cultivation, Choice and Character. Data collected from 1,211 online customers demonstrate that all these factors, except convenience, impact e-loyalty; the data also reveal that e-loyalty has an impact on two customer-related outcomes: word-of-mouth promotion and willingness to pay more (Srinivasan et al., 2002). The two models have a certain overlap of described factors but most of them are general determinants of an initial purchase decision and do not fully focus on how to retain a customer. Contrary to the

popular perception that on-line customers are fickle by nature, Schefter & Reichheld also found that most of today's on-line consumers exhibit a clear proclivity toward loyalty, and Web technologies, if used correctly, reinforce that inherent loyalty (Schefter & Reichheld, 2000).

The number of transactions from new visitors is a function derived from the amount of visitors and conversion rate. The main question therefore is how first time or loyal visitors can be motivated to perform more transactions. Once a consumer has identified and used a Web site with a first transaction, the PO has to seek to motivate the person to either conduct more transactions right away or to revisit and reuse the Web site. As described in the existing literature the underlying effort spent to attract a new customer is significantly higher than to retain an existing customer (Lowenstein, 1995; Gerson, 1998; Murphy, 2001). To create the desire to transact more or come back by staying interesting for the customer is one of the main activities for sales organization Internet marketing strategy. As illustrated above every consumer has a specific interest profile which matches with the value proposition of the offered products and services. Based on the specific interest profile of the first or all subsequent visits a comprehensive user profile can be generated. Based on this user profile and the underlying interests corresponding measures to retain the customer can be initiated. Within this section two examples of retention measures are illustrated.

Newsletter, RSS-Feeds: Newsletters and RSS-feeds offers are a significant element of Web 2.0 but are mostly just an un-successfully used measure to retain customers (Hoekman, 2008). The idea is to provide interest specific information to certain users and to use this information to motivate them to revisit the Web site. Within an environment of for example spammed email inboxes, users do not subscribe to additional - mostly advertising and not very informative – newsletters (Veloso, 2009). RSS-feeds on the other hand are quite popular to be integrated into computer browsers and handhelds. Newsletter and RSS feeds are operational measures to motivate a previous visitor to return and potentially conduct additional transactions. Making a newsletter work means to first of all identify the potential consumers who would subscribe to such a service and describe the high quality information to motivate the subscription. The information has to be provided in a way that the newsletter itself is interesting enough, but the consumer is required to visit the Web sites to fully satisfy the raised interest. A good RSS-feed follows

the same understanding. The information has to be useful for the customer, but also has to motivate to revisit the Web sites at a certain period of time to conduct financial or non-financial transactions.

Coupons, bonus and reward programs: Coupons, bonus or reward programs are a marketing method that is used throughout almost all industries. The main challenge is to create an attractive program that does not jeopardize, but increase the profitability of the company. A successful program creates win-win situation and motivates the customer to purchase more products and services by providing him certain advantages out of those purchases. A coupon can be tied to product specific services and complements as illustrated above. A coupon can also bridge the gap to entirely different services, e.g. a restaurant discount voucher with the cook book, discount for purchasing fresh fruit for the new mixer or subsidized music lessons with a new piano. All those examples do not jeopardize the profitability of the supplier but also provide a benefit for the consumer. Bonus as well as reward initiatives are usually tied to purchase quantity or referrals, but also those programs can be conceptualized more creatively.

4.3.3.2   Reduce technical and psychological complexity

The extensive research of cognitive science performed for technical industrial design can be transferred as a starting point for Web design. The result of this cognitive research explains why humans sometimes push handles that are meant to be pulled, why a large segment of the population does not understand how to program a VCR or how the complexity of a technical platform determines the time required to conduct a transaction. Translating this knowledge into the area of Internet marketing helps to understand how consumers think, react, interpret, and learn in the Internet. The psychologist Norman has performed solid research on technology independent user-centered industrial design. Within his writing Norman illustrates how design can be brought more into line with human needs (Norman, 1990). As his findings are not limited to specific devices, applying the same models in Web design can help to create Web sites that motivate a fast transaction decision. In studying how people use tools and complete processes, one of the things Norman looked at was actions. He highlighted seven stages of completing a task which can be translated into a set of questions which support to develop an appropriate design for the specific task:

	Seven stages of action	Relevant design questions
1	Forming the goal	How easily can one determine the function of the device?
2	Forming the intention	How easily can one tell what actions are possible?
3	Specifying an action	How easily can one determine mapping from intention to physical movement?
4	Executing the action	How easily can one perform the action?
5	Perceiving the state of the world	How easily can one tell if the system is in desired state?
6	Interpreting the state of the world	How easily can one determine mapping from system state to interpretation?
7	Evaluating the outcome	How easily can one tell what state the system is in?

Table 31 : 7 stages of action and relevant design questions (Norman, 1990)

The 7 corresponding design questions as illustrated above can be consolidated into broader principles. Table 32 explains the Norman's four "principles of good design":

Principles	Description
Visibility	By looking, the user can tell the state of the device and the alternatives for action.
A good conceptual model	The designer provides a good conceptual model for the user, with consistency in the presentation of operations and results and coherent, consistent system image.
Good mappings	It is possible to determine the relationships between actions and results, between the controls and their effects, and between the system state and what is visible.
Feedback	The user receives full and continuous feedback about the results of actions.

Table 32 : Principles of good design (Norman, 1990)

The four generic principles as illustrated above can be fully applied to Web design. A consistent implementation makes sure that in every step the user knows his location or

state of the transaction. Transactions via the Internet usually encompass a set of requires steps: Registration, login, specification of products and services, payment details and invoice and delivery addresses. Even in commonly used shop software the default transaction process requires several steps after a product decision. Evaluating which information is really required to finalize a transaction indicates the potential to simplify this process. Registration, payment and delivery information can be easily collected on 1 screen and maybe 10 fields. To streamline the transaction process the existing forms can be reviewed and input fields which are not transaction-critical eliminated. A lot of Web sites allow certain self-service functionality or communicative transactions. Those transactions can follow the same review process to ensure that unnecessary technical complexity is avoided. A good example of a streamlined transaction process is Amazon's 1 click button, allowing the consumer to make online purchases with a single click, considering previously entered payment information needed to complete the transaction (U.S. Patent 5,960,411). This concept reduces the technical complexity for a consumer to an absolute minimum and fosters a faster transaction turn-around time.

As extensively described in section 3.2.1, for most consumers the Internet consists of an unstructured and incomprehensible network of Web sites (Metzger, 2004, Gauzente, 2004). Within this largely uncontrolled network everything is by essence virtual. Products are not physically visible, sales people are absent, no cashiers – not even cash – is required. Within this unnatural environment each user is inherently concerned that offered products, services and prices might not be real, certain quality attributes might not be ensured or that the products and services will not be delivered (Metzger, 2004, Gauzente, 2004). Especially as several publications continuously inform about fraud and improper business practice in the Internet, which nurtures the sentiment of insecurity. To be able to help the customer overcome this psychological barrier of insecurity is a key success factor for a PO that tries to fully leverage the opportunities of Internet marketing. Tiangsoongnerm conducted extensive studies in the area of Internet trust (Tiangsoongnern, 2007). In her work she identifies three main "factors influencing perceived risk" and trust: Internet marketing strategy / product information, privacy & security concern and Internet fraud (Tiangsoongnern, 2007). Based on this research the authors developed a structure which focuses to positively influence those three factors. Derived from the three critical criteria crystallized from Tiangsoongnern (Internet fraud, Marketing strategy, privacy & security concern) the authors defined three subsequent

'facilitators' to exploit the topic of trust as a competitive advantage (Tiangsoongnern, 2007). The figure below illustrates three areas that allow a potential customer to develop trust:

Tiangsoongnern Criteria		Facilitators of Trust
Internet marketing strategy	⟶	Offering (p)
Internet Fraud	⟶	Establishment (e)
Security & Privacy Concern	⟶	Reliability (r)
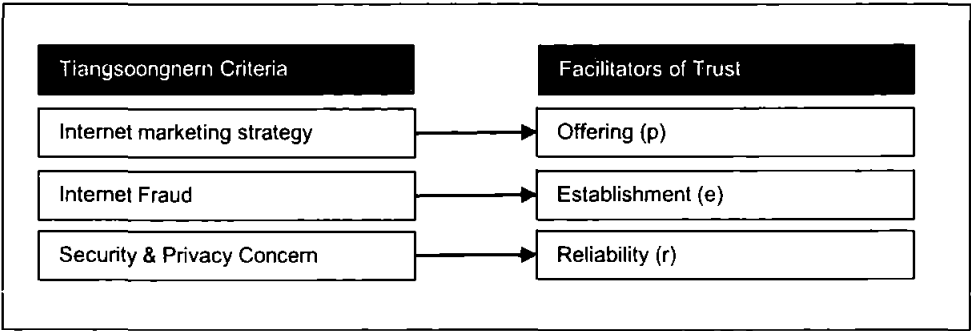
Figure 43 : Tiangsoongnern criteria & facilitator of trust

Additionally to the three facilitators there are certain minor aspects (o = others) that may influence the trustworthiness of an offer. With illustrating the development of trust mathematically in an multiplication structure the authors attempt to stress how a failure of one area can completely ruin the established trust for the overall environment T(total).

F10: $T(total) = T(p) * T(e) * T(r) * T(o)$

The formula illustrates the opportunities and threat of the scheme in actively managing trust (T). While all components may multiply the effectiveness, also just one failure may result into a total loss of trust.

Establishment: The influence of collective behavior on an individual has been studied from Le Bon for several years (Le Bon, 1985). If for example in a shopping center there are two electronics stores A and B; while store A is completely empty, a bored salesman stands behind the counter and the shop looks like it has never had any customer, and store B is full of people and several salespersons are smilingly welcoming the passing customers, it seems quite obvious that a new customer would initially enter store B. This behavior is based on the intuitive trust in a collective correct opinion as described by Le Bon (Le Bon, 1895, Berk, 1974). Following this approach, it is suggested that the same holds true for a Web site. An established Web site which is known to be used for several years from many customers potentially creates more trust in a targeted customer, than a site that appears to have been never used before. There are many documented methods to indicate that a Web site is established and used. First of all understandable and attractive statistical

information can be illustrated on the sites. Besides quoting numbers, the use of real reference names and photos will raise the level of trust that can be created. Up-to-date news and articles show that the site is alive and taken care of. Entries in an online forum may contribute to daily movements on the site. Consumers, which are afraid of fraud, find in that structure security that their purchase behavior follows an established pattern and they are not exposed to any unforeseeable risk.

Offering: All information illustrating that a Web site is used is already an implicit indicator that the offered products and services are perceived to be acceptable. This sentiment can be enhanced significantly by some additional considerations. These considerations focus on the complete value chain of the products and services as well as the usability and design of the Web site, the payment and delivery processes and even the feedback or return policies. This marketing strategy, determining all features of the offering can increase the level of trust in a potential online transaction. The level of transparency of the products and services and of the price correlation depends on the business strategy – in some cases full transparency is valuable while in others a comparative pricing disadvantage has to be hidden in bundling products and services intelligently. No matter whether the pricing information is comparable or not, the offer has to be very clear and explicitly illustrated as providing a comparable advantage to alternatives. Published customer feedback helps to foster this evaluation. An additional major criterion is to be extremely easy or convenient to do business with (easy registration, ordering and payment). A fast but secure loading of the pages is also a key element to prove the service quality the PO wants to provide. Published feedback from customers or external awards may strengthen the acceptance of a collective correct opinion.

Reliability: In a normal retail shopping environment sales personnel are often available for consumer questions and can typically provide personal advice immediately on the point of sales. In an Internet environment personal consultation is also possible but requires significant technical development as well as the consumer's acceptance of digital media. This technical implementation requires the creation of an online chat or even a voice connection between the user and a service center consultant. In case a consumer has a question, he can click on a particular field to start an online-chat and type his question or ask it directly. As this kind of service is not very prominent yet, the main part of the sales process is without personal care. The establishment of a similar service level as within a

retail store can create a great reputation and a clear long-term competitive advantage as a service-oriented organization. There are several ways to create an atmosphere of personal care and reliability on a Web site. First of all different support channels can be established (phone, email, online-chat or voice). Those channels can be nicely integrated on the different sites to enable the potential customer to use them without a great transaction complexity. Certainly all support channels have to be very responsive to incoming enquiries to show the reliability of the sales organization. A channel is completely useless and maybe even harmful if the turn-around time is not reliable. Pictures and names of the service consultants help to add a sense of humanity to the site. Subject-specific frequently asked question pages can become very helpful. They can show that the PO has experience with customers and their specific questions regarding a product or service. From a different perspective customer feedback can be published online. In a very aggressive marketing model even customer complaints and how they were resolved might create an atmosphere of complete transparency and customer focus. Finally a direct and explicit explanation of how privacy and security concern are handled has to link into a considerate ordering process and security measures.

As highlighted previously the entire research followed several iterations including peer reviews, discussions and surveys to refine the models. To provide an indicative insight into the facilitator of trust a very small survey was used to evaluate the significance of the identified facilitators of trust. A survey was conducted in the Singapore central business district with two persons interviewing willing individuals. Over one day random 173 adults were asked to allocate in total 10 points to T(p) * T(e) * T(r) * T(o). The data documented provides certainly just a first assumption of significant pattern. Based on the setup and process of the survey the group individuals selected has already common characteristic (e.g. similar social status, geography, etc.). The result is illustrated in Figure 44.

22 %	55 %	19 %	4%
Offering	Establishment	Reliability	Other
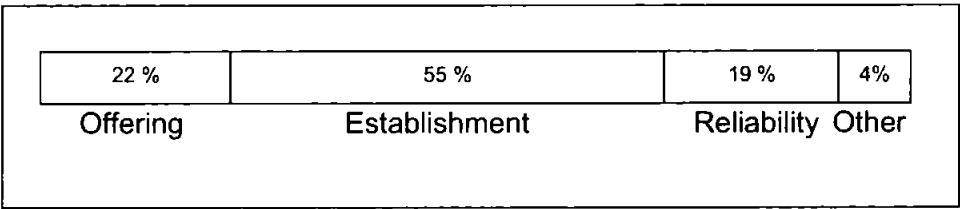
Figure 44 : Significance of facilitator of trust

Based on the responses the highest impact in creating trust has the establishment of the Web site. The offering and reliability are rather similar in the evaluation with around 20% each. Furthermore 4% was allocated to other influences. Considering the limitations of survey as such the result indicates a valid case for the identified facilitators. Future research surveying consumer behavior of larger groups directly online may complement those findings, while it remains difficult to build psychological scenarios ceteris paribus.

A company using the element of trust as an integral part of the sales process is eBay. Resnick & Zeckhauser (2002) explain:

"One of the earliest and best known Internet reputation systems is run by eBay, which gathers comments from buyers and sellers about each other after each transaction. Examination of a large data set from 1999 reveals several interesting features. First, despite incentives to free rides, feedback was provided more than half the time. Second, well beyond reasonable expectation, it was almost always positive. Third, reputation profiles were predictive of future performance, through eBay's net feedback statistic is far from the best predictor available. Fourth, there was a high correlation between buyer and seller feedback, suggesting that the payers reciprocate and retaliate (Resnick & Zeckhauser, 2002)."

4.3.3.3   Increase return per transaction

Increasing the return per transaction – without working on the corresponding cost structure or product bundling (impact on number of transactions, but not always return) – requires active management of the pricing model. A pricing model is certainly very specific to the underlying products and services. A complete pricing model considers many determinants like volumes, levels of quality as well as strategic relevance of the customer. Pricing models have been subject of extensive research and existing approaches can be modified to suit the Internet marketing channel (Farris et al., 2006, Kuttner, 1998). As part of Internet marketing pricing models can be developed, tested and applied more easily and provide the main opportunity – excluding product and service costing – to increase the return per transaction. Following this understanding an example dynamic pricing is illustrated below.

The sales price of a product or service is a function of demand and supply. In a marketplaces with a significant number of uniform transactions the prices are adjusted very quickly, within the diversity and complexity of the classical retail environment the

elasticity of prices are generally much lower (Sheth et al., 1988). Based on the technical platform on the other hand the sales organization can quite quickly identify the current level of demand of as well as supply for a specific product. Using this information the offered price on a Web site can become an immediate function of the current demand. Certainly this kind of pricing model may not apply to all industries or products, but there are several examples in which the approach can yield into a significant increase of the return per transaction. This demand-based determination of price is especially interesting for non-commodity products without equivalent alternatives. The price can also be determined by analyzing the current supply and corresponding pricing structure. Automating this process requires more sophisticated technologies and potentially investment.

Furthermore the price can be determined by other factors. Based on the understanding of the purchasing behavior for the specific product or service, prices can be varied over the hours of the day or days of the week, geographic location of the visitor or even technical settings of the computer. The feasibility of dynamic pricing has to be evaluated against local and international laws which potentially govern consumer protection or other legislations.

4.3.4   Balance of work packages

The nine work packages described in this section 4.3 focus on how to create awareness, desire and transactions. The structure is fully derived from the balanced structure of objectives and KPIs stipulated within the previous sections and it therefore inherits this characteristic of balance.

Within the derived structure of work packages, several concepts are transferred from different disciplines and customized to Internet marketing. Internet marketing specific target groups are defined, the utilization methods for channels described, the interdependency of product life cycle and Internet marketing illustrated and McGuires hierarchy of advertising effect applied to Internet marketing. Furthermore the section elaborates on how to apply value curves, navigation, information and illustration to attract and retain potential consumers. Finally industrial concepts like Norman's stages of action or Lee's multi-phased model of Internet loyalty, as well as what and how transactions

should be offered with a potentially dynamic pricing structure the entire set of strategic work packages. The overall structure reflects the balances defined in objectives and KPIs. That means that the operational implementation of the work packages can not be disconnected from the strategic perspective to ensure the approach remains successful and sustainable.

4.4 Summary

Chapter 3 evidenced that existing frameworks for an overall strategic and sustainable Internet marketing are insufficient. Chapter 4 illustrates such a strategic Internet marketing framework which has been derived directly from the basic principles of strategic management and marketing. The overall self-similar framework is illustrated in the figure below:

	Objectives	KPI	Work packages
Create AWARENESS	as MUCH (of right target group)	Visits/Views (by target group)	Create highest visibility for target group
	as FAST	Awareness TURN-AROUND TIME	Shorten Awareness TAT
	as EFFICIENTLY	Awareness COST	Use Channels effectively
Create DESIRE	as STRONG (of right target group)	Conversion (by target group)	Create amazing product & service attributes
	as FAST	Conversion TURN-AROUND TIME	Convince with amazing information and illustration
	as EFFICIENTLY	Conversion STEPS	Create intuitive and interesting navigation
Generate TRANSACTIONS	as MANY (of right target group)	Transactions (by target group)	Increase transactions per visitor
	as EASY	Transaction TURN-AROUND TIME	Reduce technical and psychological complexity
	With the HIGHEST RETURN	Transaction Return	Increase return per transaction

Figure 45 : Framework for sustainable Strategic Internet marketing

The new framework for sustainable strategic Internet marketing consists of all elements of the classical Balanced Scorecard properly derived from clear marketing objectives. Contrary to existing approaches the framework provides an overall model for Internet marketing and not just individual, potentially disconnected elements thereof. The set of specific KPIs are provided which allow to first of all track the value generated from the marketing activities, but also to create an understanding and appreciation of the strategy within the senior management team of the PO. Individual KPI (e.g. Awareness turn-around time) and work packages (e.g. amazing product and services attributes via value

curves), necessary for a sustainable implementation have been described appropriately and allow sales organizations to significantly increase the transparency as well as effectiveness and efficiency of the marketing operations. Furthermore, the new approach provides a sustainable basis for future evaluation of the effectiveness of continuously morphing implementation models, while the structure of objectives, KPIs and work packages as such remains the same.

The next chapter will illustrate several examples on how this new framework can be used in the implementation of strategic Internet marketing. Chapter 6 then summarizes a survey that evaluated the applicability and consistency of the new model; Chapter 7 further investigates the impact and benefit based on several extensive case studies.

5   Implementation of the Internet marketing framework

"Structure follows strategy"
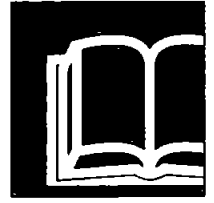
The implementation of an Internet marketing strategy means establishing dynamic structures which have been derived from the overall strategy of the PO. These structures remain a pure function of the objectives and work packages described in the strategy. As highlighted in the previous chapters, the demarcation of strategy and implementation allows the close alignment towards business objectives and changes thereof. The outlined concepts of Chapter 5 are examples how to apply the new framework for strategic Internet marketing to derive a technical, operational and organizational implementation structure.

The technical framework for a sustainable Internet marketing strategy (section 5.1), as well as the processing framework (section 5.2), provide an example how to translate business objectives into a technical and operational environment. To illustrate an example how to develop an organizational structure to set up an Internet marketing strategy (section 5.3) this chapter uses the standard methodology of the Project Management Institute. Those three examples are derived from the concerns raised in the survey results illustrated in the chapter 1 (e.g. insufficient capabilities, knowledge where to start) as well as the literature research of chapter 3. Finally an additional example is describes how the new framework allows evaluating existing, largely technical tactics (section 5.4).

The four sections described in this chapter provide concrete examples how to use the framework in different domains, specifically:

- How to implement the framework in a technical environment
- How to implement the framework in an operational environment
- How to set up the Internet marketing strategy
- How to use the framework to evaluate tactics

5.1 Technical framework for the implementation

The new strategic framework has to enable the PO to determine a technical platform for sustainable Internet marketing which supports the organization in the marketing activities. The Sustainable Internet Marketing Technical Framework (SIMTF) is an example how the framework can be translated into a technical environment and consists of 9 systems which describe the elements required for sustainable Internet marketing. Each system provides a business value as defined in the Internet marketing objectives. The systems are not understood as tools for analysis but as integrated learning engines. The "Site Usage Information System" for example describes the functionality to adjust the Web site navigation structure according to utilization patterns (see work package in section 4.3.2.3); another example is the "Online Pricing Information System" [SIMTF-S8] which optimizes the products and services pricing (see work package in section 4.3.3.3).

Create Awareness	SIMTF-S1	Link and Banner Placement System
	SIMTF-S2	P/S Positioning Information System
	SIMTF-S3	User Origination and Profile Information System
Create Desire	SIMTF-S4	Site Usage Information System
	SIMTF-S5	Information Management and Distribution System
	SIMTF-S6	Customer and Partner Interaction System
Generate Transaction	SIMTF-S7	Transaction Support System
	SIMTF-S8	Online Pricing Information System
	SIMTF-S9	Affiliation and Advertisement System

Figure 46 : SIMTF Elements

The nine components illustrated in the figure above are described in the following sections. The individual components may support several objectives and/or work packages. The model itself has not been implemented at this point of time but just serves

as an example on how to use the new framework to determine a technical structure. Furthermore the reference between the SIMTF and the strategic model as well as current implementation pattern are summarized.

5.1.1   Components of the SIMTF

Link and Banner Placement System: The objective of the link and banner placement system is primarily to create awareness for products, services or whole brands. The attempt is to provide the technical environment that enables the distribution of specific links and banner on demand to create awareness as quickly and efficiently as possible. The system network integrates all relevant channels as search-engines (Seda, 2004), directories, social media and partner Web sites. SIMTF-S1 has several quality aspects which determine the effectiveness of the system; examples are illustration type, location quality or timing. The system is mainly used for campaign implementations. The maturity of the system is determined by its level of automation to optimize the marketing activities. The key-functions of the SIMTF-S1 are the banner and link specification, the campaign specification, the partner generation and the partner evaluation. Information maintained by the system is channel and meta-data to illustrate links and banners within the network.

Products and Services Positioning Information System: The products and services positioning information system is required to evaluate the level of awareness which can be leveraged via the Internet and if channels are used effectively. The system provides information about the positioning of specific products and services as well as the overall Web site within the Internet. The information system finally joins channel and target group specifications. Examples of quality characteristics of this system are the degree of channel details, the possibility of development tracking, and the impact and time sensitivity analysis. The system is mainly used for search engine optimization and for the general evaluation of the Web presence (performance monitoring). The data maintained can be utilized to automatically optimize advertisement strategies. The key-functions of this system are the channel analysis, target-group analysis, development-tracking and quality analysis. The system manages information about channel utilization schemes and the positioning within those channels.

User Origination and Profile Information System: The objective of the user origination

and profile information system is to provide the data source to analyze the awareness structure of the products and services, especially based on demarcated target groups. This system provides information about existing and potential customers, partners and multipliers using the Internet marketing elements. Within this system, origination data (Bayne, 2000) is matched with profile information. This information is used to analyze the clustered target group and to customize the products and services as well as the overall Internet marketing strategies. Quality aspects are the level of detail and the integration with the other elements of the SIMTF. User origination and profile information can be automatically translated into optimizing the on- and off-site marketing activities or the scope of the illustration and distribution system. The key functionalities of this system are the user origination identification and the user profile analysis. The system maintains information about user behavior, user characteristics and user navigation.

Site Usage Information System: The primary objective of the site usage information system is to provide a data source to analyze how much desire the Web site has created for potential customers. This system provides information about the Web site's elements usage by existing and potential customers. It is used for product/services and Web design analysis. Additionally a combination with the information from user origination and profile information system provides an interesting insight on the different Web site components' appeal on the different user cluster. The quality of this system is determined by the complexity of data which can be stored and the possible analysis which can be performed with this element. The site usage information can be automatically utilized in adjusting the navigation structure favoring specific products or services. The key functionality of the system is the utilization analysis and the generation of a link-structure according to the utilization schemes. The core data is traffic information matched to identifiers of the Web site's elements.

Information Management and Distribution System: The objective of the information management and distribution system is to create awareness and create desire. The SIMTF-S5 provides the technical environment to manage and illustrate information on- and off-site. The system includes a professional content management system (CMS) as well as possibilities to distribute the content via a set of data-distribution formats (e.g. XML). The CMS has to provide supporting functionality to create attractive (content and design) information. The system has to be highly integrated with the other systems of the

SIMTF. The key functionalities of the system are the content creation, content illustration and content distribution. The illustration and distribution of information are continuously optimized according to utilization statistics that focus on the Internet marketing strategy. The system maintains the core information of the Web site and meta-data to structure and distribute the content.

Customer and Partner Interaction System: The customer and partner interaction system is a major element to continuously create desire for potential and existing customers, partners and multipliers even after the first visit or purchase. Additionally the system provides a platform to promote the PO's products and services. This system provides the technical environment to enable B2B, B2C or C2C interaction and has to be integrated comprehensively with information management and distribution components. The customer and partner interaction leverages the opportunities of the Internet of establishing a brand and network as well as a community (Hanson, 2000). While the significance of a brand is broadly elaborated, a virtual network or community allows to identify customer's and partner's needs, to steer products and services feedback, to lower support and maintenance costs and to secure new customer within their purchase decision (Cox & Koelzer, 2003). The key functionalities of the system are the discussion management, newsletter management, FAQ management and feedback management. The system has to be designed to maintain and develop itself, e.g. to generate FAQ-pages automatically from helpdesk requests or structure the discussion platform upon the existing discussion threads. The system provides customer, partner and multiplier data as well as specific meta-data for the described functionalities.

Transaction Support System: The objective of the transaction support system is to enable potential customers and business partners to perform transactions on the Web site as well as to motivate additional transactions within the same or future sessions. This system provides the technical environment to support the whole transaction process including registrations, operations, payments and deliveries. Transactions highly determine the usability of a Web site (Roberts, 2002); they have to be comprehensible, effective, efficient and secure. The key functionalities of the system are the transaction operation and the transaction supervision. The support of operative activities by automatic processes has to continuously adjust to the tracked performance of the activities. The system includes customer and partner data as well as transaction and source information.

Online Pricing Information System: The online pricing information system is a back office component required to analyze the overall market situation, especially in regard to the strategic work package illustrated in section 4.3.3.3. The system establishes the information base to identify the right pricing strategy to ensure an optimum of transactions. The system provides the technical functionalities to assess pricing information about the products and services within the Internet environment. The pricing information refers to all equivalent or comparable products and services in consideration of the whole service package (add-ons, shipping, warranties, and other benefits). The key functionalities of the system are the price and the scenario analysis. The system has to be able to adjust the pricing and bundling of products and services on the Web site according to the performed analysis. The data that are maintained by the system are pricing information, channel query logic and service package specifications.

Affiliation and Advertisement System: The objective of the affiliation and advertisement system is to generate (a) more awareness for the Web site and (b) additional revenues via the Web site. The system provides the technical instruments to integrate affiliate and alternative advertisement elements seamless within the existing environment. The system can (a) manage the established affiliate marketing programs (e.g. integrate Google AdSense or Amazon partner programs) and (b) initiate an own affiliate/advertising concept that provides all technical requirements to manage the own external advertising network. The efficiency of this system depends on the simplicity with which attractive external affiliate marketing systems (or partner programs) can be managed and on the flexibility to enable selected advertisers to connect to the provided advertisement platform. The key functionalities of the system are the advertisement management and the affiliate management. The system has to independently adjust the advertising activities according to the performance of specific key performance indicators. The system maintains the data required to identify the accounts for the partner programs and the partner program specific source code. The system has to store details about advertisers and their advertisement activities.

5.1.2   Reference between SIMTF and strategic framework

The following table summarizes the reference between the SIMTF and the strategic framework:

Components of the SIMTF	Create highest visibility for target group	Using Internet Channel Effectiveness	Shorten Awareness Turn-around time	Create amazing product & service attributes	Convincing with amazing Information and illustration	Create an intuitive and Interesting navigation	Increase transaction per visitor	Reduce technical and psychological complexity	Increase return per transaction
Link and Banner placement system	X	X	X						
Products and services positioning system	X	X	X						
User origination and profile information system	X	X	X						
Site usage information system				X	X	X			
Information management and distribution system					X	X			
Customer and partner interaction system							X	X	
Transaction support system							X	X	
Online pricing information system									X
Affiliation and advertisement system	X								X

Table 33 : Reference between SIMTF and strategic work packages

The table illustrates that almost all system components support several work packages of the strategic framework. Referring back to the literature review in section 3.1 this also shows why it was difficult to determine a strategic model with clear objectives based on technically driven initiatives.

5.1.3   Perception of priorities

During the research several small surveys were conducted asking for feedback in regards to newly developed models. The data from those surveys were used to refine the models in an iterative approach as well as to provide an indicative insight in priorities within

specific structures. In regards to the SIMTF, the model itself and a small questionnaire were sent via email to Web site design and development companies which were identified via the yahoo and dmoz directory. The companies all had a portfolio of references including several developments for commercial customers. In the survey the question was raised, which focus areas (based on the structure of the SIMTF) were in scope of past implementation projects. The result based on 53 responses is certainly not entirely representative but provides just an indication of the current priorities:

SIMTF	Yes	No
Link and Banner placement system	0	53
Products and services positioning system	0	53
User origination and profile information system	22	31
Site usage information system	28	25
Information management and distribution system	44	9
Customer and partner interaction system	34	19
Transaction support system	37	16
Online pricing information system	0	53
Affiliation and advertisement system	8	46

Table 34 : Survey result, SIMTF focus areas

The result suggests that the current focus is put majorly on user origination and profile information, site usage information, information management and distribution, customer and partner interaction and transaction support systems. The other areas remain rather underrepresented and therefore provide a large potential of future development. Certainly the scope and setup of this survey provides only a small and indicative insight into current and future practices. Further exploration in more extensive confirmative surveys and case studies will be required to fully assess potential implementation approaches in detail.

5.2 Operational Processing Framework for the implementation

Similar to the technical implementation the newly developed framework has to enable the PO to develop an operation model to manage the Internet marketing strategy. Having

successfully implemented the basics of a technical infrastructure, certain operational processes have to be put in place to ensure the continuous maintenance and improvement of the established network. The execution of those processes also requires an underlying organization to support the individual tasks. This support organization has technical, editorial as well as administrative tasks. The operational tasks are described as an example in the Sustainable Internet Marketing Processing Framework (SIMPF), which is fully aligned to the strategic model as well as the SIMPF.

Objectives	SIMTF	SIMPF
Create Awareness	Link and Banner Placement System	Link and Banner Spread
	P/S Positioning Information System	Evaluate & enhance positioning
	User Origination and Profile Information System	User profiling
Create Desire	Site Usage Information System	Improve usability
	Information Management and Distribution System	Info Creation and Distribution
	Customer and Partner Interaction System	Customer Interaction Support
Generate Transaction	Transaction Support System	Transactional Support
	Online Pricing Information System	Packaging and Pricing
	Affiliation and Advertisement System	Affiliation and Adv. Administration

Figure 47 : Sustainable Internet Marketing Process Framework

The figure above illustrates the overall SIMPF; all components are described in further details in the sections below. The entire SIMPF just serves as an example on how to use the initially defined objectives to determine operational processes.

5.2.1   Components of the SIMPF

Link and banner spread: During the start of the implementation project there is either no

Web site or just an older version available online. Creating additional awareness during this phase, and logically for the old platform, might not be intended from an overall Internet marketing strategy. Certainly after go-live of the new platform it is of major importance to position hyperlinks and banners to the own Web site to achieve the objective of creating awareness within the specific target group. As highlighted in section 4.3.1.1 this process has to become an operational activity over a period of time. Over the same period of time the channel effectiveness as well as the awareness turn-around time has to be improved. The process of positioning hyperlinks and banners can be easily outsourced to professional service provider. Certainly the positioning has to be aligned to the target groups as defined in the strategic work packages.

Evaluate and enhance positioning: The overall strategic framework described a set of performance indicators to measure the progress of the strategic activities. Those performance indicators described in section 4.2 have been designed to not just clearly indicate the status of the strategy but also to be easily measurable. Based on this understanding the SIMTF consists of several examples of technical requirements to accommodate for the tracking of the performance. This specific function of evaluating and enhancing the positioning can be outsourced, but if possible at least the evaluation should be retained in the responsibility of the PO itself. Similarly to setting the objectives and defining the KPIs those functions can be supported by a professional service provider or consultants, but due to the strategic significance of those aspects the ownership has to be clearly determined. The enhancement of the positioning may allow the potential partnership with service provider or external experts.

User profiling: Based on the solid analysis of user origination and profile information the overall marketing strategy and implementation thereof can be re-evaluated. This re-evaluation is a normal process considering the iterative nature of the strategy development process. Profiling within this process means interpreting statistical data from a marketing perspective to identify pattern which can be used to better achieve the marketing objectives. This process is certainly highly supported by the automatically assessed origination and profiling information, but requires a significant human as well as product and service understanding. Therefore this process has to be addressed by an experienced professional usually out of the PO. Existing analytic tools support this process with automatically assessed navigation and user information.

Improve usability: As illustrated in the SIMTF the site usage information system has to adjust the site structure according to the user's behavior to create an intuitive and interesting navigation (section 4.3.2.3). The necessary analyses as well as the adjustments require some human psychological involvement. Within this process the PO has to identify common navigation paths as well as attention map improvements. Based on those information adjustments to the Web sites can be implemented. To evaluate the effectiveness of the changes the potential change in behavior has to be monitored. This monitoring is also supported via analytic tools which facilitate different Web site structures to run in parallel while assessing the user behavior. Based on the offered products and services continuous changes to the navigation model can also have a particular positive but also negative impact.

Information creation and distribution: The role of content has been repeatedly addressed in the previous sections. The creation of high quality content and the effective distribution within the Internet can be maximized if the process is pro-actively managed. Optimally the Information management and distribution system of the SIMTF supports this activity, but very often the creation as well as distribution remains a manual process to achieve a maximum impact. This process ensures a high visibility of the content in specific awareness channels, but much more importantly determines the attractiveness of product and service's attributes. If the information created and distributed provides great attributes and is based on outstanding design components the conversion rate can be increased significantly. Theoretically the function of information creation and distribution can be outsourced. Unfortunately that step might be very dangerous as the control of the distributed information determines the overall sales and marketing strategy of the PO. The interests of potential partner that serves several customers might conflict or the compensation structures misdirect distribution activities. The information creation is very product and service specific and requires in-depth knowledge about the value proposition and target consumer segments.

Customer interaction support: The customer interaction support is looking at the interactive elements of the Web site and manages the operations of those channels. The scope of operations depends on the deployed interactive elements. Based on the technical features illustrated in the SIMTF, customer interaction support means managing

discussion forums (e.g. initiating topics, answering questions or deleting spam), writing newsletters, creating FAQ content and answering email requests. The customer interaction support focuses on maximizing the number of transactions as well as the transaction return.

Also this function can be outsourced, but is usually kept in-house due to the reason that most POs perceive customer service or interaction as their core competence.

Transactional support: One of the main targets of the Internet marketing strategy is to facilitate additional online transactions. A lot of transactions require a certain response (service delivery) from the PO. Certainly the objective from an operational point of view is to minimize the manual effort via automation or to outsource knowledge-minimal processes. Even though, a large spectrum of business transactions requires human support for example to initiate the delivery / mailing of physical products. Furthermore, especially the human element of transaction support has the potential to create loyalty.

Packaging and pricing: The process of packaging and pricing comprises the development and continuously improvement of the products and services which are offered via the Internet. This process immediately impacts the transaction return and is highlighted in section 4.3.3.3. Packaging as well as pricing requires a very solid understanding of the products and services as well as the specific target groups. Packaging and pricing is probably the most complex topic of the SIMPF; especially in terms of ensuring sustainability of the Internet marketing success as much as short term profitability. A lot of details in terms of how to determine the overall value proposition and specific products attributes have been illustrated in section 4.3. The task requires in-depth experience and knowledge from sales and marketing professionals as well as the finance and strategy departments.

Affiliate and advertisement administration: The affiliate and advertisement administration focuses on managing the affiliation and advertisement channels. This means being optimally incorporated into others affiliate and advertisement systems as much as controlling the own affiliation and advertisement network. This function can be similarly to the link and banner spread easily outsourced. This approach is applied especially when the according components of the SIMTF are underdeveloped. No matter

if outsourced or done in-house affiliation and advertisement can create significant costs even after the setup project.

5.2.2 Reference between SIMPF and strategic framework

The following table shortly summarizes the reference between the SIMPF and the strategic framework:

Components of the SIMTF	Create highest visibility for target group	Using Internet Channel Effectiveness	Shorten Awareness Turn-around time	Create amazing product & service attributes	Convincing with amazing information and illustration	Create an intuitive and interesting navigation	Increase transaction per visitor	Reduce technical and psychological complexity	Increase return per transaction
Link and banner spread	X	X	X						
Evaluate and enhance positioning		X	X						
User profiling	X	X	X						
Improve usability						X	X		
Information creation and distribution					X	X			
Customer interaction support							X	X	
Transactional support							X	X	X
Packaging and pricing									X
Affiliate and advertisement administration	X								X

Table 35 : Reference between SIMTF and strategic work packages

The table illustrates that the example processes support several work packages of the strategic framework.

5.3 Organizational Framework for the implementation

The initial setup of the Internet marketing strategy is an important function to ensure the sustainability of the technical and procedural environment. In case of specific oversights in

this phase the technical infrastructure may be very cost sensitive to required changes or operational processes are not able to further optimize the Internet marketing approach. This example illustrates how the Internet marketing strategy can be set up in a comprehensive organizational structure.

Per definition a project starts when (financial or personal) resources are allocated to work on the subject. This strict definition is of relevance to determine the full investment made to support the Internet marketing strategy (KPI transaction return). To continuously and cautiously enter into the overall investment of resources a project charter has to be created to outline the scope, objectives and required resources of the activities. The project charter entitles the project manager to deploy resources to the project. During the initiation phase certain planning details are already identified. The PMI illustrates this overlap of the five central project phases as process interactions illustrated in the figure below:
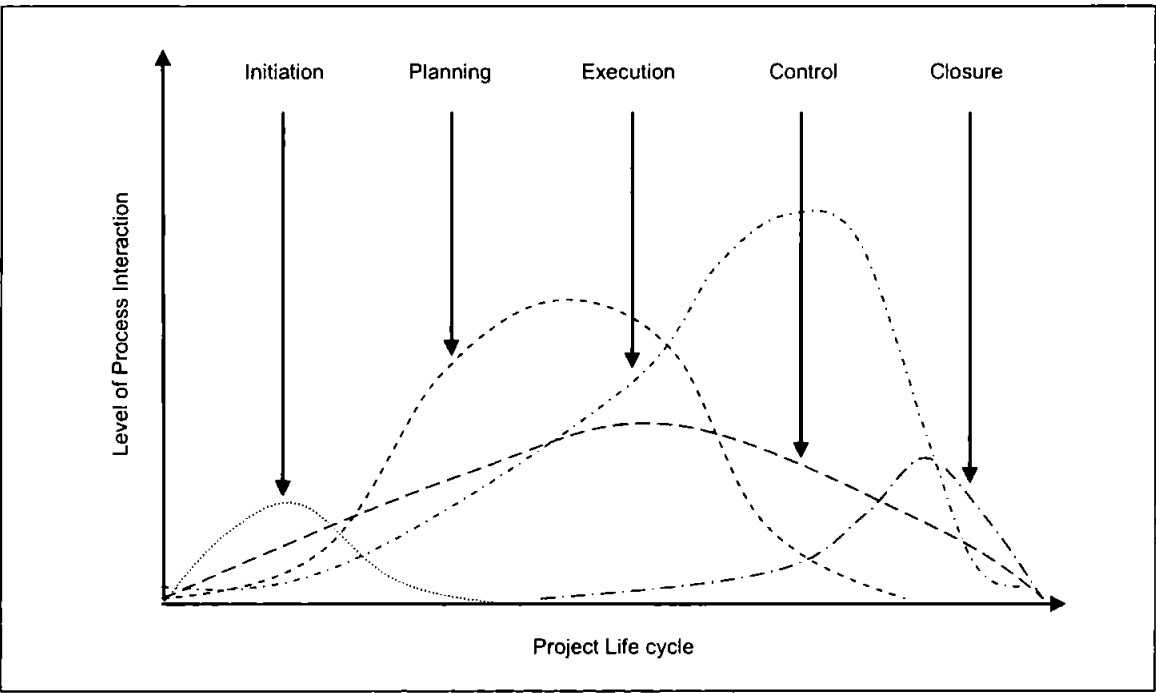
Figure 48 : PMI Process interactions (PMBOK, 2004)

Describing the overall planning structure for the setup of the Internet marketing strategy is of importance due to three reasons:

- Ensure long term buy-in from management via clear expectation management over implementation milestones
- Grouping of all Internet marketing implementation activities to supervise overall investments into Internet marketing strategy
- Ensure sustainability of all implementation components

To achieve a successful implementation of the strategic framework 10 planning areas can be utilized: scope, time, cost, quality, human resource, procurement, risk, communication, knowledge and integration management. This example structure includes a small extension of the global PMI standard in terms of knowledge management. This area has been added as a result of the research and is illustrated below.

5.3.1   Components of the organizational framework

Scope planning: Internet marketing activities usually have a very clear beginning but generally no pre-determined end. This aspect fully translates into the understanding of the scope of the initial implementation. Based on this structure every strategic work package of the framework requires a clear definition of a certain scope of deliverables for the initial setup phase. This clear definition will ensure all stakeholders of the Internet marketing strategy have a common set of expectations and motivations. The basics required to create an operational phase of the strategy is determined by the competitive environment. To understand this environment a comprehensive market analysis of the market participants builds the first block of information to evaluate the feasibility of a successful Internet marketing strategy (Malhorta & Birks, 2007; Smith & Flechter, 2004). During this analysis the strategy of exactly those existing but also potentially future market representatives as well as their compatibility with the own objectives has to be assessed. This market analysis can be performed as described within the established literature of general marketing (McGivern, 2006; Zikmund & Babin, 2006). The consolidated market analysis creates the baseline for the determination of potential opportunities. Based on the current positioning and targets of the PO the generic work packages of the strategic framework can be reviewed to evaluate potential initiatives. The evaluation of potential strategic initiatives also describes the practical feasibility of the initially defined overall objectives. Based on the identified strategic initiatives technical requirements for the

design and implementation phase have to be identified. Describing those technical requirements also allows assessing the technical feasibility. The planning of the scope includes the clear outline of the objectives, deliverables, assumptions, dependencies and critical success factors. During scope planning a comprehensive work breakdown structure for the project is developed which includes all necessary activities.

Time planning: Time plan translates the work breakdown structure into a work schedule based on the resource requirements for each task. During this process the sequence is determined by underlying priorities and dependencies in the strategic framework. Based on the described project scope certain activities have to be addressed earlier some later. To create awareness the onsite search engine optimization for example has to be done before search engine submission as some platforms perform an immediate evaluation of the submitted sites. In case of sub-optimal optimization this first evaluation might not be very favorable. In case of a very competitive market environment time management can become a key success factor. In case certain marketing activities are initiated but not consequently implemented a competitor might use this as an opportunity to create a major advantage.

Cost planning: The implementation of a comprehensive Internet marketing strategy often requires a significant amount of investment. This requirement of human and financial resources translates into an overall cost plan. A majority of cost elements contain one-time investment as well as continuous running expenses. An elaborate advertisement approach for example can quickly generate significant running expenses. In some cases a higher investment upfront reduces the running costs significantly. A well search engine ranking optimized Web site probably requires less keyword advertisement in search engines. Within projects of bigger size the accounting treatment of certain investments has to be discussed; for example major IT development costs for Web sites can be activated and depreciated over a period of time to avoid potentially erratic profit and loss statements. During the planning period a clear understanding of the future costs as well as tangible benefits has to be established. The desired value out of the Internet marketing activities for the PO requires explicit definition. Even if the focus of the marketing activities is simply to create awareness the corresponding costs have to be proportional to the perceived value for the organization. Equivalently to the scope definition also during the cost planning the split between project costs and running costs have to be understood.

The split is rather unnecessary from an overall organizational perspective, because no matter on the timing the costs finally occur. The split just helps the project leadership to control the budget and the senior management team to evaluate the overall ROI of the Internet marketing strategy.

Quality planning: Quality management is a key function throughout all IT projects in general. The quality of the developed elements can significantly determine the short and long term success of the Internet marketing strategy. Primarily invisible flaws, for example the system architecture or html-structure, can have a disastrous impact on the overall ambitions. During the planning period the project team has to precisely define the quality characteristics of each deliverable as defined in the scope. Quality characteristics can consist of objective as well as subjective properties. The amount of source code documentation, W3C compliance, adherence to coding conventions, response times or server downtime are examples of objective measures. Examples for subjective quality measures are design consistency, attention map compliance or transaction complexity. For each deliverable appropriate quality metrics and verification processes have to be structured. Those verification processes can be on the one hand just statistical analysis or reviews but on the other hand also focus group discussions with potential customers or customer surveys (based on qualitative and quantitative research).

Human Resource planning: The implementation of a comprehensive Internet marketing strategy requires specialized know-how and experience in different subject matters. As part of the planning phase the major personnel requirements have to be consolidated to package job profiles to cover all areas of the strategic framework. Each required position has to be recruited and in certain cases additionally trained. Based on the job profile, skill-set and availability of key people the time plan and scope has to be verified. Also based on the required key people an overall project organization has to be designed. The structure and amount of people is certainly determined by the scope and timeframe of the project. The different groups are – based on their job profile – usually compensated differently. While sales and marketing people usually prefer being paid based on generated revenues or leads the IT developers might be more interested on a stable income via a daily rate (Belcher, 1996; Barcelona & Martocchio, 2005; Heneman, 2000). The steering committee of such a project consists of the project sponsor, project customer and other main stakeholders who are responsible for required input or output in regards to

the project.

Procurement planning: During the procurement planning purchasing needs and potential supplier are identified. For each procurement need several partners should be available to avoid unnecessary price pressure or a weak negotiation power in disputes. Very often especially larger companies have certain existing strategic partners for procurement needs which can be leveraged. Within Internet marketing projects the right moment for procurement aspects is very difficult to manage. Basically all contracts should be settled as part of the project planning to assure that the project plan is solid. On the other hand required material and services can not be procured without having an approval of the project plan. The only option managing this setup correctly is to have all legal documents agreed and finalized with a certain validity period so in case of an approval of the project plan all contracts can be signed right away. In a lot of projects the project initiation and planning phase may already take several weeks or months. For those periods consultancy agreements or letter of engagement / intend are a common practice.

Risk planning: The implementation of an Internet marketing strategy can broaden the spectrum of threatening risks the PO has to manage proactively. Engaging into Internet marketing those risks have to be identified, quantified and adequate countermeasures have to be defined. Technical Risk: Almost every Internet marketing strategy involves a certain degree of software and/or Web site development. Equivalent to every software development project, technical risks of wrong software architecture, unsustainable development tools, issues during testing, deployment or during the maintenance are normal challenges throughout the different phases. Especially big Web sites are lucrative targets for continuous attacks from hackers. A successful attack can have a disastrous impact on the PO. Publishing or misusing customer data (e.g. credit card details) or just changing content of the Web sites can result into a temporary or permanent discontinuation of the business operations. Marketing Risk: A new marketing channel is mostly approached with the focus on potential opportunities. On the other hand stepping into an additional channel can dilute the established image and reputation. Wrong marketing messages can be broadcasted or unwanted target groups might be addressed. Allowing online purchases can jeopardize other established sales channels. Unfavorable price comparisons may become available. A higher visibility might attract more competition. The marketing risks are potentially under-evaluated or even ignored. A

careful consideration of the risk situation is a key factor for the overall success of the marketing strategy. Financial Risk: As highlighted in the cost planning the implementation of certain Internet based marketing strategies can create a new pattern of expenses which has not been managed from the organization before. This inexperience can result in the wrong evaluations of the cash flows or in higher insecurity of the sustainability of the targeted profitability. Legal risk: The Internet underlies a variety of laws and regulations. Those regulations include aspects like data protection, consumer protection, information requirements or taxations. The consultation of specialized lawyer for Internet law is a common practice to avoid pitfalls. The complete set of risks can be illustrated in a risk matrix of probability and impact. Based on the risk matrix specific priority items can be crystallized and appropriate countermeasures defined.

Communication planning: Communication planning is a very important aspect of project management, especially in larger organizations. The objective is to identify all relevant stakeholders of the project and to satisfy their information need and leverage their potential input. As part of every structured project of reasonable size at least a project manager, a project sponsor and the steering committee are significant inherent stakeholders. Considering the complexity of an Internet marketing strategy many additional stakeholders (e.g. sales manager, marketing manager, CFO, COO) have to be informed continuously. Based on the communication needs adequate communication channels can be established. Besides a structured project status report illustrating the status of the different planning areas, a regular reporting of the key performance indicator usually satisfies the most relevant information needs.

Knowledge planning: Knowledge management is not a standard element of the project management method of the PMI. Due to hand over of the project phase to the operational phase, knowledge management has been added to assure that the activities are sustainable throughout personal changes during and after the project. Knowledge management means to primarily involve all major knowledge carriers into the activities as well as to enable knowledge transfer between key people. Even though documentation of marketing processes seems like a theoretic process, documentation ensures that knowledge is maintained within the project team and the overall organization after the project team is dissolved. To ensure that all know how is effectively used the project management has to primarily identify knowledge domains and key sources for this

domain. Those sources can be people as well as media like documentation, books or articles. Those knowledge sources have to be integrated in the overall project plan (e.g. communication plan). Secondarily the project management has to describe a comprehensive documentation plan which consolidates all necessary information for future use.

Integration planning: Integration management means making sure that all individual elements of the project plan are consistent as a whole. Basically integration management is the managerial level on top of the other areas. From this birds eye perspective integration management also means making sure the changes to the planning baseline are appropriately considered in the whole project plan. It therefore structures a formal change request process to ensure that all stakeholders are properly informed on significant changes.

5.3.2   Perception of priorities

In the small survey conducted as part of the research (explained in section 5.1.3) 53 Web designers and developers also answered the questions, which PMI planning area was properly documented within their customers' projects. The result is illustrated below:

Area	Not	Partial	Fully
Scope	2	12	39
Time	3	17	33
Cost	0	1	52
Quality	2	4	47
Human Resource	26	15	12
Procurement	22	25	6
Risk	39	10	4
Communication	42	7	4
Knowledge	41	6	6
Integration	44	5	4

Table 36 : Current planning priorities in Internet marketing projects

The result of the short survey suggests the clear focus on scope, time, cost and quality management; major deficiencies lie in risk, communication, knowledge and integration management. Based on the lack of communication processes, knowledge documentation and organizational integration, this statistic indicates one potential reasons why a majority of Internet marketing implementations are not successful or sustainable. The risks resulting from an incomplete planning can be eliminated following the above described example structure. As highlighted in section 5.1.3 the scope and setup of this short survey provides only a small and indicative insight into current and future priorities. Again further exploration in more extensive confirmative surveys and case studies will be required to fully assess project managerial functions.

5.4   Evaluation of Tactics

As highlighted in the introduction the new strategic framework of objectives, corresponding KPIs and subsequent work packages allows evaluating all existing and potentially future marketing initiatives. Based on the framework every initiative can be evaluated in regards to if – and how much – it supports the work packages of the strategy. This fourth example illustrates several standard Internet marketing concepts which have been described in the literature review in Chapter 3 and are very established in the current environment. The table below shows which work package is supported from which of the five concepts:

	AdWords	Affiliates	Rewards	Newsletter	SERO
WP 1.1	X	X	-	X	X
WP 1.2	X	X	-	-	X
WP 1.3	X	X	-	X	
WP 2.1	-	-	X	-	
WP 2.2	-	-	-	-	
WP 2.3	-	-	-	X	
WP 3.1	-	-	X	X	
WP 3.2	-	-	-	X	
WP 3.3	-	-	X	X	

Table 37 : Evaluation of tactics based on strategic framework

The example above shows that tactics like AdWords, Affiliates or SERO impact solely work packages 1.1 to 1.3, but have almost no impact on the areas to create desire for the product and services or the generate independent transactions. Following this example a PO can evaluate potential investment alternatives to see how they will impact the overall strategy.

5.5   Summary

The literature research confirmed statistics from different surveys that a comprehensive framework for Internet marketing does not exist. Such a framework has been established and is illustrated in Chapter 4. This chapter provides several practical examples how to use the framework in different areas.

Four implementation examples of the strategic Internet marketing framework are illustrated:

- How to implement the framework in a technical environment
- How to implement the framework in an operational environment
- How to set up the Internet marketing strategy

- How to use the framework to evaluate tactics

The technical framework for a sustainable Internet marketing strategy (section 5.1), as well as the processing framework (section 5.2), provide an example how to translate business objectives into a technical and operational environment. To illustrate an example how to develop an organizational structure to set up an Internet marketing strategy (section 5.3) this chapter uses the standard methodology of the Project Management Institute. Finally an example is described how the new framework allows evaluating existing, largely technical tactics (section 5.4).

The examples illustrated in this chapter serve as an example how to address the concerns raised in the survey results illustrated in the chapter 1 (e.g. insufficient capabilities, knowledge where to start) as well as the literature research of chapter 3. While remaining purely examples, they also explain how to use the overall framework to derive further action in different disciplines. The following chapter summarizes a survey of potential beneficiaries of the framework that evaluated the applicability and consistency of the new model.

6   Evaluation of the Internet Marketing Framework
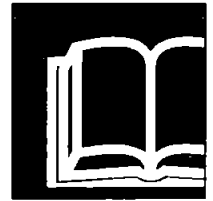
"Change brings opportunities.
On the other hand, change can be confusing."
Michael Porter [Harvard Professor]

The previous chapters have established a strategic framework for Internet marketing. To evaluate this framework an explorative survey was conducted to elicit statistical information of priorities and utilization of specific models. The survey conducted as part of the research targeted representatives of sales organizations to identify utilization of frameworks and methods as well as priorities of the different objectives, KPIs and work packages in the past and future.

The result of the survey provides explorative data in regards to:

- Current structures used for the implementations of an Internet marketing strategy
- Perception if a framework is more effective and efficient than individual activities
- Consistency and potential future adoption of the framework
- Priorities of objectives, KPIs and work packages within current and future environment.

The findings of the survey of potential beneficiaries provide a new insight into the current pattern of corporate Internet marketing. The data highlights priorities and focus points of future development. The empirical methodology supports the overall research in evaluating the new model based on direct feedback of subject matter experts.

6.1   Explorative Research Approach

Target: The target of the survey was to provide a set of data points for the explorative evaluation of the subject matter. The main criteria of evaluation were the overall situation of strategic Internet marketing frameworks as well as elements thereof. An explorative

survey format was chosen as this part of the research primarily focused on the free conceptualization of a new structure and not a statistical confirmation of an established approach.

Distribution: The survey was created via Google Docs / Forms and distributed via mail to around 850 small & mid-size POs (The detailed number of recipients cannot be assessed as several notifications bounced with temporary error messages). In the email a copy of the new framework (Figure 54) was attached. The framework was illustrated in its most simplistic way (Figure 54) to ensure that respondents would answer the questions being aware of the entire model. The online questionnaire required around 5-10 minutes to respond if answers did not require additional research within the targeted organization. The contacted organizations were determined via a) available networks of the chamber of commerce and b) public directories available in the Internet (e.g. dmoz, yahoo directory). The organizations were ensured that the responses would be stored and communicated anonymously.

Questions: The questionnaire distributed contained 5 parts:
- Categorization of organization
- Utilization of overall Internet marketing framework
- Internet marketing objectives
- Internet marketing KPIs
- Internet marketing work packages

The first section of the survey was designed to allow the differentiation of answers according to specific organization types or marketing approaches. The main categorizations were formed to be % of revenues generated online, % of marketing budget spent online and size of marketing team. The second section included the questions in regards to the importance and utilization of the overall strategic framework, like:
- Is your organization aware of an overall framework for the implementation of Internet marketing?
- Is a framework for Internet marketing more efficient than individual initiatives?
- Will your organization use a similar framework as attached in the future?

The third section evaluated all individual components of the 3 areas of the framework:

- Questions: How do you rate the objectives / KPI / work packages <COMPONENT>?
- Answer Options:
    - Important – We focus on / use it,
    - Important – We do not focus on it, but we will
    - Important – But we will not focus on / use it
    - Not important

Due to the formatting and evaluation limitations of Google docs at that point of time the formulation of the questions followed certain constraints (e.g. multiple choice questions could not be assessed statistically). The full questionnaire is attached in appendix F.

Responses: From around 850 notified organizations 396 responded within a period of 4 weeks. From the 396, 29 submissions had to be excluded due to incomplete information in the responses.

Evaluation: The result of the survey was consolidated using the forms summary and spreadsheet function. The detailed analysis has been conducted based on Microsoft Excel.

Limitations: The limitations of the documented data are derived from the setup of the survey. First of all organization had a Web site with updated contact details to respond to a questionnaire. Certainly only organizations which were willing to respond to an online survey could be taken in consideration. This process may have pre-qualified organizations with a larger interest in Internet marketing. Furthermore the organizations were contacted only in English and German. This communication approach also limited the scope of organizations to specific geographical or demographical areas. The framework was illustrated in a very pure format (Figure 14) on one page to ensure the respondents would have an overview of the entire model. Potentially the organization may not have reviewed all details of the model or not understood specific parts of it. Finally the survey assessed implicitly the capabilities of the Internet marketing organization. Potentially certain organizations may have answered the question in a more positive sense than an onsite review would have revealed.

6.2   Evaluation of Strategic framework

The first question assessed if the organization uses an overall strategic framework for Internet marketing as suggested in Chapter 4. Based on the survey result not a single company used such a model. Due to the answer no further differentiation of the result in specific segments is required. The overall result is illustrated in the figure below and shows the number of responses grouped by the percentage of the organization's revenues generated online:
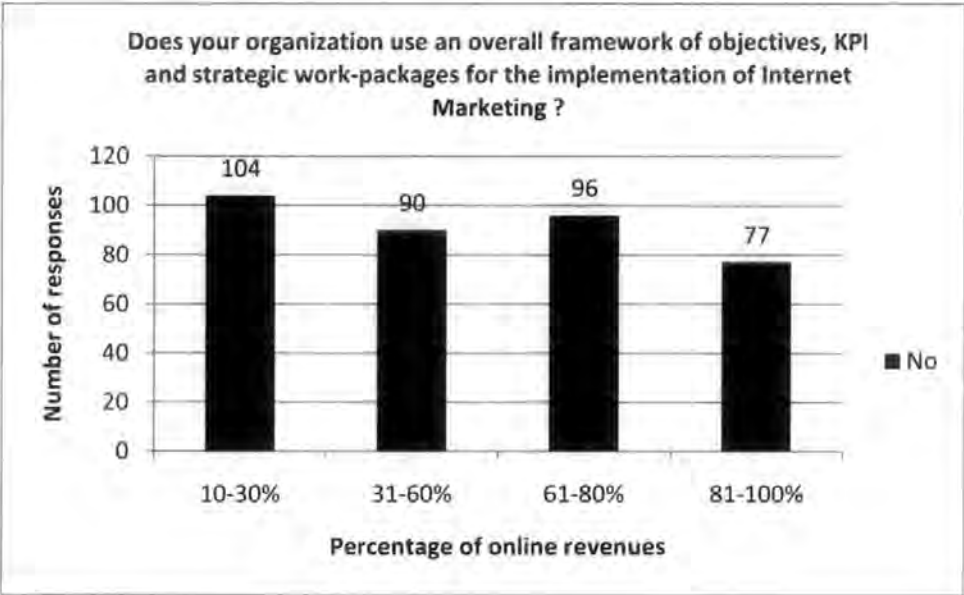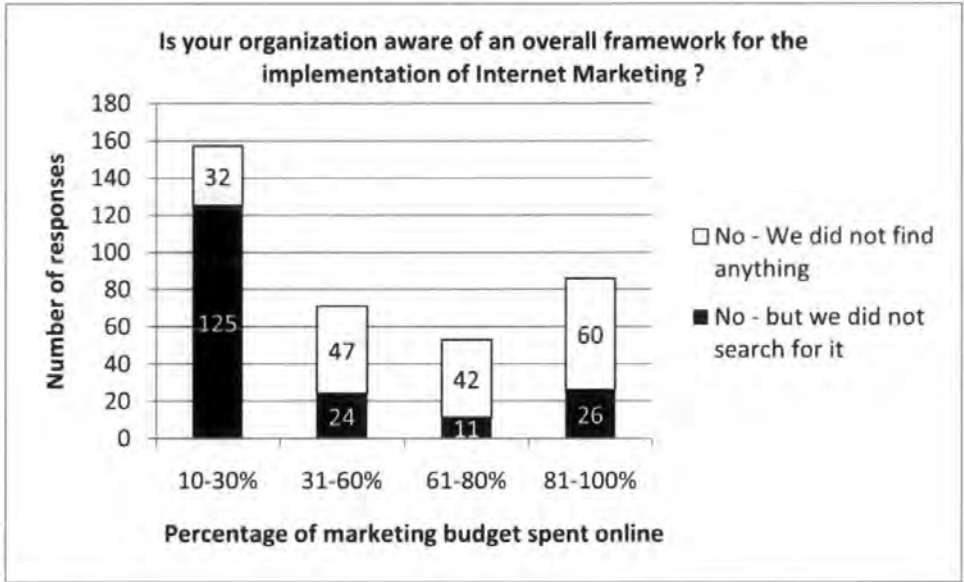

Figure 49 : Current utilization of strategic Internet marketing framework

The second question asked if the organization was aware of an overall strategic Internet marketing framework. The questions could be answered with "yes" and "no", while "no" could be differentiated between not having looked for a framework or having looked but not found a framework.

Is your organization aware of an overall framework for the implementation of Internet Marketing ?

Number of responses

	10-30%	31-60%	61-80%	81-100%
No - We did not find anything	9	35	60	77
No - but we did not search for it	95	55	36	

Percentage of online revenues

□ No - We did not find anything

■ No - but we did not search for it

Is your organization aware of an overall framework for the implementation of Internet Marketing ?

Number of responses

	10-30%	31-60%	61-80%	81-100%
No - We did not find anything	32	47	42	60
No - but we did not search for it	125	24	11	26

Percentage of marketing budget spent online

□ No - We did not find anything

■ No - but we did not search for it

Figure 50 : Awareness about Internet marketing frameworks

The reply to this question reveals that none of the organizations is aware of such a framework, even though, especially organization with larger engagements in Internet marketing, explicitly searched for a structure.

The third question asked was if working with a strategic framework is perceived to be more efficient than acting based on individual initiatives. The possible answers were "yes", "no" and "maybe". The result is illustrated in the figures below:

Is a strategic framework more efficient than individual initiatives?

Is a strategic framework more efficient than individual initiatives?
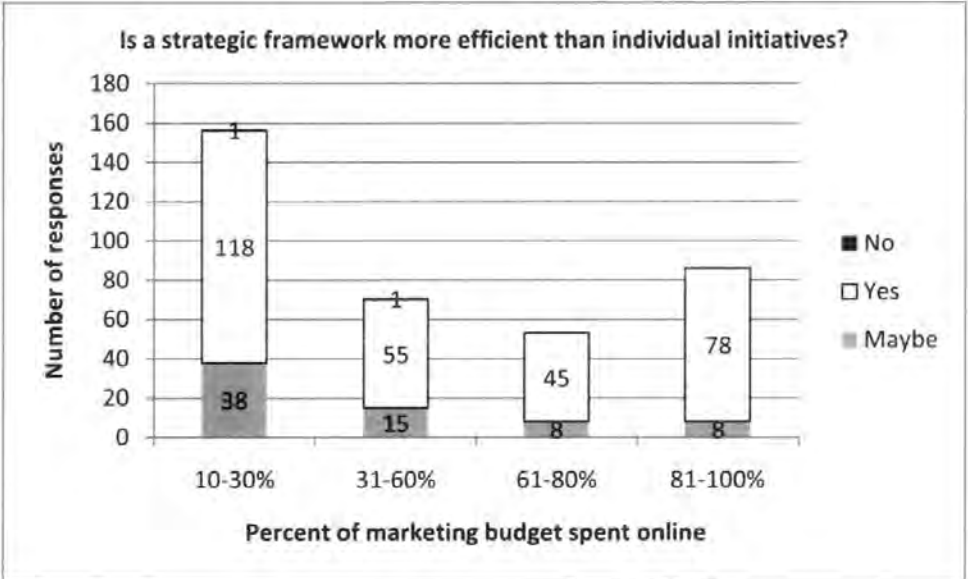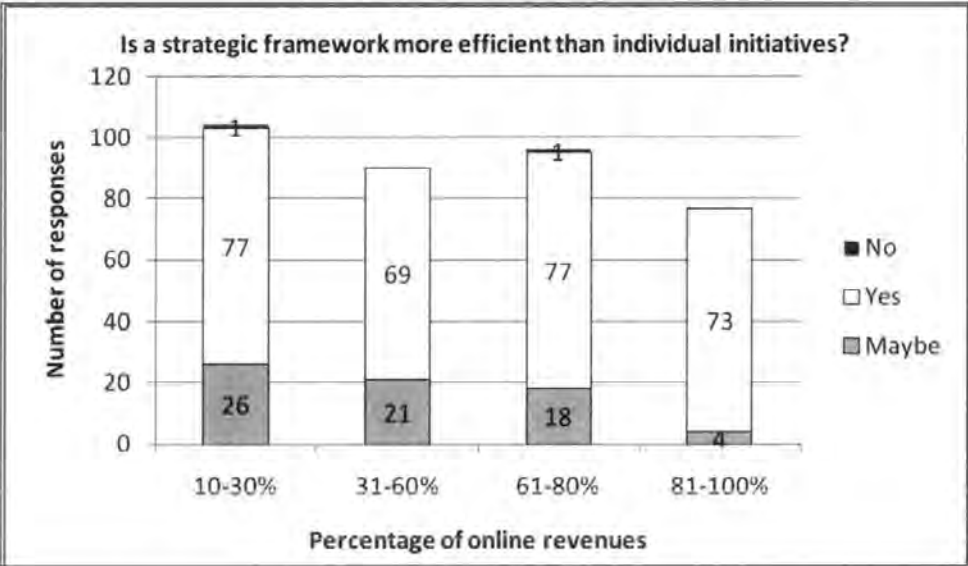
Figure 51 : Efficiency of an overall framework vs. individual initiatives

Overall around 80% of the responses indicated that they perceive a strategic framework is more efficient than individual initiatives. In organizations with higher focus on Internet marketing (percentage of online revenues, percentage of online marketing budget or headcount of Internet marketing team) this perception goes up to 90%.
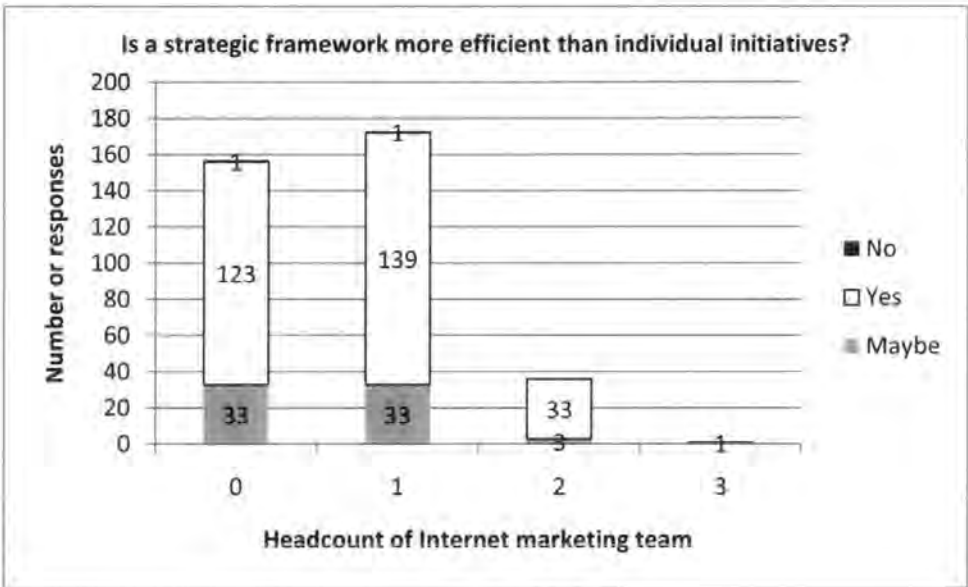
The fourth question asked if the presented framework, as described in chapter 4, looks consistent. The possible answers were "yes", "no" and "maybe". As the framework was attached in the distribution (see section 6.1) all participants had access to the full model. Due to the survey setup – not providing an immediate communication channel for questions in regards to the framework – the answers had to be made solely based on the electronically provided information. In an alternative survey setup potentially incongruent level of additional explanations may have distorted the survey data. The result is illustrated in the figures below:

Does the presented framework look consistent?

A stacked bar chart showing Number of responses versus Percentage of online revenues. Bars labeled: 10-30% (Yes = 101), 31-60% (Yes = 74, Maybe = 13), 61-80% (Yes = 81, Maybe = 8), 81-100% (Yes = 64, Maybe = 10). Legend: Yes, No, Maybe.

Does the presented framework look consistent?

A stacked bar chart showing Number of responses versus Percentage of marketing budget spent online. Bars labeled: 10-30% (Yes = 144, Maybe = 9), 31-60% (Yes = 57, Maybe = 10), 61-80% (Yes = 43, Maybe = 7), 81-100% (Yes = 76, Maybe = 5). Legend: Yes, No, Maybe.

Figure 52 : Perceived consistency of new framework

Based on the responses 87.2% (320 of 367) of the organizations perceive the presented framework to be consistent. While the number of participants with larger Internet marketing teams is rather small, especially those organizations highlighted the perceived consistency of the model. In regards to the percentage of online revenues or percentage of marketing budget spent online no determined trend is visible.

The final question was if the organization would use a similar framework in the future. The possible answers were again yes, no and maybe. The reply is summarized in the figure below:

Will your organization use a similar framework as attached in the future ?

Number of responses

	10-30%	31-60%	61-80%	81-100%
Maybe	94	50	41	
Yes		39	52	77
No	8			

Percentage of online revenues

■ No
□ Yes
▨ Maybe

Will your organization use a similar framework as attached in the future ?

Number of responses

	10-30%	31-60%	61-80%	81-100%
Maybe	125	23	17	20
Yes	29	47	35	65
No	3	1	1	1

Percentage of marketing budget spent online
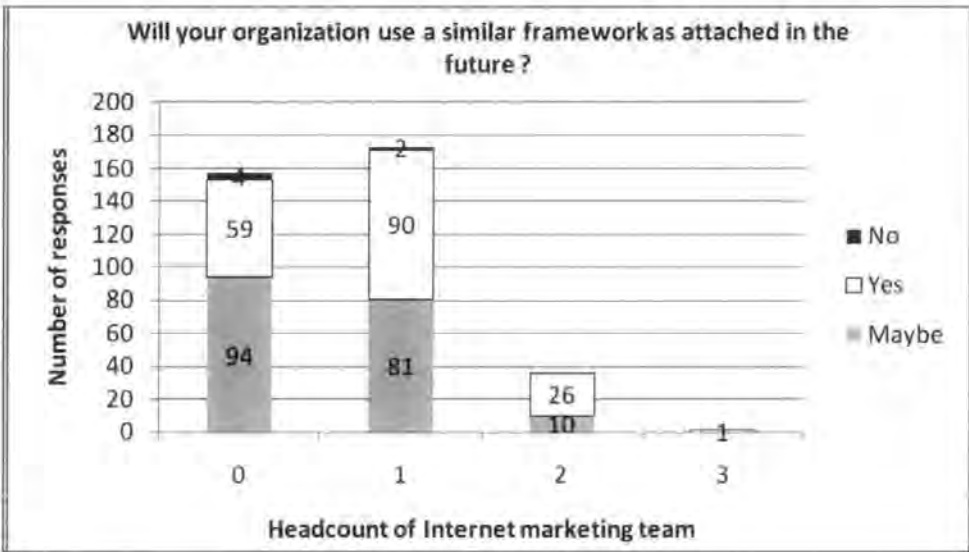
■ No
□ Yes
▨ Maybe

Figure 53 : Future utilization of new framework

Overall 47.9% of all respondents answered yes, 50.4% maybe and 1.6% no. Again, especially in organizations with higher percentages of online revenues or share of marketing budget spent online responded more favorable.

The overall survey result first of all strengthens the claim made by statistics and the literature review (Chapter 3) that a comprehensive framework for strategic Internet marketing does not exist. Furthermore it highlights that a framework as such is perceived to more efficient than individual activities. Finally a considerable amount of organizations mentioned their potential interest to use a model as suggested in this thesis.

6.3   Evaluation of Strategic Elements

This section illustrates the detailed data elicited via the survey on the evaluation of the individual components of the new strategic framework. All objectives (section 6.3.1), KPIs (section 6.3.2) and work packages (section 6.3.3) are explained in detail.
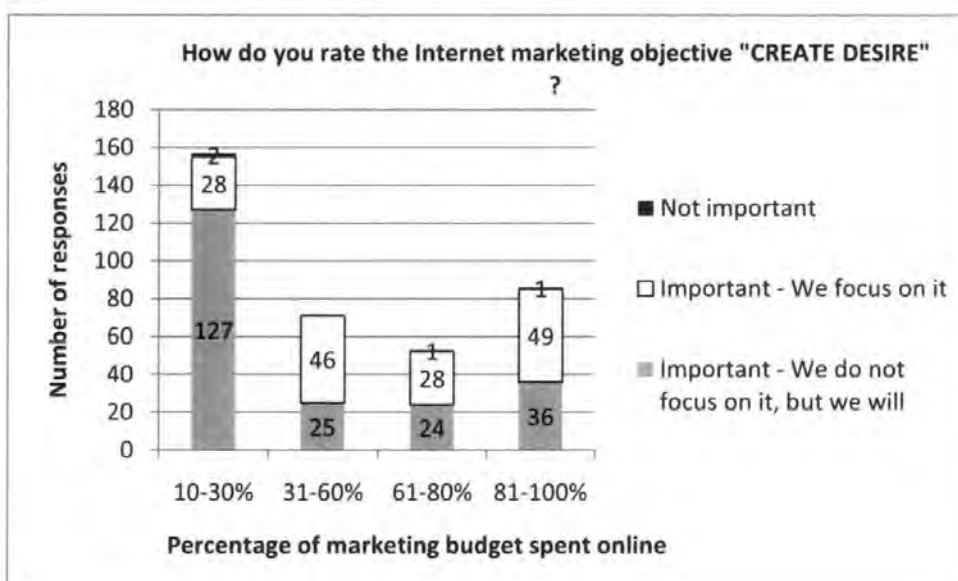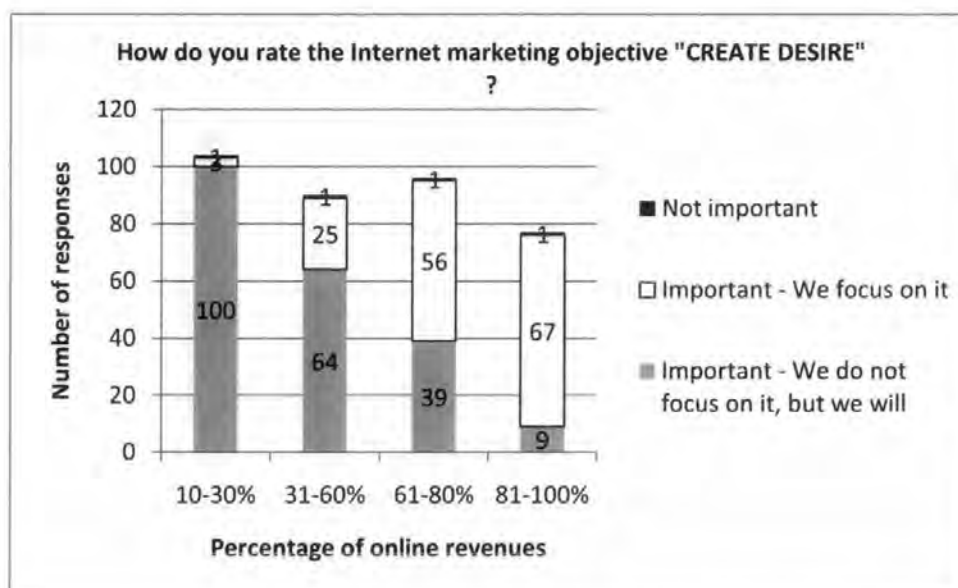
6.3.1   Evaluation of Objectives

The third section of the survey asked for the prioritization in regards to the three objectives: create awareness, create desire and generate transactions. Absolutely all

respondents highlighted the first objective (create awareness) as important and therefore no further breakdown is provided in this thesis. In regards to the two other objectives a matrix below illustrates the survey result:

	How do you rate the Internet marketing objective "CREATE DESIRE" ?			
How do you rate the Internet marketing objective "GENERATE TRANSACTION" ?	Important - We do not focus on it, but we will	Important - We focus on it	Not important	Grand Total
Important - We focus on it	205	142	1	348
Not important	7	9	3	19
Grand Total	212	151	4	367

Table 38 : Perceived importance of Internet marketing objectives

94.8% of the organization considered the objective to "generate transactions" important. In regards to "creating desire" just 41.1% of the organization highlighted current importance, while 57.8% mentioned that the objective will be of importance in the future. This rating of the importance of "creating desire" has been analyzed in further detail. The figure below indicates that especially organizations with very small online revenues (10-30%) have rated the objective to be not of importance at this point of time. Organizations with larger dependencies to online revenues have rated the importance of this objective much higher. The details are illustrated in the figure below:

How do you rate the Internet marketing objective "CREATE DESIRE"?

Chart 1: Number of responses vs. Percentage of online revenues

- Not important
- Important - We focus on it
- Important - We do not focus on it, but we will

Data (Percentage of online revenues):
- 10-30%: 100, 3
- 31-60%: 64, 25, 1
- 61-80%: 39, 56, 1
- 81-100%: 9, 67, 1

How do you rate the Internet marketing objective "CREATE DESIRE"?

Chart 2: Number of responses vs. Percentage of marketing budget spent online

- Not important
- Important - We focus on it
- Important - We do not focus on it, but we will

Data (Percentage of marketing budget spent online):
- 10-30%: 127, 28, 2
- 31-60%: 25, 46, 1
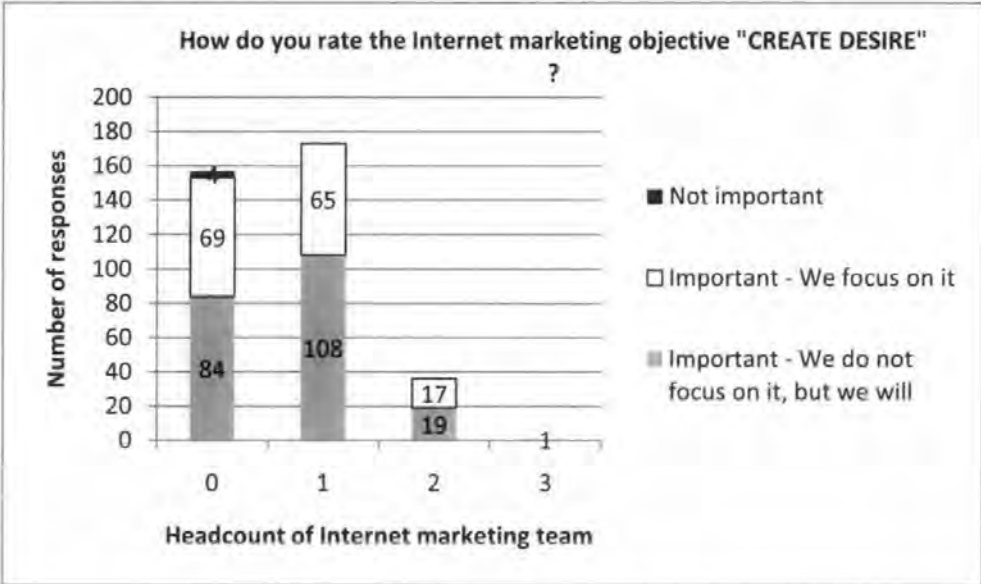- 61-80%: 24, 28, 1
- 81-100%: 36, 49, 1

Figure 54 : Importance of creating desire

6.3.2   Evaluation of key performance indicator

The key performance indicators have been highlighted to be of major importance to manage the implementation of the Internet marketing strategy. The survey result provided interesting insight into the current and future utilization of the suggested KPIs.

The following figure below illustrates the feedback on the KPI "Number of visits". Almost all organizations mentioned they use the KPI at this point of time. Just under 10% of all organizations mentioned they would not use the metric at this point of time, but would implement it in the future:
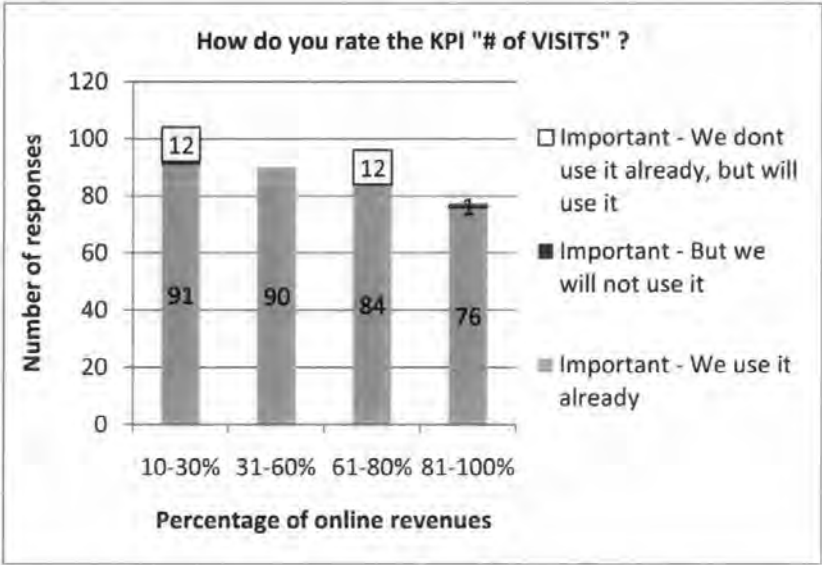
How do you rate the KPI "# of VISITS" ?

Figure 55 : Survey feedback on KPI "visits"

The following figure illustrates the feedback on the KPI "awareness turn-around time". While none of the organizations mentioned to use the KPI at this point of time, especially the organizations with a larger share of online revenues highlighted a significant interest in using this metric in the future:
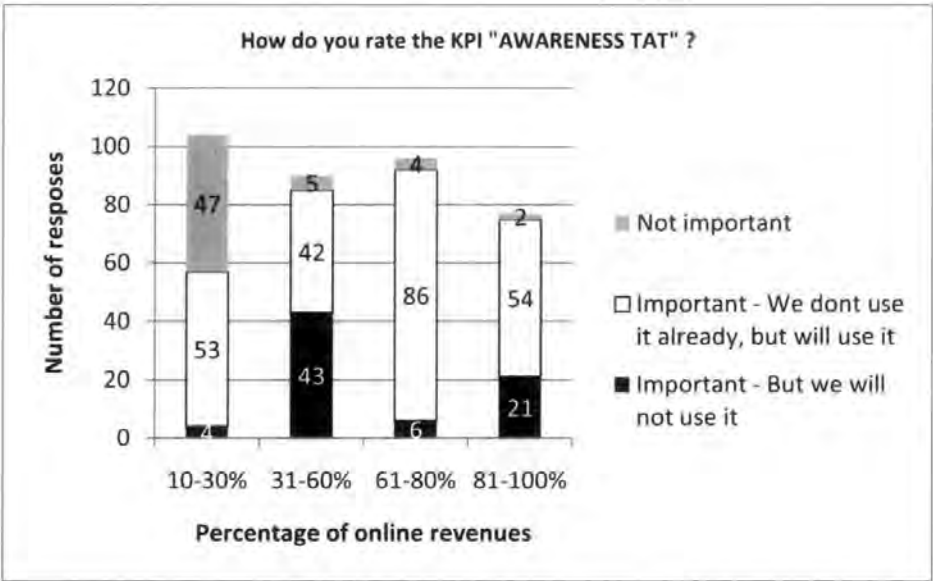

How do you rate the KPI "AWARENESS TAT" ?

Figure 56 : Survey feedback on KPI "awareness turn-around time"

The following figure illustrates the current usage of the KPI "awareness cost". While

especially organizations with a larger share of online revenues mentioned that they already use this KPI, almost all segments highlighted a motivation of using it in the future:
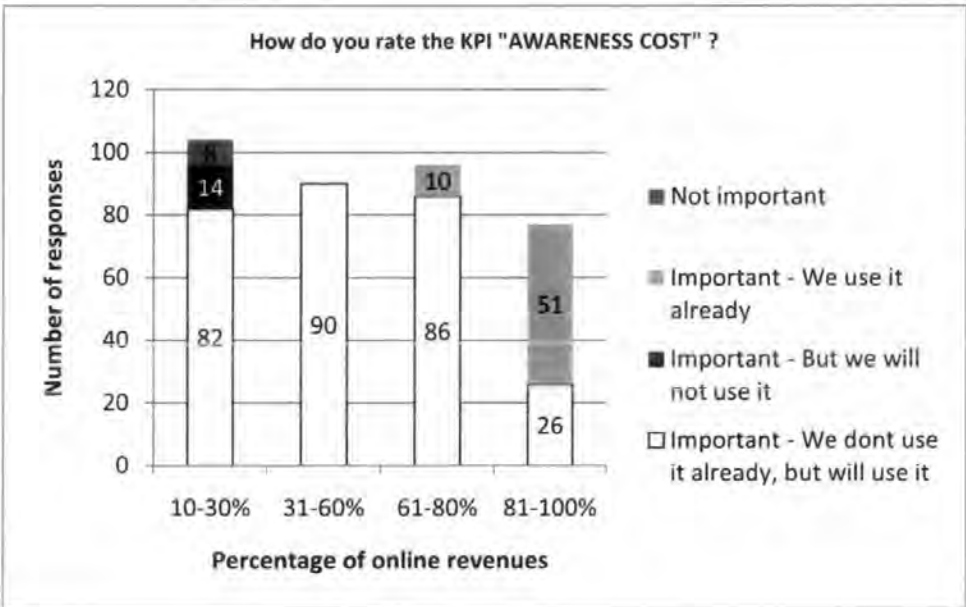
Figure 57 : Survey feedback on KPI "awareness cost"

The following figure represents the feedback on the KPI "conversion". In around 50% of all organizations, in which the percentage of online revenues was more than 30%, this KPI was used already. Furthermore all organizations mentioned they would use the KPI in the future. In total less than 10% of the organizations mentioned they would not use the KPI or consider it as not important:

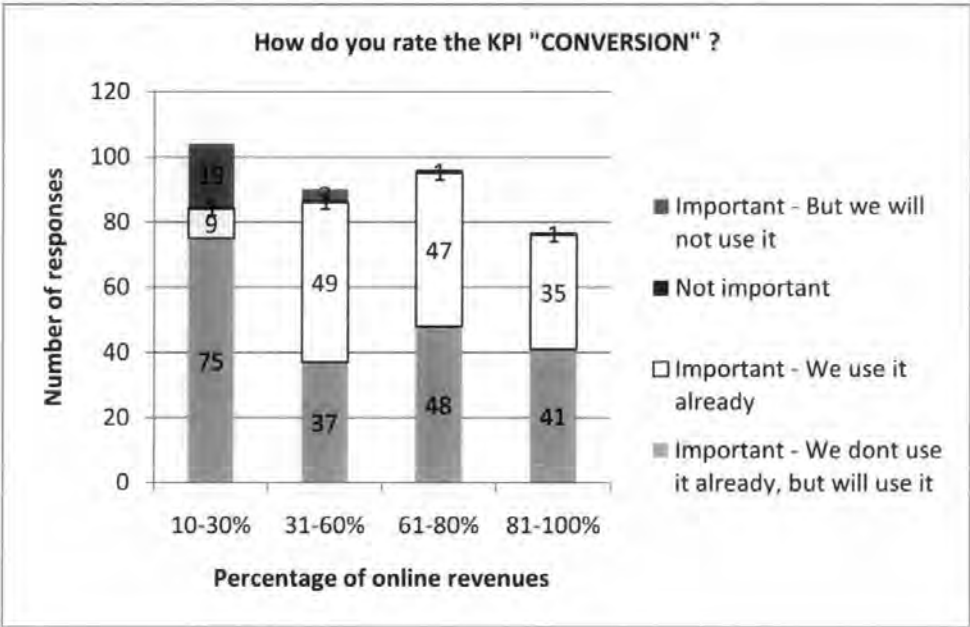**Figure 58 : Survey feedback on KPI "conversion"**

The next figure illustrates that no organization was using the "conversion turn-around time" at this point of time. Furthermore also just organizations with a percentage of over 61% online revenues raised interest in using this KPI in the future. 83% of the organizations with more than 81% of online revenues answered that they would use the KPI in the future:

How do you rate the KPI "CONVERSION TAT" ?
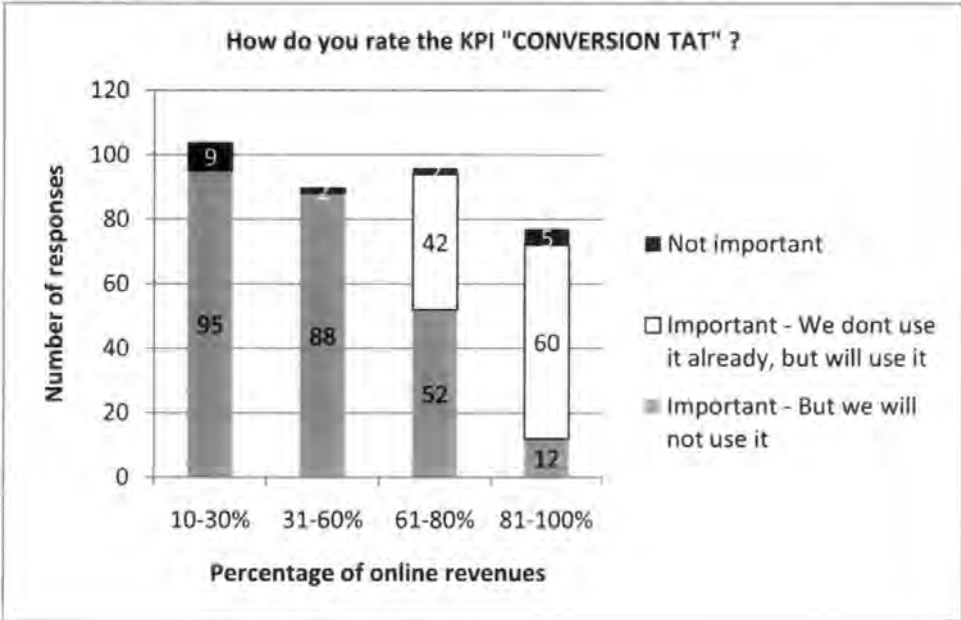
Figure 59 : Survey feedback on KPI "conversion turn-around time"

Also the KPI "conversion steps" was highlighted as a KPI to be used more actively in the future. On the other hand just around 1% of the organizations are using the KPI at this point of time. 37.5% of organizations with less than 30% of online revenues stated they would not use the KPI in the future. Especially organizations with a larger share of online revenues highlighted their interest in using this KPI in the future:

How do you rate the KPI "CONVERSION STEPS" ?
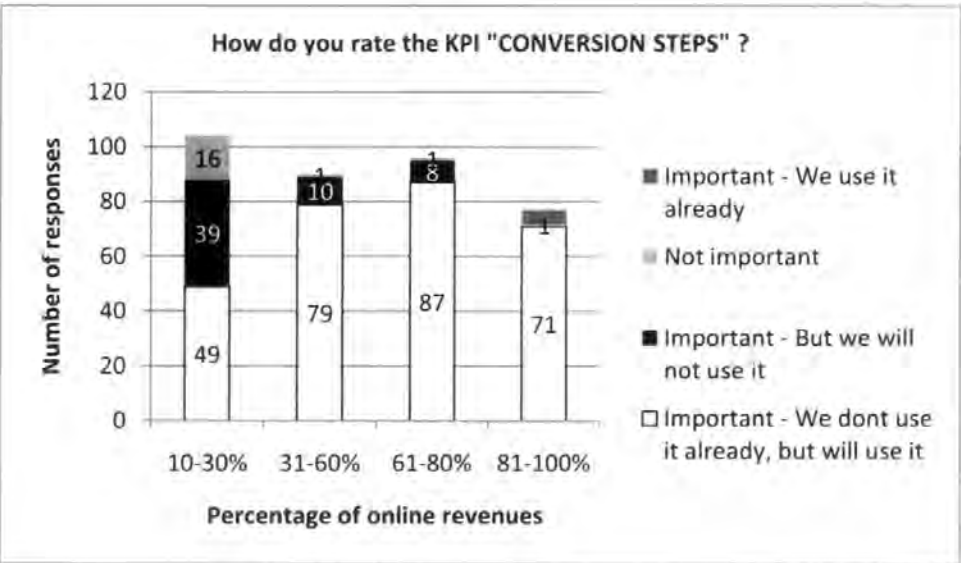
Figure 60 : Survey feedback on KPI "conversion steps"

In regards to measuring the number of transactions almost all organizations (97%) highlighted they use the KPI at this point of time:
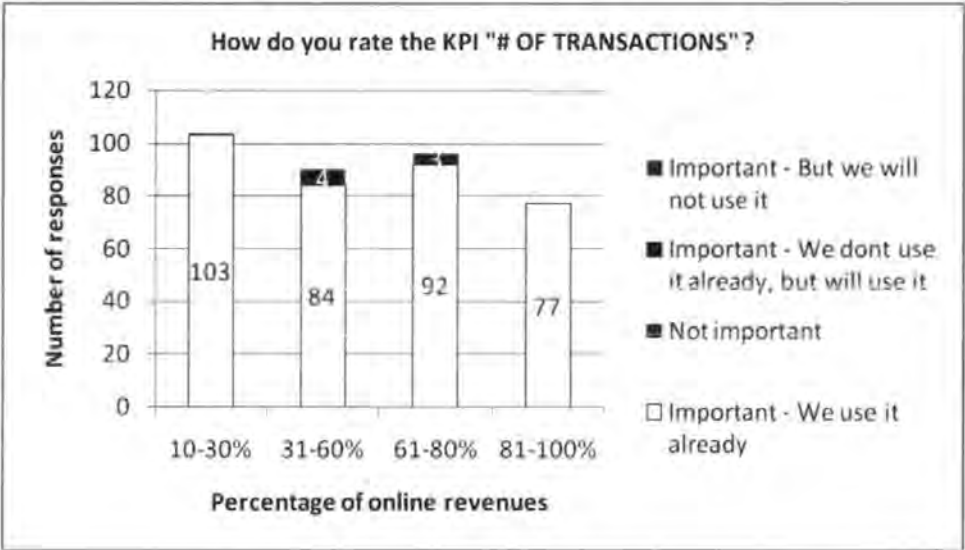
Figure 61 : Survey feedback on KPI "# of transactions"

The KPI "transaction turn-around time" was evaluated from 31% to be not important. On the other hand especially organizations with over 61% of online revenues highlighted that they would use the KPI in the future. 87% of organizations with more than 81% online revenues mentioned their interest in using the KPI:

Figure 62 : Survey feedback on KPI "transaction turn-around time"

Finally 75% of all organizations already measure the "transaction return". Interestingly the segment of organizations with 31-60% online revenues had a rather low value with just 44%:

Figure 63 : Survey feedback on KPI "transaction return"

The following table summarizes the evaluations regardless of the segmentation:

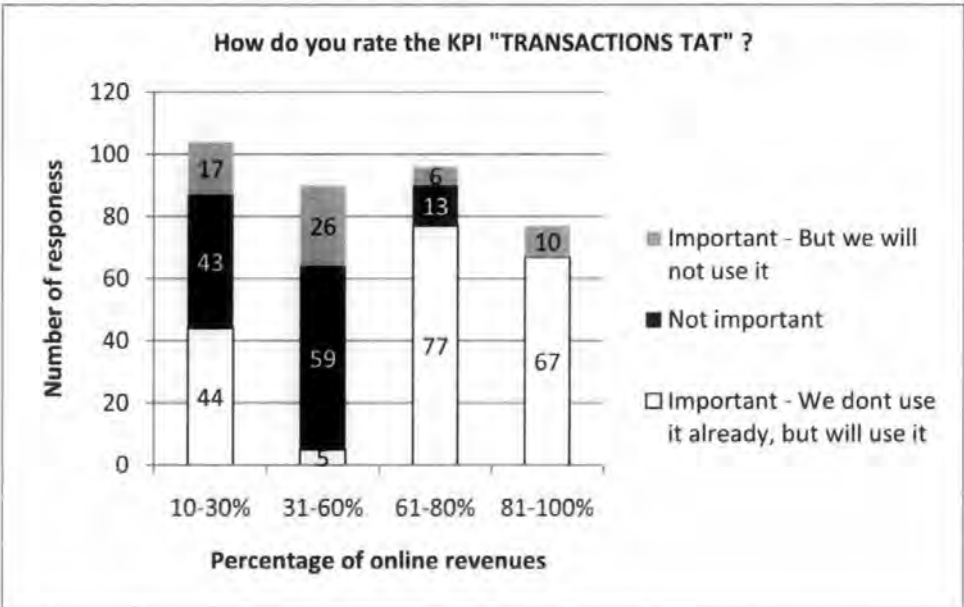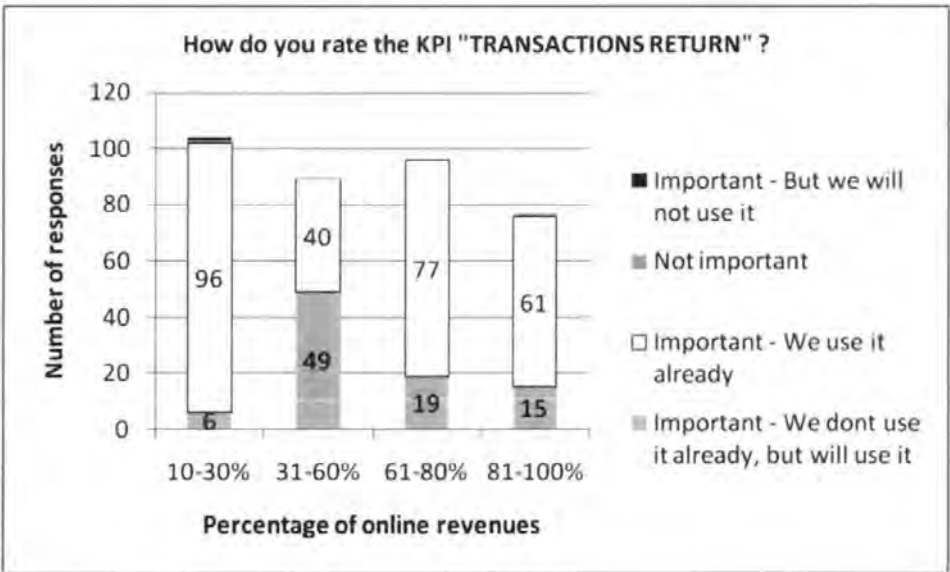|	Not important	Important - But we will not use it	Important - We don't use it already, but will use it	Important - We use it already
How do you rate the KPI "# of VISITS" ?	0.00%	0.27%	6.81%	92.92%
How do you rate the KPI "AWARENESS TAT" ?	15.80%	20.16%	64.03%	0.00%
How do you rate the KPI "AWARENESS COST" ?	2.50%	4.38%	88.75%	4.38%
How do you rate the KPI "CONVERSION" ?	1.09%	54.77%	5.99%	38.15%
How do you rate the KPI "CONVERSION TAT" ?	4.90%	67.30%	27.79%	0.00%
How do you rate the KPI "CONVERSION STEPS" ?	5.18%	15.53%	77.93%	1.36%
How do you rate the KPI "# OF TRANSACTIONS" ?	0.82%	0.27%	1.91%	97.00%
How do you rate the KPI "TRANSACTIONS TAT" ?	31.34%	16.08%	52.59%	0.00%
How do you rate the KPI "TRANSACTIONS RETURN" ?	0.82%	0.27%	24.25%	74.66%

Table 39 : Summary of evaluation of KPI

Based on this data, the KPIs "visits" and "transactions" and "transaction return" have been mentioned to be the most important of the entire framework. Those two main KPIs are followed by "awareness cost", "awareness turn-around time" and "conversion steps". The least important are "transaction turn-around time" and "conversion turn-around time".

6.3.3   Evaluation of work packages

The strategic framework introduced nine work packages which were derived from the overall objectives and KPIs. This section summarizes the survey result in regards to all work packages.

The first work package "Create highest visibility for target group" was mentioned to be used by in total 90.2% of all organizations. Interestingly especially 22% of the organization with a higher dependency on online revenues had not focused on this work package before:

How do you rate the following work package "CREATE HIGHEST VISIBILITY FOR TARGET GROUP" ?
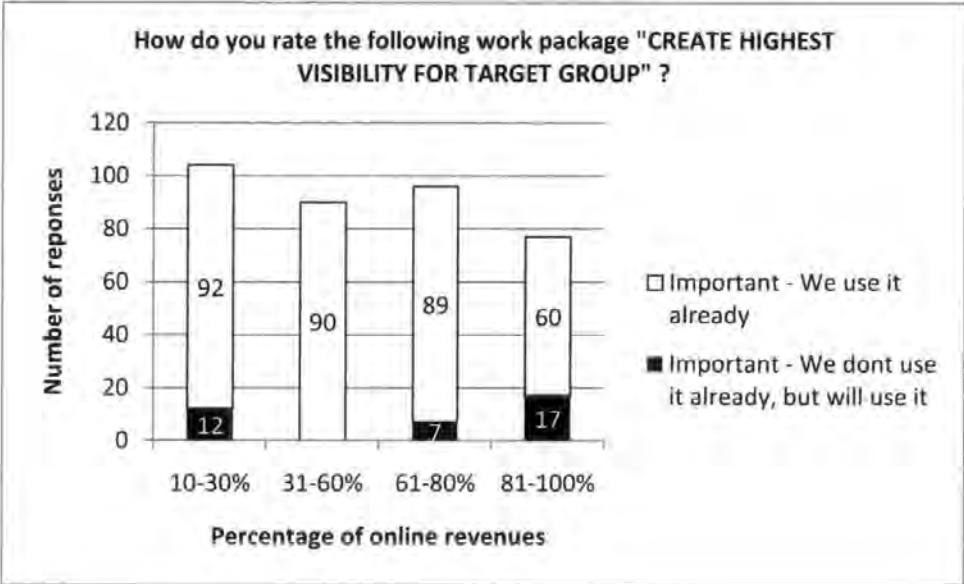
Figure 64 : Survey feedback on work package "create visibility"

In regards to penetration channel just a small number of organizations (5%) used the suggested work package. Those 5% were entirely based on organizations which have more than 81% of their revenues based on online business:

How do you rate the following work package "CREATE FLEXIBLE PENETRATION CHANNEL" ?
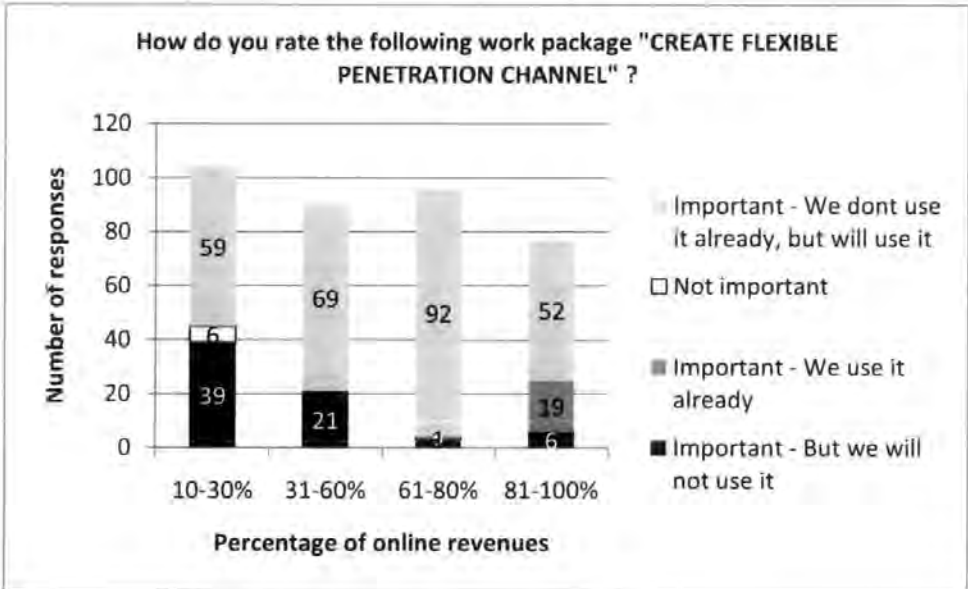
Figure 65 : Survey feedback on work packages "flexible penetration channel"

13% of the organizations already focus on using the Internet marketing channels

effectively. Another 78% highlight the importance of this work package in mentioning that they will make use of it in the future:

How do you rate the following work package "USE INTERNET CHANNEL EFFECTIVELY" ?
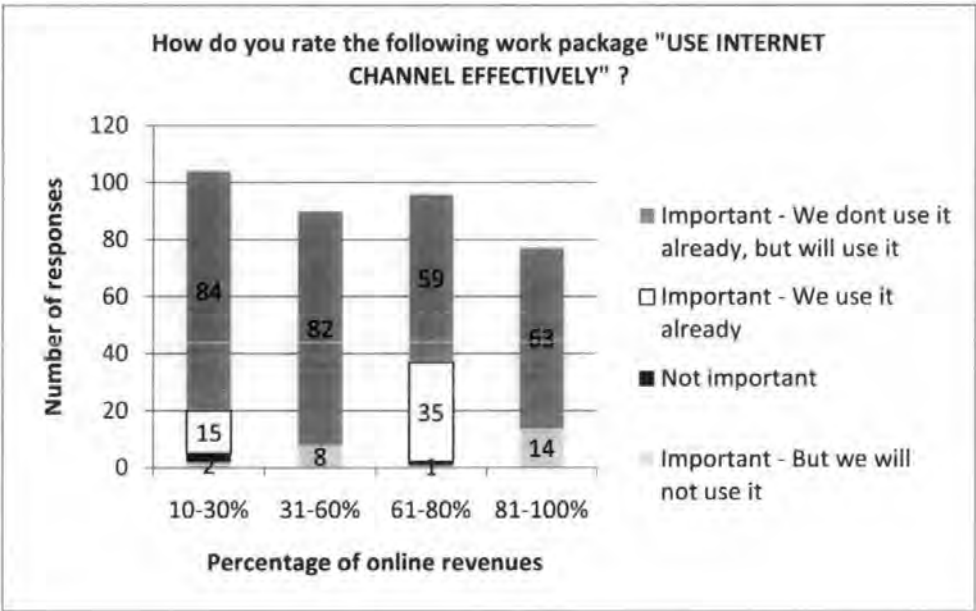
Figure 66 : Survey feedback on work package "use channels effectively"

The result on the following question is very interesting and quite counterintuitive. Based on the survey data, especially organizations with a smaller share of online revenues appear to focus on creating exceptional product and service attributes:

How do you rate the following work package "CREATE AMAZING PRODUCT / SERVICE ATTRIBUTES" ?
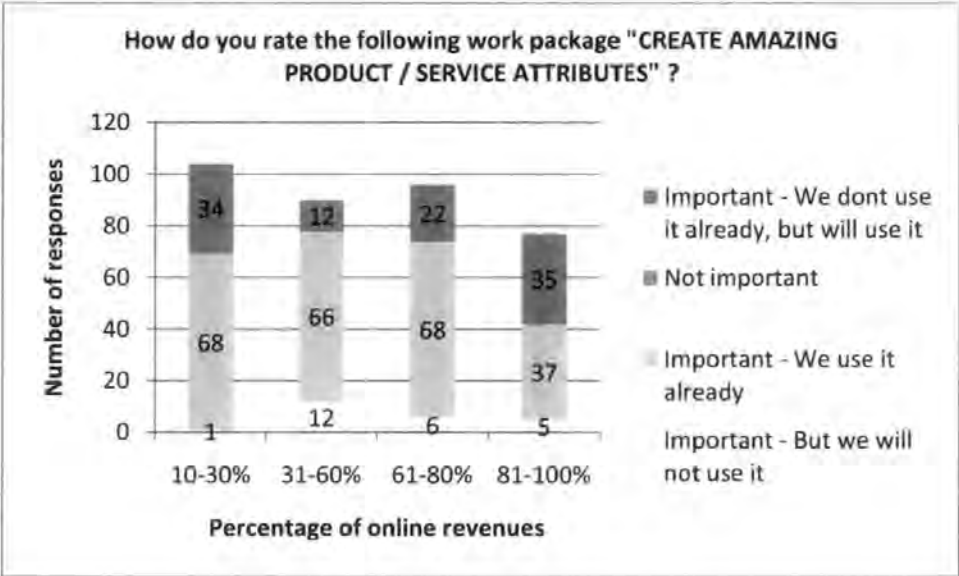
Figure 67 : Survey feedback on work package "amazing product / service attributes"

Also the result for in regards to product information and illustration is very mixed. Organizations with larger dependencies on online revenues already have structures in place, but the segment of 31-60% online revenues had a higher share of utilization than the group of 61-80% online revenues. On the other hand the segments with smaller percentages of online revenues also include more organizations which did not plan to utilize this work package:
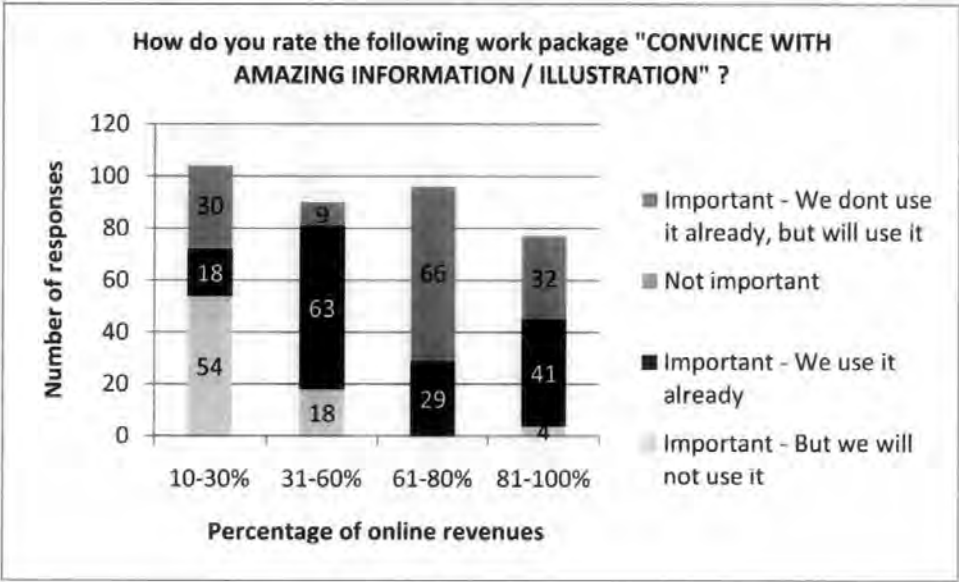
Figure 68 : Survey result for work package "amazing information / illustration"

Finally also in the last work package in regards to creating desire the group with online revenues of 31-60% is very established. Besides this group, the importance of this work packages increases in correlation to the percentages of online revenues:
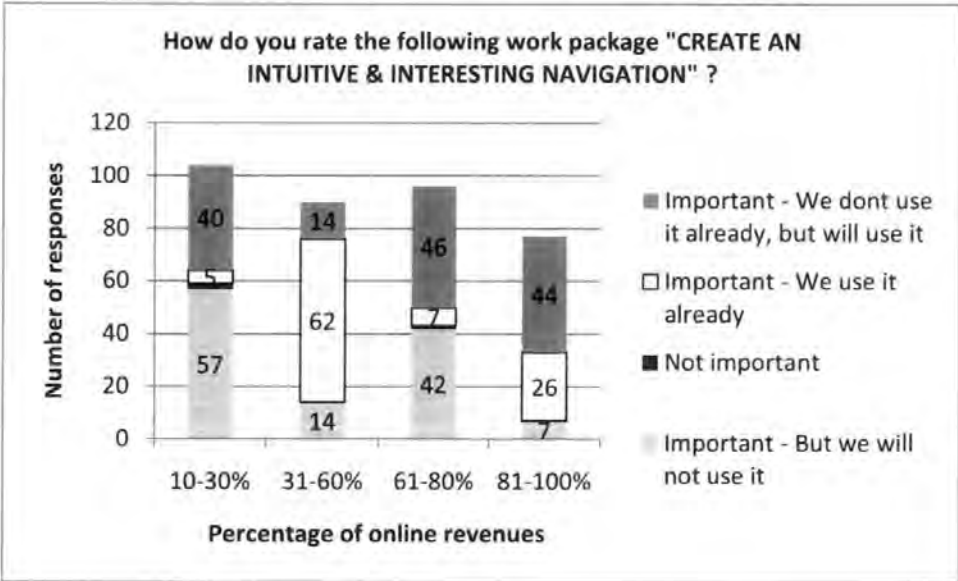
Figure 69 : Survey result on work package "intuitive and interesting navigation"

In regards to increasing transactions 28% of all organizations already use this work

package and 55% plan to do so. 97% of organizations with online revenues of over 61% confirmed that they do, or will, focus on this work package:
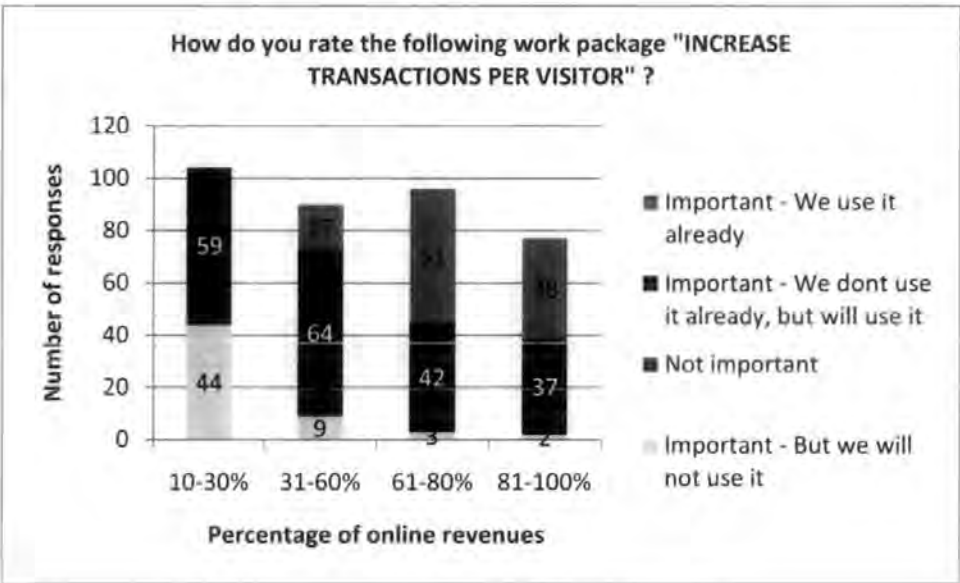
Figure 70 : Survey feedback on work package "increase transactions"

Almost no company (<1%) is using the work package to reduce the technical and psychological complexity at this point of time. On the other hand around 58% of the organizations indicated they would consider this work package in the future. Especially the share of organizations with higher dependency towards online revenues had higher rankings:

Figure 71 : Survey feedback on work package "reduce technical / psychological complexity"

Finally 81.7% of the organizations stressed the importance of increasing the return per transaction. 43% of the organizations with online revenues of over 61% use this work package already:
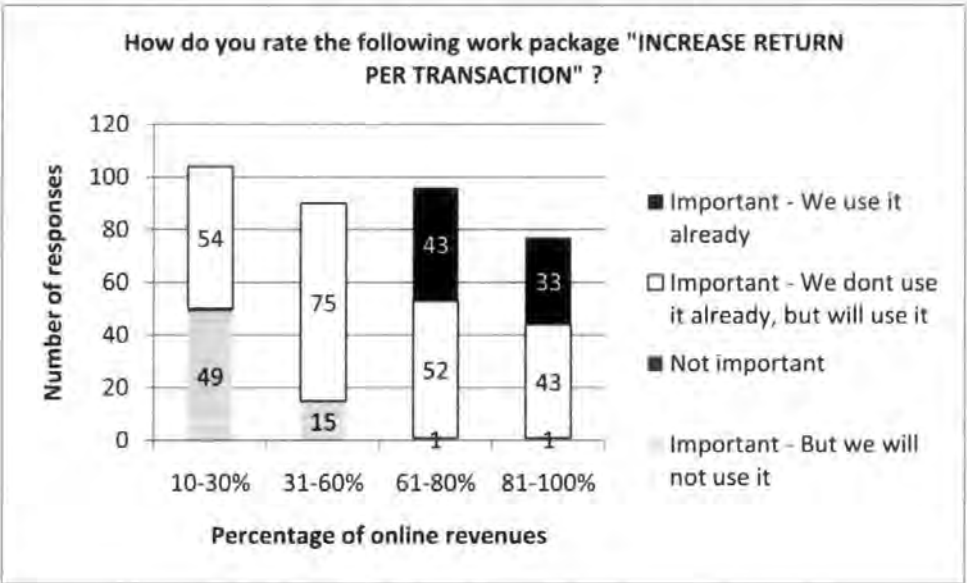
Figure 72 : Survey result on work package "Increase return per transaction"

The following table summarizes all data regardless of the specific segments:

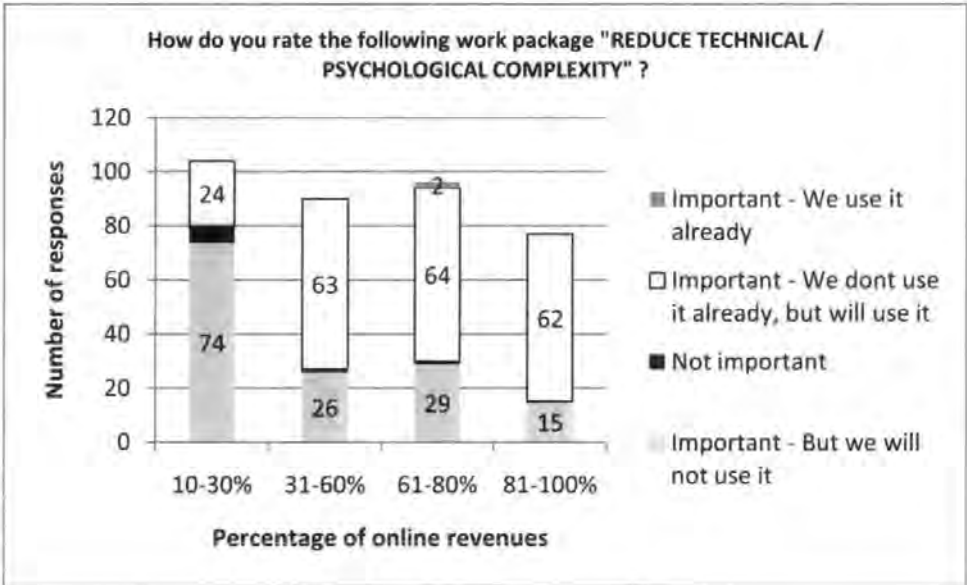|	Not important	Important – But we will not use It	Important - We don't use it already, but will use it	Important - We use it already
How do you rate the following work package "CREATE HIGHEST VISIBILITY FOR TARGET GROUP" ?	0.00%	0.00%	9.81%	90.19%
How do you rate the following work package "CREATE FLEXIBLE PENETRATION CHANNEL" ?	1.91%	18.80%	74.11%	5.18%
How do you rate the following work package "USE INTERNET CHANNEL EFFECTIVELY" ?	1.09%	6.81%	78.47%	13.62%
How do you rate the following work package "CREATE AMAZING PRODUCT / SERVICE ATTRIBUTES" ?	0.81%	6.50%	27.91%	64.77%
How do you rate the following work package "CONVINCE WITH AMAZING INFORMATION / ILLUSTRATION" ?	0.82%	20.71%	37.33%	41.14%
How do you rate the following work package "CREATE AN INTUITIVE & INTERESTING NAVIGATION" ?	0.82%	32.70%	39.24%	27.25%
How do you rate the following work package "INCREASE TRANSACTIONS PER VISITOR" ?	0.27%	15.80%	55.04%	28.88%
How do you rate the following work package "REDUCE TECHNICAL / PSYCHOLOGICAL COMPLEXITY" ?	2.18%	39.24%	58.04%	0.54%
How do you rate the following work package "INCREASE RETURN PER TRANSACTION" ?	0.27%	17.98%	61.04%	20.71%

Table 40 : Summary of evaluation of work packages

The data suggests the current priorities to be in the areas of "creating awareness" and "creating amazing product / service attributes". Secondly the priority is put on "product information and illustration", "Using Internet Channel effectively" as well as "increasing the transaction per visitor".

Interestingly not all focus points in regards to the work packages are in line with priorities mentioned for the corresponding KPI. As the table below illustrates, a lot of emphasize was put for example on work packages in the area of creating desire, but the underlying KPIs were underrepresented:

KPI	Important - We don't use it already, but will use it	Important – We use it already	Work packages	Important - We don't use it already, but will use it	Important - We use it already
How do you rate the KPI "# of VISITS" ?	6.81%	92.92%	How do you rate the following work package "CREATE HIGHEST VISIBILITY FOR TARGET GROUP" ?	9.81%	90.19%
How do you rate the KPI "AWARENESS TAT" ?	64.03%	0.00%	How do you rate the following work package "CREATE FLEXIBLE PENETRATION CHANNEL" ?	74.11%	5.18%
How do you rate the KPI "AWARENESS COST" ?	88.75%	4.38%	How do you rate the following work package "USE INTERNET CHANNEL EFFECTIVELY" ?	78.47%	13.62%
How do you rate the KPI "CONVERSION" ?	5.99%	38.15%	How do you rate the following work package "CREATE AMAZING PRODUCT / SERVICE ATTRIBUTES" ?	27.91%	64.77%
How do you rate the KPI "CONVERSION TAT" ?	27.79%	0.00%	How do you rate the following work package "CONVINCE WITH AMAZING INFORMATION / ILLUSTRATION" ?	37.33%	41.14%
How do you rate the KPI "CONVERSION STEPS" ?	77.93%	1.36%	How do you rate the following work package "CREATE AN INTUITIVE & INTERESTING NAVIGATION" ?	39.24%	27.25%
How do you rate the KPI "# OF TRANSACTIONS" ?	1.91%	97.00%	How do you rate the following work package "INCREASE TRANSACTIONS PER VISITOR" ?	55.04%	28.88%
How do you rate the KPI "TRANSACTIONS TAT" ?	52.59%	0.00%	How do you rate the following work package "REDUCE TECHNICAL / PSYCHOLOGICAL COMPLEXITY" ?	58.04%	0.54%
How do you rate the KPI "TRANSACTIONS RETURN" ?	24.25%	74.66%	How do you rate the following work package "INCREASE RETURN PER TRANSACTION" ?	61.04%	20.71%

Table 41 : Survey result – KPIs vs. work packages

Those kinds of inconsistencies are a true effect of not using a strategic structure in which activities are properly derived from clear objectives and KPIs. Within the current environment tactics are initiated, but the performance and contribution is not measured or actively appreciated.

6.4   Summary

The survey provides data from a significant number of potential beneficiaries of the new framework. The POs evaluated the applicability of the overall strategic framework as well as priorities within.

The data in regards to the evaluation of the overall strategic framework suggests that a) a comprehensive structure does not exist at this point of time, b) that a framework is perceived to be more effective than individual initiatives (80% of the organizations) and c) that the proposed framework looks consistent (87%). Overall 47.9% of all respondents answered they will use a similar framework in the future; 50.4% of the organizations would consider it going forward.

The current priorities in regards to Internet marketing objectives are clearly focused on creating awareness and transactions. Especially organizations with a larger share of online revenues also evaluated the importance of creating desire online as significant. In regards to the KPIs a similar trend is visible. For the defined work packages a more diverse mixture of priorities has been assessed. This breaking point between objectives / KPIs and work packages are an example of current Internet marketing implementation approaches in which the individual – rather technical – initiatives are not fully in line with the strategic motivation.

This chapter summarizes the findings on a survey conducted to evaluate the newly established framework. The next chapter further validates the impact and benefit of the framework based on several case studies and scenario analysis.

7 Validation of the Internet marketing framework

"However beautiful the strategy,

you should occasionally look at the results."

(Churchill, W.)

Internet marketing is not just a conceptual and theoretic discipline, but it requires consistent technical implementation and continuous adjustment. As part of this research a generic framework has been conceptualized providing POs a structure to improving the effectiveness and efficiency of Internet marketing activities. The transparent structure facilitates managerial oversight and the identification of the cause and effect of individual activities and investments. To validate the impact and benefit of this framework, two market participants were analyzed in several dedicated scenarios and empirical data points were documented, structured and interpreted.

The first participant of this research was a PO selling learning material over the Internet. The organization represented the 'classical' business model targeting exclusively to increase sales of pre-existing physical products via the new Internet distribution channel. The second participant of the research was a content provider comprising of a network of over 60.000 Web pages. The economic focus of this content provider was to increase the platform's utilization, subsequent market value and potential advertising revenues.

The empirical data assessed over the research project has been put into context of the Internet marketing framework illustrated in Chapter 4. First of all, the impact and benefit of the individual work package on KPI and objectives is illustrated (section 7.2) to collect a data set for the subsequent analysis of the framework as such. To validate the overall framework – as a balanced combination of the individual components – the assessed data is also elevated to a more holistic perspective describing the dependencies of different work packages on the overall structure (section 7.3).

The empirical data consolidated in this chapter provides evidence that:

- The individual components of the new framework support achieving the formulated Internet marketing objectives
- A framework is more effective than individual components and required to ensure an overall successful approach

This chapter illustrates the approach of the empirical research, its findings and interpretation.

7.1   Empirical research approach

The empirical data required to validate the impact and benefit of the strategic framework and its components has been consolidated via the observation of two separate market participants. Those two participants were established especially for the research; while one of them is still operating as an independent small PO, the second participant has been taken offline due to the massive effort and significant cost involved. The full ownership on the two setups allowed full flexibility in different scenarios as well as full authority and insight into all aspects of the business. The description of the participants and setup of the scenarios is described in the sections that follow.

7.1.1   Setup of Learn2Go

The observations of Learn2Go were initiated as a research project in early 2005 (registration of domain in January, trademark in February 2005). Learn2Go Pte Ltd produced, promoted, sold and distributed DIN A7-sized paper cards used for studying different academic subjects. On the front side of the paper card a question or specific topic was mentioned, the back side described an answer or a detailed overview about this area. The example in the figure below illustrates one card out of the marketing set:

Figure 73 : Example card, Front and back, Learn2Go, Marketing

The production of the cards was based on five process steps: Preparation of the texts (questions and answers) within a standard text template, printing of the card layout template (colored frame) on cardboard, printing of text on the cardboard card template, cutting of the cards into a set and packing the set in an acryl box for shipping. This process was shared by Learn2Go Pte Ltd and one outsourced printing service provider. The production cost of one set was around 2.50 euro without considering the personal time and effort. One set consisted of 60 or 80 cards about one topic and was sold for either 7 euro (for 60 cards) or 9 euro (for 80 cards). The offered subjects were limited to general business administration, accounting, organization, e-learning, investment and funding, marketing, computer systems and software development. The cards were sold under the 'German book system'; therefore the cards had the unique identifier ISBN. This potentially inadequate approach (cards published as books) provided an advantage for Learn2Go allowing to apply a reduced value-added tax of just 7% (§ 12 Abs. 2 UStG). The product as such was rather unique as no comparable cards were available in the German market for the specific subjects upon the first time of publication. The only exceptions were sets provided for medicine (anatomy, psychology, biochemistry, microbiology) from different private individuals. The only substantial professional competitor producing learning cards was Urban & Fischer[7], providing sets of 300 cards for around 20 euro based on own published medicine literature. Especially during the end of the research project (end of 2008 and beginning of 2009) new market entrants published competing sets also for business administration.

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[7] www.urbanfischer.de/Sobotta/seite16.html

Creating awareness for this generally unfamiliar retail product (known concept, but unknown in terms of availability for purchase) and underlying brand (learn2go) was certainly different than for a popular commodity product. From this perspective, it has to be considered that the concept of learn-cards as such was not new and therefore also easily explainable to potential customers. The primary target group of the learn cards was students who prepare for specific courses or exams. This target group either purchased the product themselves or got them as preparatory presents from their parents. The second target group was identified to be young professionals who wanted to get a quick insight into a specific new subject or to refresh formally existing knowledge. The main value contribution of learning with those small cards was that the consumer can study them rather independently from time and location (e.g. in the subway on the way to the office or university). The benefit for this way of learning is that very subject-specific know-how can be developed quickly and provides the person a basis of self-confidence for academic or non-academic challenges. The precise value proposition of the product for those target groups was not explicitly promoted in any Internet marketing channel or communication during the inception of the project. All activities of Learn2Go were determined by this research project. The overall marketing strategy was adjusted to evaluate two different sales channels: first of all direct sales via an own Web site and later also sales via a major German wholesaler (which fed several on- and offline retailers). In the first phase the overall setup was kept simple to enhance the visibility of the impact and benefit of certain marketing strategies. After introducing the extensive network of the wholesaler, the Internet distribution network became unfortunately already quite complex and scenarios difficult to demarcate ceteris paribus. As described below also the scope of the Learn2Go Web site has been kept very small. Awareness for the products of Learn2Go was originally based on the Learn2Go Web site (www.learn2go.de) and around 2-3 banner on affiliated Web sites. The technical platform of the Web site was based on osCommerce 2.2 Milestone 2 running from a linux server with php and mySQL. osCommerce was a php-based open-source shop software with a rather rich and comprehensive set of functionalities. The software architecture was unfortunately not very advanced so significant development was required to accommodate relevant modifications throughout the research project. The main weakness from an Internet marketing perspective was the missing template layer (see section 3.2.2) to flexibly adjust the html output-format of the Web sites. Furthermore the software did not have a

dedicated database layer which made it fully depended on the mySQL database. The figure below illustrates the GUI of www.learn2go.de:
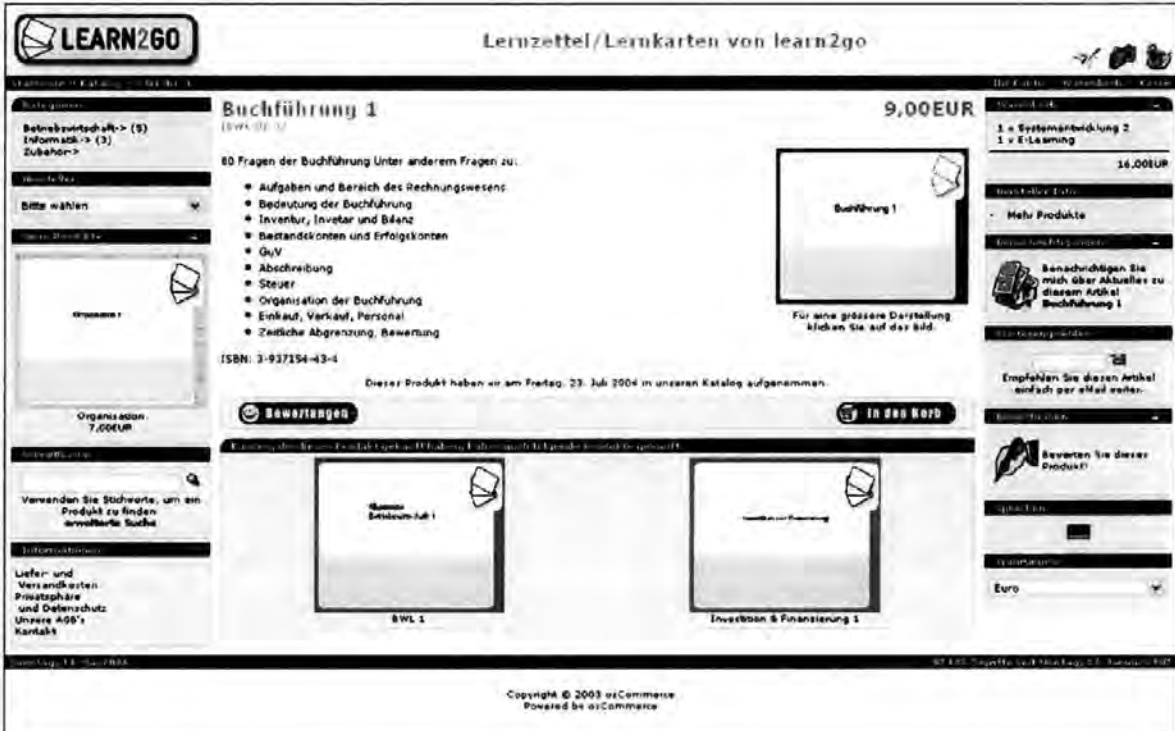
Figure 74 : Learn2Go Web site, May 2006

In the strategic domain of creating awareness the Internet has been the major pillar of Learn2Go. Over the duration of the research project around 70.000 to 100.000 visitors used the Web site www.learn2go.de annually and around 200 - 700 sets were sold every year. This volume provided a small but valid data set facilitating the analysis of specific scenarios illustrated in section 7.2. The impact of specific adjustments during the case studies was documented using server logs, internal application components and (upon availability) finally Google Analytics. Those different measurement methods determined that the analysis of the data was largely based on relative developments and not the absolute figures as such. Within one scenario the measurement method was kept constant to avoid any deviations relevant towards the interpretation of the data points.

7.1.2   AAT-network

The second research participant used in the validation of the impact and benefit of the new strategic framework was a large content-based information network (abbreviated with AAT-network). Also this network was used to assess and analyze data points resulting from various customization scenarios. The main focus of the scenarios was put largely on how to create awareness as well as desire for the provided information. The economic dynamics of this specific market participant (providing a free information service) complemented the findings from the classical sales organization Learn2Go (providing a classical chargeable physical product).

The scope of the information network comprised a virtual network of nine Web site nodes and approximately 60.000 Web pages which was established end of 2005. Each of the nine nodes focused on a dedicated subject. The subjects were selected to cover major and / or competitive areas of Internet traffic of the German Internet environment: cars (www.aat-autos.de), computer (www.aat-computer.de), movies (www.aat-filme.de), hotels (www.aat-hotels.de), internet-marketing (www.aat-internet-marketing.de), investments (www.aat-investments.de), jobs (www.aat-jobs.de), music (www.aat-musik.de) and travel (www.aat-reisen.de). The domain names were selected to facilitate an optimal search engine and directory positioning for specific keywords. Each of the Web site nodes, in different level of maturity, combined general information, books, downloads and discussion about the specific topic.

One example of the Web site nodes is illustrated in the figure below:
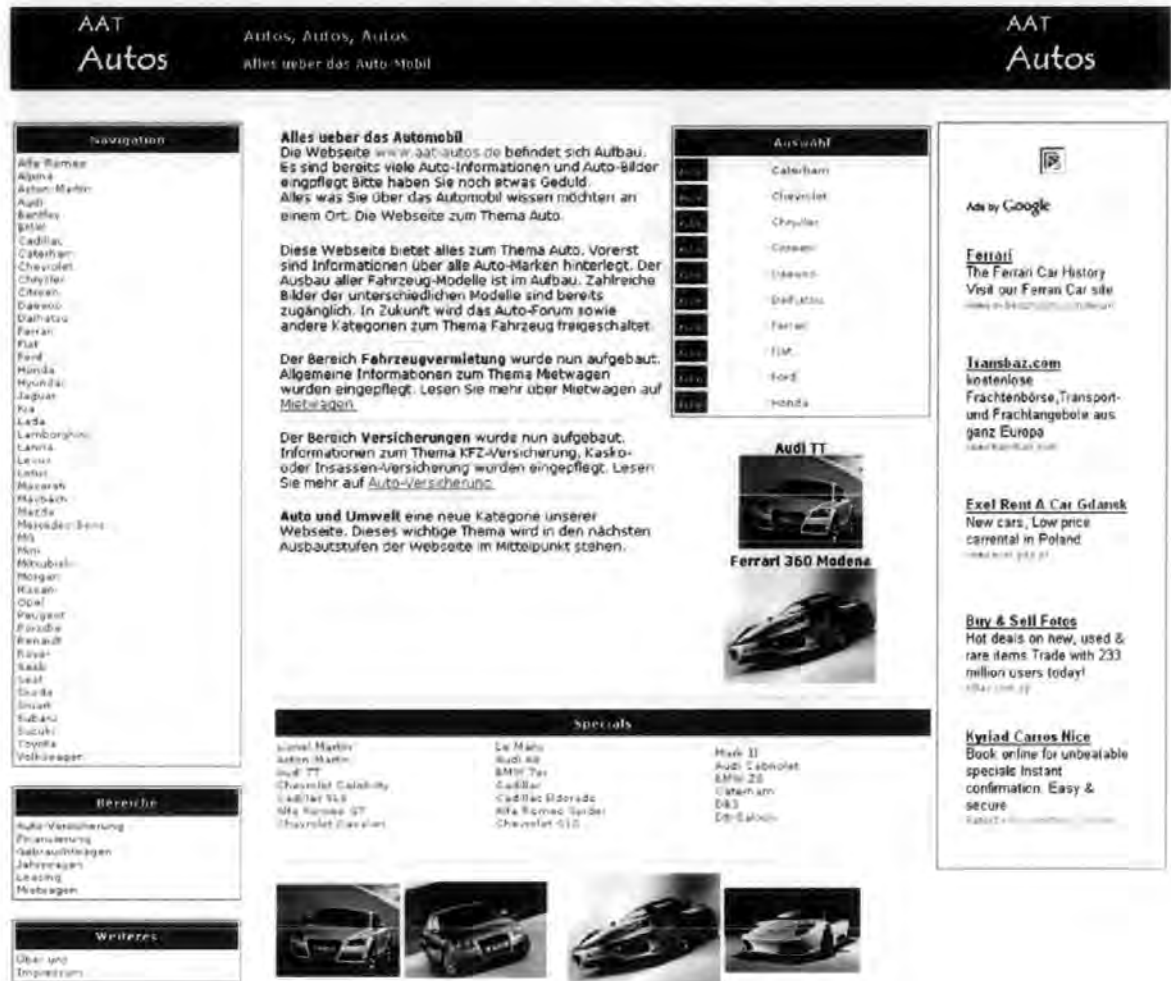
Figure 75 : www.aat-autos.de – automobile-node

The technical setup of all Web site nodes was based on a common version (single source file, with different configuration settings and database) of a self-developed content management system (CMS) based on the open forum software of phpbb (www.phpbb.com). The underlying technology was a php-script and a relational database (in the case study mySQL was selected to limit further operational expenses). While the software development architecture of the used phpbb2.X was not fully optimized using latest programming architectural principles, the software design was much better than the technical platform of osCommerce used for the Learn2Go platform. Especially the language, template and database layer made it much easier to implement minor adjustments to core elements for the specific scenarios. As for the aat-network, server logs, an integrated session management feature as well as later Google Analytics have been utilized to document and analyze the data. Again the different measurement

methods determined that the interpretation of the data was based on relative developments and not absolute figures. As indicated above within one scenario the measurement method was certainly kept constant.

7.2   Data collection & Impact and benefit of strategic work packages

Validating the overall framework - as a balanced combination of the individual components – also requires substantiating the benefit of the individual components as such to provide a clear value to the PO. To provide this substantiation validating the effectiveness of the components of the new model, the correlation of the outlined work packages (section 4.3) to the corresponding KPI (section 4.2), and the relationship between KPIs and objectives (section 4.1) has been analyzed thoroughly. The following nine sections provide a comprehensive empirical data set and concluding observations for the work packages outlined in the new Internet marketing framework. Furthermore section 7.3 brings those findings in the context of the overall framework to indicate the impact and benefit of the main contribution of this research (the framework of strategic Internet marketing).

7.2.1   Observations on visits and visibility

The strategic work packages describe main determinants to increase the awareness for products and services. First of all the right target group has to be identified and secondly the marketing message has to be positioned in a visible way within the specific channel. During the case studies two observations were made and documented to validate the impact and benefit of creating more visibility on the overall awareness of the products and services.

The nodes of the information network received traffic from search engines and 5-10 affiliated Web sites. One significant traffic source was www.php-styles.com initially contributing to around 40% of the 'referring sites' traffic via a block of 'sponsored projects' on all pages. The resulting visits to the individual nodes were equally distributed until an intentional simple adjustment of formatting changed the situation. The figures below illustrate the two different formatting structures and how one reference was highlighted:
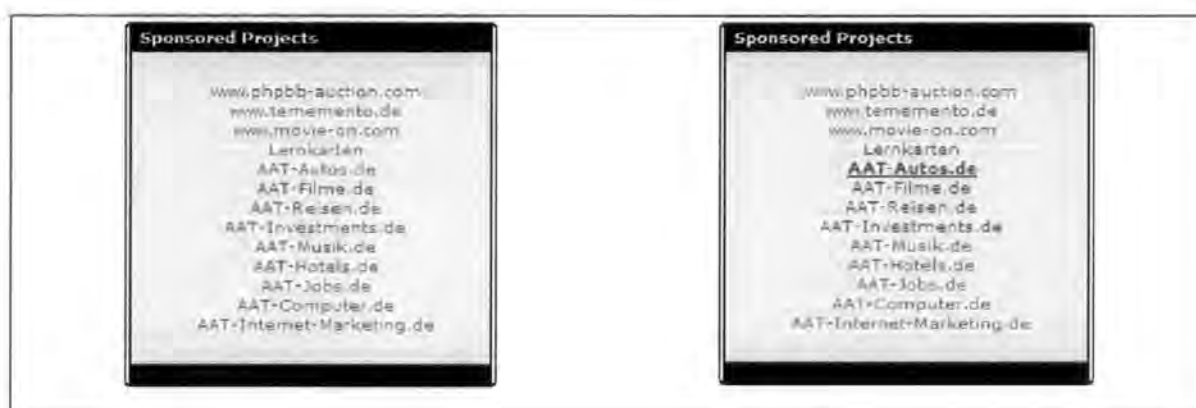
Figure 76 : Change of formatting on affiliated Web site

Based on the small adjustment of the formatting, highlighting one element in bold, the references where funneled largely to the node aat-autos.de. The table below illustrates the data points assessed over 3 month before and after the adjustment:

Average referral per month (measured over 3 month)	Before change	After change
aat-autos.de	15	35
aat-filme.de	19	12
aat-investments.de	10	5
aat-musik.de	22	9
aat-hotels.de	9	3
aat-jobs.de	8	6
aat-computer.de	16	10
aat-internet-marketing.de	15	9

Table 42 : Impact on visits based on formatting

This small sample of data suggests a clear, potentially intuitive, correlation between formatting and the awareness created for a specific Web site. The assessed data points of this scenario also suggest the cannibalization of awareness between the different nodes within one communication channel (number of referrals decreased for all other nodes). This funneling pattern can be utilized directing the click stream to create visibility for specific products and services within one Web site. While providing some initial data points above indicating the benefit of creating visibility, no further data shall be provided

for this specific technique, as the finding appears to be rather intuitive and limited in novelty as long as it is not put into relationship to other factors / KPIs.

The underlying technical platform of learn2go.de provided some structural weaknesses to create visibility of the consumer effectively, especially in terms of search engine intermediaries. The standard html header (source of the snippets illustrated on search engine result pages at this point of time) of the oscommerce software just included the shop name within general meta-information:

```
<!doctype html public "-//W3C//DTD HTML 4.01 Transitional//EN">
<html dir="LTR" lang="de">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<title>Learn2Go</title>
<base href=" http://www.learn2go.de/">
<link rel="stylesheet" type="text/css" href="stylesheet.css">
```

Figure 77 : Standard header of learn2go.de

The same header structure applied to all category and product pages. Following this model the representation on search engine result pages could not create visibility for specific products and services as the headline were not descriptive. An example of a SERP for an online shop with such a deficiency is attached below. Even though the illustrated matches refer to different products (visible in the parameter of the URL), the explanations are not descriptive:

Figure 78 : SERP based on standard oscommerce header

To create independent header-tags for each product and category site, the database as well as the application for the front-end and administration area had to be adjusted. The enhanced header of the start page provides a lot of information which the search engines can use to identify the Web site as a potential match to a query:

```
<!doctype html public "-//W3C//DTD HTML 4.01 Transitional//EN"><html dir="LTR" lang="de">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<title>E-Learning Lernzettel - Lernzettel von learn2go : </title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<META NAME="Description" Content="E-Learning Lernzettel - Einfaches und effizientes Lernen Lernzettel/Karteikarten von
learn2go.de - Einfach und effektives Lernen.">
<META NAME="Keywords" CONTENT="E-Learning, Lernzettel, Karteikarten Lernzettel, Karteikarten, Betriebswirtschaft,
Organisation, Marketing, Büchführung, Rechnersysteme, Investition, Finanzierung">
<base href="http://www.learn2go.de/"><link rel="stylesheet" type="text/css" href="stylesheet.css">
```

Figure 79 : Enhanced header of learn2go.de

The impact of using this adjusted html header is visible in the following screenshot. The online presence of www.perlis.com (which is based on the same software – visible in the URL) has been optimized in a way that each search engine result has an individual header which provides product and service information:

Figure 80 : Enhanced oscommerce header

The small technical adjustment had a substantial impact on the visibility of the products and services and underlying KPI promoted from the POs. Immediately after the technical adjustment the number of visits on www.learn2go.de increased for specific keywords significantly while the overall positioning of the Web site in search indexes remained rather unchanged. Based on the data of the Google Webmaster Tools, learn2go.de moved between SERP positions 13-19 (page 2 in the standard configuration) for the term "Systementwicklung" (http://www.learn2go.de/product_info.php/products_id/35) while the

average visits generated via this specific link tripled over a period of two month from 5 to 17. Certainly this observed development of visits could be the result of an increased search volume for exactly this specific keyword in exactly those specific months. Besides this potential coincidence the data may also suggests that the better visibility of the specific product information within the intermediary was able to positively impact the number of visits (KPI in section 4.2.1.1) and overall awareness created. The assessed data is interesting but may not yield into a fully conclusive or scientifically reliable interpretation. Therefore it is also not used in supporting the main contribution of this thesis which is describing the overall framework as a combination of different components (section 7.3) and not just the individual components as such.

7.2.2   Observations on awareness TAT via intermediaries

The awareness turn-around time is determined by the expertise of the organization, technical platform and intermediaries (section 4.3.1.3). Over the period of the research project Learn2Go published several new products. To enhance the awareness as well as awareness turn-around time, book portals seemed to be an obvious extension of the already used own Web site. Via the German wholesaler KNV (Koch, Neff & Volckmar GmbH) Learn2Go cards were made available to be sold via several alternative Web sites (mainly book shops, e.g. www.amazon.de, www.buch.de, www.book.de, www.bol.de). The figure below provides evidence of the availability of the learn2go products within amazon.de:
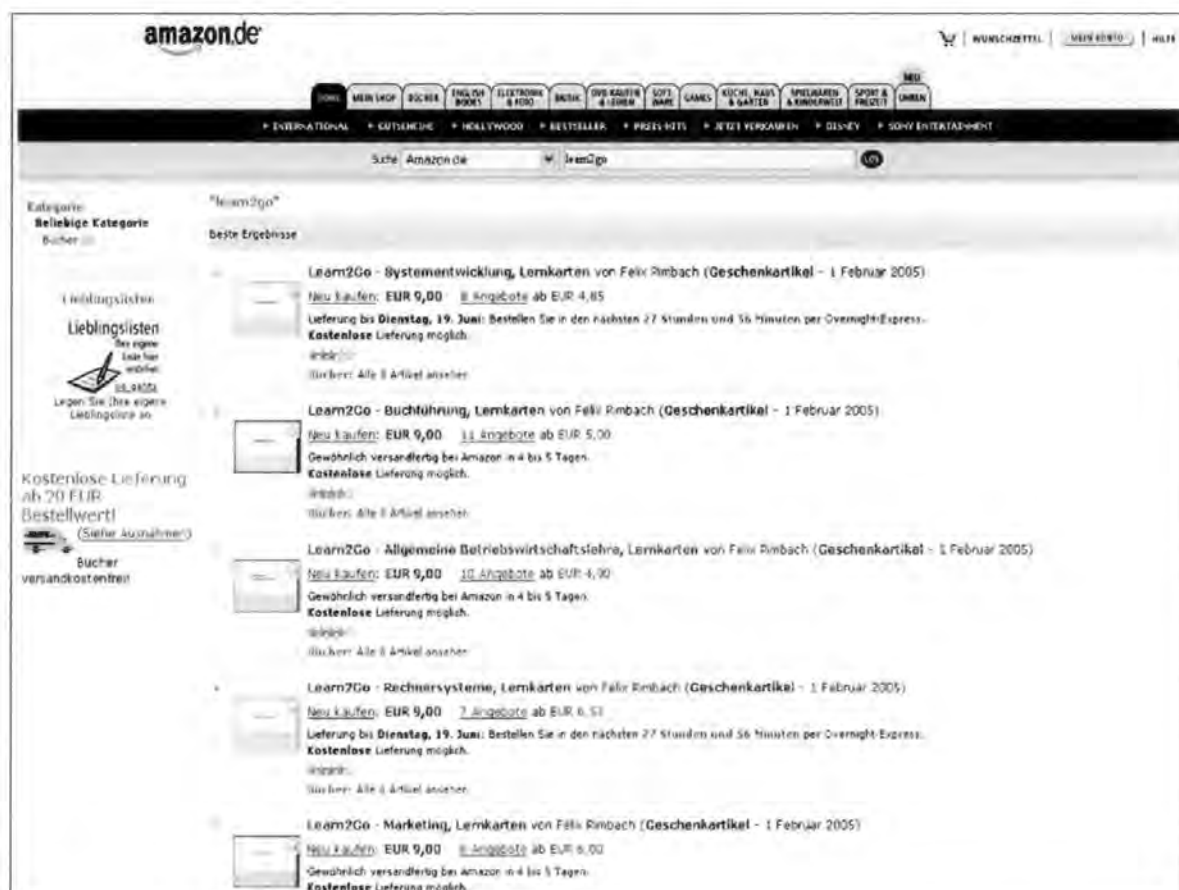
Figure 81 : Learn2Go products on amazon.de

Directly with the submission of a new product to the distributer KNV all affiliated intermediaries published the product information within their channels. With the integration into all dominant Internet book portals, and due to the different indexing priority of major intermediaries compared to the small own Web site, the products were found almost immediately even for general queries on topics like marketing, accounting or e-learning. It remains difficult to accurately isolate the changed turn-around time ceteris paribus due to potentially parallel changing search engine technology, indexing frequencies, general Web site positioning and inconsistent index updates. Even though, the observed difference was very significant and approximates have been consolidated in the table below:

Method	Preparation work	Estimated Time until visibility in Google
Own Website	Preparation of text and images Registration of product on Web site Highlighting of new products on home page	2 - 3 weeks
Wholesaler	Preparation of text and images Submission to KNV Forwarding from KNV to retailers	3 days

Table 43 : Awareness Turn-around time and intermediaries

The additional channel of book portals has therefore not just increased the overall awareness but also significantly decreased the awareness turn-around time for new product publishing.

7.2.3   Observations on awareness costs and channel utilization

Reducing awareness cost requires the effective utilization of intermediaries (section 4.3.1.2). The effective penetration of the right channels reduces cost but also increases the awareness created for products, services and brands. Potential intermediaries, the underlying penetration methods and subsequent awareness cost have been summarized in chapter 4. Paid advertisement on specific social media or portals is a direct method towards increasing the visibility of the sales organization's offering. In regards to search engines, adjustments to the Web sites for onsite search engine optimization have been described as an alternative to reduce the awareness cost. To enhance the positioning in search engines some basic configurations and customizations were performed in the learn2go platform. One important configuration was the change to use mod-rewrite for the URLs. The module mod_rewrite provided a rule-based rewriting engine to rewrite requested URLs on the fly (Apache Web Site, 2006). This configuration allowed changing the URLs from dynamic strings with parameters and special characters into standard static URL-strings. The example below shows to hyperlinks. The rewritten hyperlink can be translated by the apache module to the parameterized hyperlink on the fly:

Parameterized hyperlink:

http://www.learn2go.de/product_info.php?products_id=3

Rewritten hyperlink

http://www.learn2go.de/product_info.php/products_id/3

During the initiation of the Learn2Go Web site in 2005 / 2006 most search engines refused to index and provide result pages including dynamic URLs. The rationale of this was to secure search engine's indexes (databases) from being spammed by redundant Web sites which are created by adding new parameters within the URL. Now some search engines consider dynamic as well as static URLs on top positions. Therefore the configuration change as described above may not have an equivalent impact any more. Even though, the scenario describes valid data points how the same channel can be used in different ways changing the underlying awareness cost. The rewriting of URLs also facilitated exchanging parameter with specific keywords further improving the SERP positioning. With the adjustment of the URLs the search engine positioning and subsequent visits to the Web site significantly increased without changing the underlying effort (cost). In case paid advertisement would have been used, the improved efficiency of other marketing channels could have further reduced the cost basis.

Month	-3	-2	-1	0	+1	+2	+3
Visits	6583	7192	6821	6773	9126	12852	11498
internal effort (in hours)	4	4	8	8	4	4	4
Cost (500 EUR per 8 h)	250	250	500	500	250	250	250
Cost / Visit [in cent]	3.8	3.5	7.3	7.4	2.7	1.9	2.2

Table 44 : Visits and Awareness cost for Learn2Go

The table above illustrates the increase of visits while the internal effort (1 hour per week) remained constant. Based on the data elicited in this scenario, the impact of effective Internet marketing channel utilization translates into a reduction of around 40% of the awareness cost. Furthermore the data creates an example of the potential misconception based on the limited observation of just the first KPI 'visits'. The required balance with the underlying cost basis is a prime example of the necessity of an overall strategic

framework. In the month -1 and 0 the increase of internal effort required for the channel optimization changed the awareness cost significantly, a potentially good investment considering the impact of the activities.

A similar observation was made in a scenario in the information-network. The awareness for the Web sites was generated majorly via search engines and some hyperlink references on other Web sites (e.g. php-styles.com). The search engine Google indexed a large amount of Web sites from the different nodes:

Nodes	Indexed Sites
www.aat-autos.de	145
www.aat-computer.de	50
www.aat-filme.de	28,500
www.aat-hotels.de	1
www.aat-internet-marketing.de	46
www.aat-investments.de	14
www.aat-jobs.de	111
www.aat-musik.de	32,500
www.aat-reisen.de	213

Table 45 : Indexed sites from information network nodes

The highest PageRank of all nodes was 4, derived from some higher ranking Web sites referring to the individual pages. The lower ranks were distributed over all Web pages. The initial version of the Web site had several weaknesses (e.g. meta-keywords were not generated properly – see figure below) and the impact of using existing channels more effectively was observed over the subsequent 2 years. The figure below illustrates the html-header of an information-node with the missing meta-keywords being highlighted:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html charset=iso-8859-15">
        <META http-equiv="Content-Language" content="de">
        <META NAME="Language" CONTENT="DE">
        <META content="aat - Reisen - Forum">
        <META http-equiv="Content-Style-Type" content="text/css">
        <LINK rel="stylesheet" href="http://www.aat-reisen.de/griechenland.css" type="text/css">
        <LINK rel="stylesheet" href="http://www.aat-reisen.de/templates/subSilver/subSilver.css" type="text/css">
        <META NAME="keywords" content="">
        <META NAME="Description" content="Reisen nach Griechenland">
        <META NAME="revisit-after" content="7 days">
        <META NAME="author" content="aat-internet-marketing.de">
        <META NAME="owner" content="aat-internet-marketing.de">
        <META NAME="distribution" content="global">
        <META NAME="robots" content="index, follow">
        <META NAME="abstract" content="Reisen nach Griechenland">
        <title>Griechenland Reisen - Informationen, Tipps und Angebote zur Reise nach Griechenland</title>

    </head>
```

Figure 82 : HTML source code of aat-node reisen, Keyword malfunction

Initially one site (www.aat-jobs.de) was left unchanged – with the keyword defect – to evaluate the impact of adjusting measures. For all other sites just the malfunction was fixed and the change of monthly visits evaluated. The result is illustrated in the table below:

Month	0	+ 1	+ 2	+ 3
www.aat-autos.de	156	227	356	342
www.aat-computer.de	83	113	188	163
www.aat-filme.de	259	412	527	693
www.aat-musik.de	234	456	954	827
www.aat-reisen.de	127	327	446	482
www.aat-jobs.de	113	102	122	95

Table 46 : Development of visits after adjustment

The assessed data provides an indication of the effectiveness of the adjustment or the impact of appropriate keywords on the amount of visitors during the time of assessment. While all Web sites significantly improved this KPI, www.aat-jobs.de remained rather unchanged. Similar to the observations for learn2go the small technical adjustment on how an existing Internet marketing channel was used increased the awareness generated, potentially avoiding additional investment into paid advertising.

7.2.4   Observations on product and service attributes and conversion

As indicated in the description of the strategic framework, the composition of product and service attributes has an immediate impact on the conversion rate. The impact of specific service components, which extend the focus on the entire purchase or ownership life cycle – like delivery-time, delivery-cost, payment-methods, warranty, maintenance or other factors – became clearly visible in the development of learn2go.

As described in section 7.1.1, the products of learn2go were initially sold just via the own Web site. Every order required the additional pre-payment of the shipping expenses based on the corresponding delivery address. The shipping costs were priced with 2 euro per order, later per set (actual costs were first 1.83, later 1.28 euro per package). With the introduction of the intermediaries (e.g. amazon, sales registered via KNV), which waived the underlying shipping cost, the conversion rate on www.learn2go.de immediately fell dramatically. Certainly a majority of the visits were channeled directly from search engines to those major intermediaries, but also the conversion rate (on the lower number of visits) on the own Web site changed significantly.

Month	-2	-1	0	1
Visits	12.273	14.628	12.891	9.383
Website Transaction	12	10	0	0
Conversion	0.01 %	0.01 %	0.00 %	0.00 %
KNV Sales	0	0	18	25

Figure 83 : Conversion rate development for learn2go.de

The loss in conversion rate to 0 while overall visits remained rather stable and total sales increased is an indicator for how the 'additional services' in the overall transaction chain determined the distribution structure of the PO. The dramatic effect, visible in this development, highlights the significance of the underlying work packages within the overall strategic framework.

7.2.5 Observations on information / illustration and conversion TAT

The AAT-network targeted to provide appealing content to attract consumers to visit the Web site. The increased traffic was supposed to increase the value of advertising placements as well as the number of potential clicks on revenue-generating references. To measure the desire for the illustrated content, the conversion TAT has not been defined as the time a user requires to click on external advertising references (practically leaving the node due to more interesting content elsewhere), but as the time in which a consumer develops an interest for the content and explores more individual pages of the node without exiting the node as such. Based on this understanding, two Google Analytics metrics provided interesting data points to evaluate the impact and benefit of information and illustration. An increased 'average time on page' as well as reduction of '% Exit' from the start page suggests that a consumer is (more) attracted by the content or not. Over the research period the maturity of the 9 nodes was more and more heterogeneous: some nodes were well developed while others contained just an empty structure. Even though, all nodes were already fully published in the Internet, which enabled good opportunities of analysis. The screenshot below illustrates an early version of the travel node (aat-reisen). A very simplistic design was used to avoid extensive effort on overall layout and detailed formatting. The main navigations as well as the specific country sites were rather unappealing, images functional and text unformatted.

Figure 84 : First GUI of node travel – Page Egypt

The 'average time on page' measured via the session management (initially via a javascript timer – later via Google Analytics) was under 1 minute (average 47 seconds) – a clear feedback regarding the attractiveness of the Web sites. The screenshot below, illustrating an enhanced version, shows some minor enhancements done to improve visual impact of the travel information portal. A significant amount of images was added to increase the visual stimulus and attractiveness of the site. Similar to the previous scenarios two sites remained unchanged (www.aat-musik.de and www.aat-filme.de) to evaluate the impact of the adjustments.
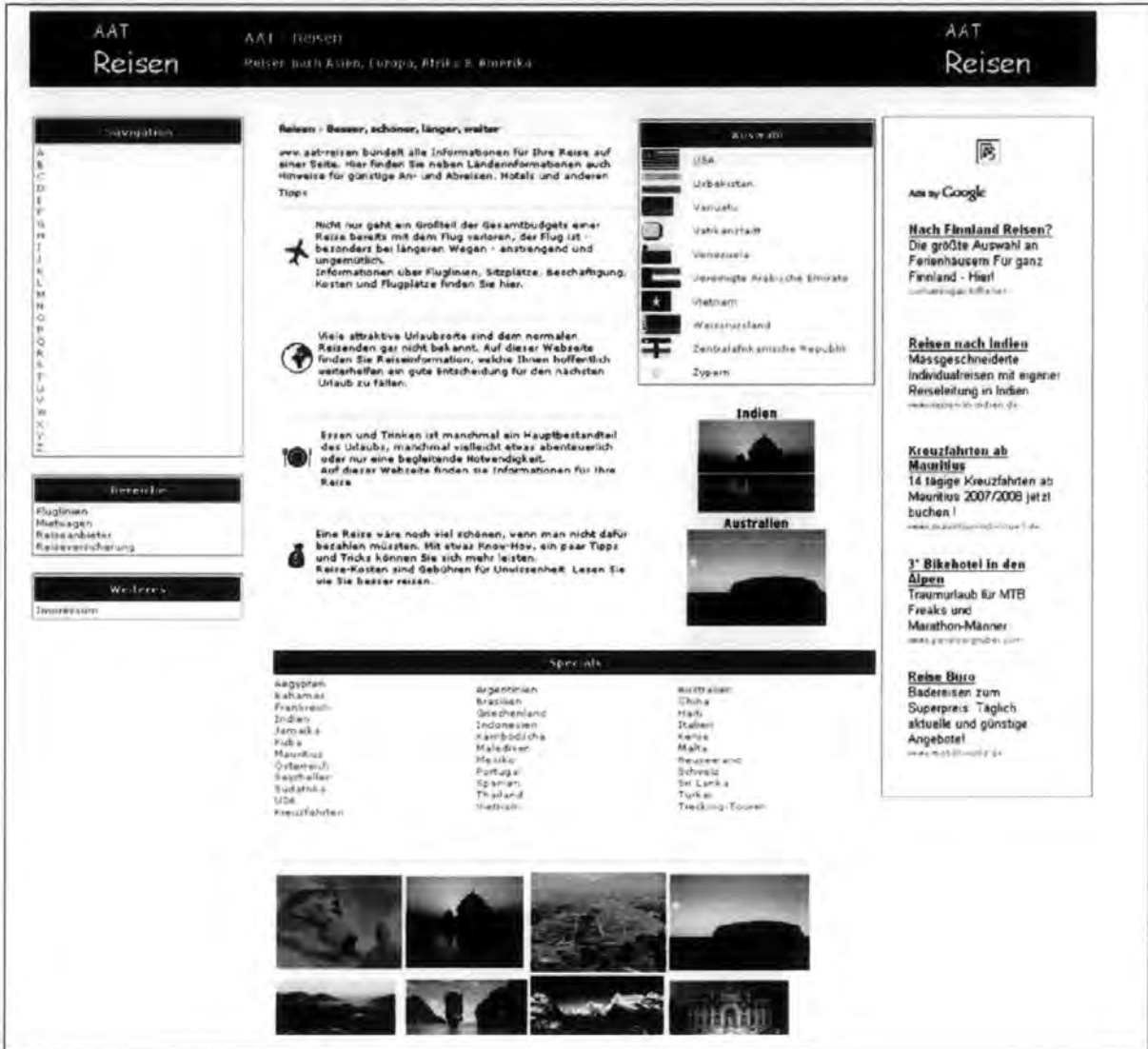
Figure 85 : www.aat-reisen.de

Based on the improvements of the design the duration user spent on the Web site significantly increased:

Month	0	+ 1	+ 2	+ 3
www.aat-autos.de	53 seconds	92	103	118
www.aat-computer.de	39 seconds	55	73	69
www.aat-reisen.de	47 seconds	88	76	95
www.aat-filme.de	34 seconds	29	33	18
www.aat-musik.de	24 seconds	17	21	27

Table 47 : Development of 'average time on page' after adjustment

This observed development statistically supports the generally intuitive perception that better information and illustration increases the user's appreciation of the Web page. The two Web sites that remained in the old format also showed no improvements of the KPIs. The adjusted Web sites on the other hand experienced an increase of over 100% in some cases. In parallel the '% Exit' from the front page (start.php) reduced significantly, suggesting that the user created a higher desire to explore the detailed content provided in the nodes. The table below illustrates the detailed data points:

Month	0	+ 1	+ 2	+ 3
www.aat-autos.de	75 %	53 %	45 %	52 %
www.aat-computer.de	87 %	67 %	59 %	58 %
www.aat-reisen.de	63 %	32 %	44 %	38 %
www.aat-filme.de	79 %	82 %	85 %	79 %
www.aat-musik.de	91 %	94 %	88 %	92 %

Table 48 : Development of '% Exit' on start page

The findings of this scenario provide a general insight into the potential positive impact and benefit of information and illustration on the consumer experience. Equivalent to previous observations the data is also an example on how the limited observation of just one KPI remains misleading. As visible in data documented further below, the positive trend illustrated in the two tables above had a significant negative effect on other KPIs (e.g. revenue generated from advertising content). Without the consideration of a more holistic framework the effectiveness of this specific strategy might have been largely misinterpreted (see section 7.3).

7.2.6   Observations on navigation and conversion steps

The development of the information network provided further relevant data for the analysis of navigation and conversion scenarios. The utilization pattern of the rather established node for the subject 'travel' (aat-reisen.de) highlighted the focus on specific country Web pages. This trend of navigation appeared to be influenced by the fact that not all countries listed were attractive locations for travel. For the 20 countries (pages) with the most visits, a direct reference was integrated on the start page of the node. This direct reference changed the structure of the assessed data points significantly. The alphabetic category pages (former obligatory sites to arrive on the specific country page) lost practically all visits. Furthermore the conversion from the start page to the country pages increased. The data in the table suggests that the reduction in navigation complexity increased the conversion of users looking at the detailed content pages provided in the different nodes:

Month	-2	-1	0	1
Visits on start page	352	312	365	337
Visits on category page	226	194	54	39
Visits on country page	184	152	258	232

Table 49 : Click-stream on node travel over time

The data indicates that due to the adjusted navigation structure more users of the total visitors explored detailed content pages, potentially increasing the value of the Web sites and subsequent advertising revenues. While previously a lot of exits happened on the category pages the impact of the direct reference suggests great opportunities for improvement of the Web site's appreciation.

7.2.7   Observations on needs and transaction

The information network was structured around the business concept of generating a large amount of visitors which may click on the advertisement illustrated on the Web sites. The information and illustration on the different nodes constituted a key driver of this

model. While the amount and quality of information determined the number of visitors, interesting data was documented in relationship to the conversion turn-around time. From the first statistics the two nodes for movies and music had the highest number of visitors. This result appeared to be the effect of the high number of indexed Web pages which – due to good search engine optimization – ranked high on SERP. While having the most pages, automatically generated via a database, it was practically impossible to populate all pages with relevant and comprehensive information and illustrations. In parallel exactly those two nodes created the highest conversion rate in terms of clicking on the advertising references.

Node	Indexed Pages	Average Visitors	Conversion Rate
www.aat-autos.de	145	300	0.03
www.aat-computer.de	50	150	0.01
www.aat-filme.de	28,500	500	0.9
www.aat-hotels.de	1	2	0.00
www.aat-internet-marketing.de	46	30	0.01
www.aat-investments.de	14	20	0.01
www.aat-jobs.de	111	200	0.02
www.aat-musik.de	32,500	600	1.5
www.aat-reisen.de	213	350	0.04

Table 50 : Indexed sites and conversion rate from AAT network (rounded figures)

The data suggests that the users quickly identified that no relevant information could be found on the Web site and used the external (advertising) references to navigate to alternative Web sites. The other nodes with more informative texts and appealing illustrations appeared not to create a similar consumer behavior. Based on this logic, it may look appealing to position voluminous, but empty Web sites in the Internet to receive a high number of visitors with a subsequent high conversion rate on advertisement. Out of practical reasons the larger Web sites (node music and movies) were left without content over the following month and years. At some point of time the primarily good rating in search engines - which translated into high number of visits within the first months of the project – suddenly plummeted extraordinarily with the improvements of the positioning algorithms of major search engines. The traffic for the large, but empty nodes went down

to almost zero and practically no income via Google AdSense could be generated. The long term development of visitors is illustrated in the table below:

Node	Q4/05	Q2/06	Q4/06	Q2/07	Q4/07
www.aat-autos.de	315	345	397	311	287
www.aat-computer.de	159	180	124	112	148
www.aat-reisen.de	354	324	385	347	313
www.aat-filme.de	518	252	143	52	32
www.aat-musik.de	639	394	194	73	24

Table 51 : Average number of visits per months

The data documented in this scenario is a good example how the fate of a potentially lucrative business model, which is not based on satisfying a particular consumer's need, is influenced by a simple change of environmental factors (see section 3.2.3). It also stresses the significance of the long-term perspective of Internet marketing models.

7.2.8   Observations on transaction complexity and TAT

Previous to the introduction of the wholesaler (KNV), the ordering process for purchases via learn2go.de required the manual transfer of the payment via the customer's banking channel. Upon arrival of the funds on the learn2go bank account around one week later, the products (and attached invoices) were dispatched. Based on this structure a consumer transaction involved a certain level of 'technical' complexity as well as a long turn-around time to receive the desired product. To evaluate the impact and benefit of reduced transaction complexity and turn-around time, Learn2Go Pte Ltd agreed to accept a transaction fee charged from paypal for online transfers. Subsequently the online payment method was technically configured in the shop software and publicly introduced enabling customers to make credit card payments directly embedded in the ordering process. The paypal payment method was a standard feature of the underlying technical oscommerce platform and the integration required solely the verified registration of an online bank account at paypal.com. The new payment process eliminated transaction steps / complexity and reduced the turn-around time by around 5 working days. Furthermore the reduction of technical complexity increased the number of transactions

while visits remained rather stable. The table below shows the assessed KPI over a period of four month:

Month	-2	-1	0	1
Visits	12.238	11.921	9.872	10.592
Purchases	3	4	12	15

Table 52 : Learn2go visits and purchases development

The observations made in this scenario provide an insight into the benefit and impact of decreasing the technical complexity and improving the transaction turn-around time to subsequent increase the number transactions in general.

7.2.9   Observations on services and transaction return

The introduction of the wholesaler KNV shifted the purchase pattern for the products of learn2go largely to the dominant online retailers which waved the shipping cost for the customer. As indicated above, the sales transacted via www.learn2go.de went to 0 with amazon offering the products. Considering the major discount of 40% granted to KNV the net sales price for all transactions went down to 4.20 euro (for 7 euro sets) and 5.40 euro (for 9 euro sets) respectively. Considering the shipping cost of 1.28 euro (reduced price due to special treatment of book-distributions) direct transactions from www.learn2go.de waiving the shipping cost still resulted in a higher net-revenue (+ 36-43%) than sales transacted via the distributer KNV. The table below illustrates the dynamics of the different scenarios:

	KNV			Direct Retail		Increase
Market Price	Discounts	Shipping Cost	Net Revenue	Shipping Cost	Net Revenue	
7 EUR	2.80 EUR	0*	4.20 EUR	1.28 EUR	5.72 EUR	36 %
9 EUR	3.60 EUR	0*	5.40 EUR	1.28 EUR	7.72 EUR	43 %
* shipping cost to KNV had to be paid by learn2go						

Table 53 : Net Revenues based on different sales approaches

Considering the financial impact extrapolated from the table above, the shipping cost was waived for 2 month on www.learn2go.de. Following this change the transactions on the Web site picked up again, but significantly under previous levels.

Month	-3	-2	-1	0	1	2
Sales volume via learn2go.de	0	0	0	4	6	5

Table 54 : Sales development after waiving shipping cost

As described in the strategic work packages, this scenario illustrates how a bundle of products and services can increase the return per transaction. Even if a reduction in income in one area may feel counter-intuitive, the overall profitability could be improved. Finally learn2go.de decided to reinstate the shipping cost as the distribution to the wholesale organization reduced the transactional complexity of the retail business.

7.3   Impact and Benefit of overall Framework

Validating the value of the entire overall framework – compared to individual components thereof (as done in section 7.2) – required the illustration of the inner dynamics between the overall structure of different work packages and KPIs. The data documented and analyzed above provides further ground to determine the impact and benefit of using the new overall framework as a whole, instead of just individual components.

7.3.1   Strategic Framework and Learn2Go

In the case of Learn2Go the tactic of introducing major intermediaries had an impact on several KPIs and objectives. First of all the awareness turn-around-time, as well as overall awareness for the offered products was positively influenced. While increasing the absolute sales number (over all channels), the introduction had also a significant negative impact on the transaction return reducing the net margin substantially (from 4.50 / 6.50 to 1.70 / 2.90 euro). Certainly the dynamics of sales volumes and underlying margins have to be managed very carefully to not jeopardize the entire profitability of the organization.

The figure below illustrates how the implementation of one work package or strategy can impact several KPIs and finally also different objectives of the Internet marketing framework:
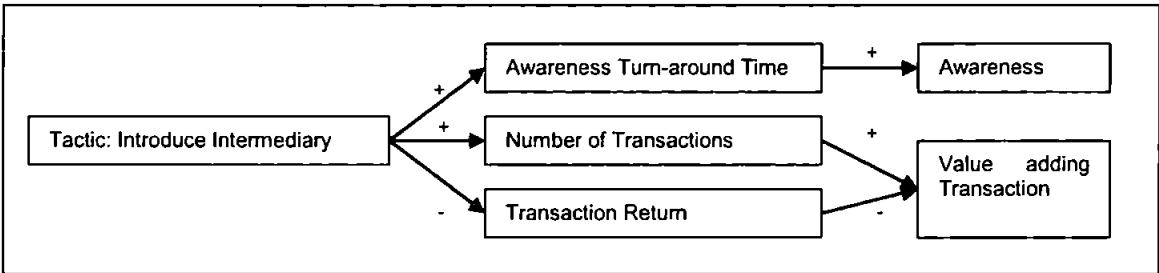
Figure 86 : Correlations of tactic with KPIs and objectives in learn2go

This scenario is a solid example that a single perspective (of measurement or objectives) can not become a conclusive criterion for evaluation of the overall effectiveness and efficiency of the Internet marketing strategy. The figure above provides a scheme how one tactic impacts several KPIs and objectives positively or negatively. Without having a holistic perspective on the entire Internet marketing strategy, the change of the transaction return resulting from the introduction of intermediaries may not have been identified. Furthermore also the counter-tactic of waiving the shipping cost to re-generate transactions – with a higher transaction return – requires a holistic perspective of several performance metrics.

An additional example was visible in the impact of adjusting the ordering process to incorporate online payment. The introduction of paypal as an online payment reduced the transaction complexity and subsequently increased the number of transactions as such. On the other hand facilitating online payments meant to accept an additional transaction cost charged from paypal, reducing the transaction return. The figure below illustrates the impact of the strategy on the different KPIs and the final objective:
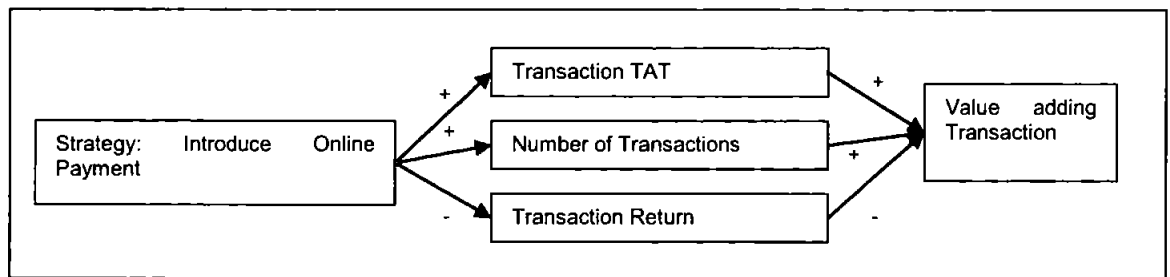
Figure 87 : Impact of online payments on several KPIs

Based on this view the introduction of online payment methods has to consider the increased sales volume as much as the underlying margin situation. In case the overall scenario does not transpire with a positive business case potentially a different tactic should be investigated to reduce the transaction complexity.

The two empirical scenarios above provide evidence of the impact and benefit of using a framework of different KPIs compared to an isolated view. Without the holistic management from a strategic perspective, the overall impact of specific marketing activities would not have been transparent and the negative effects overlooked.

## 7.3.2   Strategic Framework and AAT-network

The data elicited from the information-network suggests a sensitive correlation of how the increase of information quality impacts the user satisfaction (and potentially the platform value) as well as transaction return. The figure below simplifies the dependencies. In the specific setup of the information-network, the content tactic had also a different short and long term effect. Again this illustrates that the implementation of a successful strategy has to be evaluated from different perspectives as well as a short and long term views. The figure below summarizes how a strategy within the information-network had a positive or negative impact on KPIs and objectives:
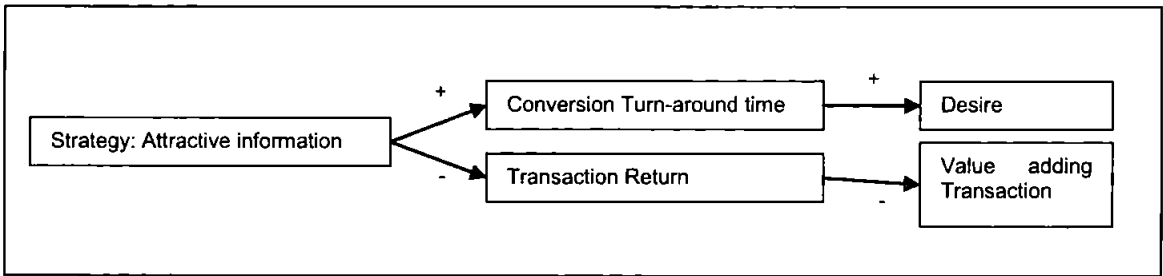
Figure 88 : Correlations of strategy to KPIs and objectives in aat-network

The figure describes that the attractive content significantly increased the user's experience or consumer desire, measured via the conversion turn-around-time. Furthermore the strategy reduced the number of transactions and transaction return generated via Google Adsense. This impact of one tactic on several metrics remains in-transparent without an overall framework evaluating the marketing strategy. Applying the new framework the organization can make a conscious managerial decision on priorities and balance of 'creating desire' and 'transactions'.

The development of the aat-network also indicated that individual tactics may have a different short and mid-term effect. That consideration remains a key attribute for the implementation models suggested in Chapter 5 to establish a structure which can accommodate continuous adjustment. The figure below illustrates the dynamics within the specific developments within the aat-network:
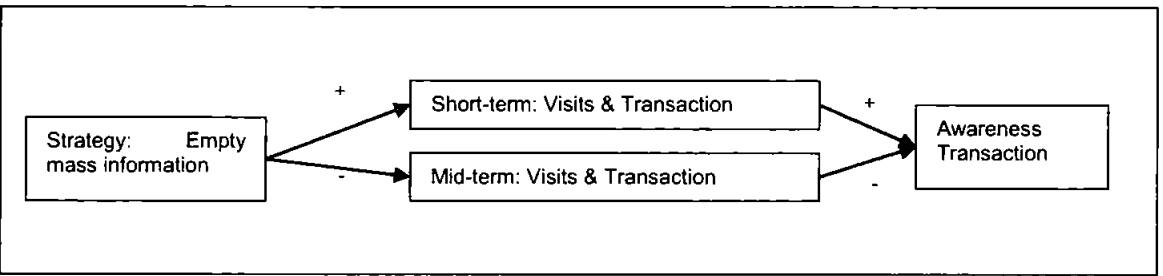
Figure 89 : Short & Mid-term impact of strategy

While the large and empty information nodes translated into a high number of visits and transactions in the short term, the mid-term effect was very negative (see section 7.2.7). This overall development could have been preempted using a more holistic approach,

measuring also the conversion steps and turn-around-time and interpreting the development under consideration of the implementation models of intermediaries (section 3.4).

7.4   Summary

The two case studies represent an important element of the research project. The data provided from Learn2go and the AAT-network has been used as an example to validate the impact and benefit of the overall framework and specific strategic work packages introduced in Chapter 4.

Learn2Go was a small but fully established PO. The continuous development of the Learn2Go case study over a longer period of time significantly enhanced the understanding of the strategic setup of a PO with the Internet as a major marketing channel. Learn2go offered data points in scenarios of changing source code, product attributes and payment structures as well as the introduction of intermediaries. The information network concentrated on technical implementation areas of an information-based Web site. The aat-network provided data points from scenarios of different source code and navigation structures, Web designs and positioning.

The two examples very clearly illustrate how Internet marketing strategies require a holistic managerial structure to ensure all objectives are achieved effective- and efficiently (section 7.3). Especially the dynamics between different tactics were visible in data assessed within the case studies. While the impact and benefit of using an overall framework of objectives, KPIs and work packages for Internet marketing becomes evident, it remains difficult to quantify this benefit in precise measures of elasticity. An assessment of elasticity may be an adequate future extension of this research, but might not yield into conclusive findings due to the multi-disciplinary nature and morphing environment of Internet marketing over time.

The data consolidated in this chapter adds empirical data to the entire research describing the impact and benefit of the new Internet marketing framework:

- The individual components of the new framework support achieving the Internet

marketing objectives

- An overall framework enables a better management of a strategy than individual components

The empirical data consolidated in Chapter 7 solidifies the new strategic framework and research subject as a whole. Certainly the interpretations of cause and effect of individual changes, ceteris paribus, can be discussed in terms of applicability to different industries, consumer segments or product positioning. Furthermore the findings are limited due to the explorative approach of the empirical research. This information provided in this chapter therefore complements the explorative findings crystallized in Chapter 6. This empirical validation approach is the last component of the overall research methodology utilized to evaluate the new strategic concept.

8   Conclusion

"Strategy without tactics
is the slowest route to victory.
Tactics without strategy

is the noise before defeat."

(Sun Tzu)

The Internet triggered the "greatest transition of powers in history, one that will take power away from the mightiest corporate and social institutions and give it [...] consumers" (Murphy, 2000). This thesis describes how a PO can successfully leverage the opportunities out of this transition via a structured approach of Internet marketing.

This closing chapter summarizes the major elements of the thesis on how to formulate and implement a successful Internet marketing strategy. Furthermore it stresses the research contributions and limitations and provides an outlook on Internet marketing of the future.

8.1   Research Contribution

The survey results illustrated in Chapter 1 – indicating "missing capabilities", "lack of knowledge where to start", "no understanding of benefits", "insufficient metrics", "lack of resources and skills" – suggested the lack of and need for a consistent framework how to use the Internet effective and efficiently for marketing purposes (McKinsey, 2008; Econsultancy, 2009; MIC, 2000). While specific marketing tactics are explored, a structured technical and processing framework derived from such an overall Internet marketing strategy are also missing. Based on the basic principles of strategic marketing a comprehensive literature review is consolidated in Chapter 3 and the major limitation is crystallized and substantiated: Current models are largely insufficient and a comprehensive strategic framework for Internet marketing does not exist.

Considering this limitation current Internet marketing approaches are per se deficient. As initiatives and investments are not directly deducted from predetermined business objectives, they potentially deliver no adequate value to the PO. This implicit

inconsistency also creates frustration and distrust of senior management and marketing managers. The lack of an appropriate structure of KPIs (aligned to specific objectives) to measure the value contribution of investments complicates the right allocation and justification of marketing resources. Furthermore the underdevelopment of technical implementation frameworks and operational marketing processes invokes the risk of unsuccessful or unsustainable approaches. Based on those limitations constructive, explorative and empirical research was applied to create new approach. The contribution of the thesis can be summarized as the specification of an integrated strategic Internet marketing framework, and all components thereof.

The main achievements of the research are:

- A comprehensive review of the current state-of-the-art Internet marketing strategies
- Conceptual specification of a strategic Internet marketing framework with generic applicability to POs
- Demonstration of the practical feasibility of the proposed framework at the implementation level (via several examples like the SIMTF and SIMPF)
- Confirmation of the applicability of the framework based upon a survey of potential beneficiaries
- Validation of the effectiveness of the approach via case study scenarios

The research presented in this thesis describes the underlying structural principles towards an Internet marketing strategy. The main novelty is how those principles of strategic management and marketing can be applied consistently to develop a new strategic model. Finally the research provides examples and statistical data about the validity and dynamics of this new model. The contribution of this thesis for POs can be summarized in the following points:

- A more effective and efficient strategy implementation
- A modular customization according to own priorities
- A more sustainable strategy implementation over a longer period of time
- Ensure buy-in from senior and marketing managers
- Simplify the implementation of strategic Internet marketing

- Provide a structure to evaluate and validate impact and benefit of individual tactics

The new modular approach of overall Internet marketing framework allows POs to customize an Internet marketing strategy that perfectly complements the entire overall marketing mix. The illustrated frameworks allow POs to reevaluate their Internet marketing approach and initiate activities from a purely strategic and non-technical perspective. The new structures will make Internet activities more effective, efficient and sustainable. For the academic area the broad spectrum of concepts and corresponding details of evaluation and validation allows a structured approach of making Internet marketing an accepted discipline of scientific research.

8.2   Research Limitations

The research underlies certain limitations resulting from the subject's environment as well as the utilized research approach.

1. As illustrated above the subject is continuously morphing; future technologies and business challenges will facilitate or even require alternative and complementing approaches. While the definition of objectives is assumed to remain rather unchanged, key performance indicator, the environment, strategic work packages as well as the implementation have to be re-adjusted over time. The framework as outlined therefore remains a snapshot of this point of time and requires continuous revision and adjustments. A majority of the implementation examples (e.g. SIMTF and SIMPF) are designed to facilitate this continuous adjustment.

2. As the maturity of the research subject (strategic Internet marketing frameworks) is still very low, the emphasis was consciously put on an explorative research approach. This research approach creating new frameworks and concepts by transferring them from other disciplines and deduction from explorative surveys can be further extended with confirmative surveys and a larger volume of long-term case studies. Confirmative surveys would not just require a higher number of participants, but also a completely new design of the questionnaires focusing on the details of implementation approaches over a longer period of time. Evaluating the sustainability of new Internet marketing implementation approaches via solid

case studies would require a 6-10 year monitoring of specific scenarios ceteris paribus while the entire environment continuously changes.

3. The specific strategic objectives of every PO are different. The generic concept of Internet marketing objectives, which is the guiding principle for the entire framework of this research, has to be customized and integrated into the existing balanced scorecard of the underlying enterprise. This integration may lead to the right definition of priorities and potential extensions of the work packages. The spectrum of research would have been too vast, and results potentially not tangible enough, to deduct work packages considering all industry, product, geographic or demographic specific priorities.

4. The validation of the impact and benefit of work packages has been limited to major examples. The focus has been determined by the strategic relevance of the underlying objective and main metrics. The detailed illustration of all significant work packages would lead into an extensive documentation which can not be justified following the understanding that the explorative approach remains generic.

The limitations identified describe further potential that can be explored or specific scenarios which may apply but not invalidate the main findings of the research. The work still provides a solid generic framework for POs how to approach and implement Internet marketing strategies. Additionally it forms a firm baseline for confirmative and other complementing research.

8.3   Directions of further research

During the period of research in the past 5 years major aspects of Internet marketing have changed, structures and frameworks had to be modified and assumptions and observations revisited. A generative strategy has to therefore cater for a continuous adjustment of all components. As Internet marketing provides a significant competitive advantage for a PO, more sophisticated strategies will be developed and implementations will evolve.

Based on the suggested concepts individual aspects have to be further explored. The SIMTF for example structures a way to facilitate sustainability within a changing Internet marketing environment but the technical example has to be implemented. Similarly the SIMPF requires continuous improvement to provide sustainable success to the PO. Potentially more precise KPIs can be developed and the automatic assessment and evaluation has to be improved. The strategic work packages have to further mature in regards to content as well as naming and new strategies have to be added.

Internet marketing as part of the overall marketing strategy will constantly evolve. To provide a competitive advantage the strategies have to be applied and new concepts have to be developed.

Based on this there are three areas of further research:

1. The performed research was following an explorative approach identifying major concepts for the overall framework of strategic Internet marketing. The subsequent activities are certainly to engage into the confirmative stage of the research. This confirmative approach would take the findings of this thesis and substantiate them in large sample surveys and case studies.

2. A majority of specified components of the strategic framework can be implemented in technical prototypes. For example the automatic measurement and illustration of key performance indicator as well as the nine components of the SIMTF have not been prototyped consistently. The development of those prototypes can be performed in partnership with a development research institute or active Internet marketing service provider.

3. The conceptualized Internet marketing framework can also be extended even further to focus more on the different environmental factors (e.g. technological, psychological studies). In particular, the psychological perspective and vast area of consumer behavior studies can be explored to provide additional ideas for a more effective and efficient Internet marketing strategy.

8.4　　　The future of Internet marketing

The development of the Internet has changed the face of established markets and operation approaches across a tremendous spectrum of different industries. Within the competitive environment of those industries, the opportunities and risks derived from the Internet are so ubiquitous that unused opportunities quickly translate into potential risks. Those opportunities and risks demand for a structured approach how to implement a sustainable Internet marketing strategy that targets clear business objectives. Marketing and strategic management theory describes very clear structural principles towards their operational implementation, which have been applied to create a new framework.

Changing the understanding of a former technical discipline, the thesis describes how Internet marketing becomes a precise strategic instrument for POs. The new structured, complete and self-similar framework facilitates sales organizations to significantly increase the effectiveness and efficiency of their marketing operations. Furthermore, the framework ensures a high level of transparency about the impact and benefit of individual activities. The new model explicitly answers concerns and problems raised and documented in existing research and accommodate for the current limitations of strategic Internet marketing. The framework allows evaluating existing as well as future Internet marketing tactics and provides a reference model for all other definitions of objectives, KPIs and work packages. Finally this thesis also matures the subject matter of Internet marketing as a discipline of independent scientific research providing an underlying structure for subsequent studies.

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Appendix A – Publications

In this appendix, the papers published in the context of this research project are listed together with their abstracts.

- Rimbach F, Dannenberg M, Bleimann U, Furnell SM, "From Page Ranking to Topic Sensitive Page Ranking: Implementation and Impact", Proceedings of the Sixth International Network Conference (INC2006), Plymouth, UK, 11-14 July, pp. 27-34, 2006.

Abstract: The impact of changing search engine technology on small- and mid-sized Internet based companies is more significant than a variety of general micro- or macro-economic factors. Despite this, the implementation and impact of the underlying technology of search engines are understood by just a small amount of professionals. Explaining the calculation, implementation and impact of the PageRank and Topic Sensitive Page Ranking is the prerequisite to recapitulating existing search engine optimization strategies and to identifying new methods for leveraging the Internet for sales and marketing purposes. This paper aligns the complex calculations of the two concepts to enable a comparison and describes how different strategies have to be adapted to effectively attract potential customers.

- Rimbach F, Dannenberg M, Bleimann U, "Page ranking and topic-sensitive page ranking: micro-changes and macro-impact", Internet Research, vol. 17, no. 1, pp. 38-48, 2007.

Abstract: The impact of changing search engine technology on small- and mid-sized Internet based companies is more significant than a variety of general micro- or macro-economic factors. Despite this, the implementation and impact of the underlying technology of search engines are understood by just a small amount of professionals. Explaining the calculation, implementation and impact of the PageRank and Topic Sensitive Page Ranking is the prerequisite to recapitulating existing search engine optimization strategies and to identifying new methods for

leveraging the Internet for sales and marketing purposes. This paper aligns the complex calculations of the two concepts to enable a comparison and describes how different strategies have to be adapted to effectively attract potential customers.

- Rimbach F, "Sustainable Internet marketing technical framework – concept", Proceedings of the Third Collaborative Research Symposium on Security, E-learning, Internet and Networking (SEIN 2007), Plymouth, UK, ISBN: 978-1-8410-2173-7, pp. 159-168, 2007.

Abstract: Opportunity and threat of the Internet is the new level of market transparency for products and services. Within such an environment a comprehensive strategic concept has to be established to identify market developments and to flexibly adjust to them. This concept has to be supported by systems which are aligned to the Internet marketing strategy and intelligent enough to automatically implement optimizing activities. On the basis of the current Internet marketing environment the Sustainable Internet Marketing Technical Framework describes nine elements to be prepared for future challenges. The nine elements are specified within a first level of maturity to establish a stable basis of the upcoming development. The target group of this paper is experienced Internet marketers and professional Internet Web site developers.

- Rimbach, F, "Internet marketing strategy – Pattern of implementation:, Third International Conference on Internet Technologies and Applications 2009, Wrexham, UK, 2009.

Successful and sustainable Internet marketing requires the translation of business objectives into a technical implementation. Bridging the gap between marketing executives and IT engineers is a major challenge of POs and area of disruption of the overall strategy. This article illustrates the prominent objectives and key performance indicators of Internet marketing. Additionally it describes a technical implementation model. Based on two explorative surveys the current evolution in the three areas is evaluated. Further more the result of the survey indicates the eminent strategic disconnect between marketing objectives and technical

implementation.

- Rimbach F, Bleimann U, Furnell SM, "Psycho-Analytical Considerations in Internet Marketing – Focusing on Human Needs and Personal Trust", Proceedings of the Eight International Network Conference (INC2010), Heidelberg, Germany, 6-8 July, 2010.

Abstract: Purchase decisions are complex processes that follow economic, psychological and consumer behavior models. These processes have been largely explored and subsequent marketing strategies have been derived from them. Selling products and services over the Internet complicates the process introducing a technical intermediary into this system. To facilitate a maximum of transactions initiated via the Internet means understanding the purchase decision process and optimally adjusting the Internet marketing approach accordingly. The areas of human needs and trust have been identified as two substantial determinants within this environment. On the one hand the topic of needs addresses a classical decision factor; on the other hand trust describes a media-specific aspect. The discussion paper illustrates the two determinants from an Internet marketing perspective and how established structures and concepts from conventional psychology or marketing can be adapted in an Internet marketing approach. Furthermore two surveys provide insight about the behavior of the models in the new environment.

Appendix B – Literature Review

This appendix includes the details of the literature review from the different sections in chapter 3. All references of major significance have been explained in chapter 3, this appendix just highlights the main authors, their models as well as a brief positioning of those models.

Appendix B.1 – References to Marketing Frameworks

Reference	Model Details	Weaknesses / Development Opportunities
Vassos, T. (Strategic Internet marketing)	Initial Stages of Web site development (launch, repository, link, cool) Interactive and database Web site strategy (interactive, database, advanced repository, advanced interactive) Advanced Web site Strategies (mass customization, outbound, integration, commerce) Final stages of Web site development (personality, application, global, strategic alliance, closed loop)	The model describes technology perspective in which every element / stage is determined by the sophistication of the underlying Internet applications. Neither the phases, nor the 17 stages describe an Internet marketing objectives, KPI or work-package.
Nai-Wen, K. / An-Yi, L. (The High Benefits Internet Marketing Framework through Customer Experience)	Interactive Customer Experience Framework focusing on 3 "Strategic experiential Model elements": 1. Feel – E-brand strategy 2. Think – Continued Creativeness 3. Act – Interactive customer experience center Based on those elements three functions are developed: 1. Making strategy 2. Executing communication 3. Becoming connection	The model (just illustrated 3-4 pages) does not describe profit organizations objectives, KPI or work packages. The formulations are not intuitive and no scientific evidence and validation is provided.
Goodman, S. (A Framework for the Implementation of (internet) Marketing by the Wine Business)	4 activity based categories - 1. Financial Transactions - 2. Information - 3. Business Processes - 4. Revenue Generation	Publication describes how the internet can be used specifically for the wine business. There is no general concept about Internet marketing illustrated, e.g. Internet marketing objectives or KPI.
Morgan, R.F. (An INTERNET marketing framework for the World Wide Web)	Basic principles of the Internet - how to make Web sites - how to find a Web host - Internet Security	Publication is from 1996 and not focusing about marketing itself, but more about basic principles how to make a Web site, how to find a server, building Web site prototypes as well as security aspects.
Bluelinermarketing: (6 pillars framework of Internet marketing)	6 pillars described in the model: Pillar I. Search Engine Optimization (SEO) Pillar II. Online Advertising Pillar III. Email Marketing Pillar IV. Interactive PR Pillar V. Affiliate Marketing Pillar VI. Web Analytics	Model describes a set of methods used for Internet marketing, but does not describe objectives, KPI or work packages of Internet marketing.
Ani-Okoye, U. Email Marketing: A Cheap Internet marketing framework	Small article: 1. Join the "Can Spammy" expedition 2. Make your email list open it. 3. Keep it real 4. Don't go too low 5. Make it important 6. Post broadcast	Focus on Email marketing. No strategic framework describing basics like Internet marketing objectives or KPI.

Appendix B.2 – References to Marketing Strategies

Reference	Structure / Main concepts	Weaknesses
The Online Advertising Playbook: Proven Strategies and Tested Tactics from the Advertising Research Foundation Plummer, J. / Rappaport, S. / Hall, T. / Barocci, R. (2007)	Structure: 1. Introduction 2. Targeting approaches 3. Online advertising reach and frequency concepts 4. Winning strategies in online advertising 5. Displaying advertising online 6. The connection of online search and advertising 7. Online shopping and buying 8. Advertising personally 9. Future Approach: Generate leads and acquire customers Generate brand preferences to stimulate sales Brand growth, rewards, and loyalty	No dedicated strategic framework (objectives, KPI). "Strategic options" include methods (e.g. rewards) and can not be interpreted as objectives even though the first 2 describe Internet marketing objectives
Internet Marketing: Strategy, Implementation and Practice Chaffey, D. (2006)	Structure: 1. Introduction to Internet Marketing 2. The Internet Micro-Environment 3. The Internet macro-environment 4. Internet marketing strategy 5. The Internet marketing mix 6. Relationship marketing using the Internet 7. Delivering online service quality	Potentially 2nd best reference in regards to Internet marketing strategy. No strategic framework, just process oriented structure Outline in Chapter 4 describes process (A defining the opportunity (1. Set objectives, 2. Evaluate performance, 3. Assess marketplace), B. Select approach (1. define strategy, 2. define value proposition, 3. Define mix), C. Deliver (1. implement plan, 2. Implement customer experience, ...)), not a model of objectives, KPI/metrics and work packages as such.
Internet Marketing: Strategy, Implementation and Practice Chaffey, D. (2010)	Internet marketing fundamentals Internet strategy development Internet marketing: implementation and practice	Small elaboration on BSC concept, but usage of classical dimensions to determine what can be support via the Internet (not matter if it is marketing related or not)
How to Use the Internet to Advertise, Promote and Market Your Business or Website with Little or No Money Brown, B.C. (2006)	E-Commerce and Web sites Starting your business The importance of Internet Advertising Generating more traffic to your Web site Branding Automation of your Web site E-Zines and Newsletters Using a successful auto responder Search engine optimization Banner Advertising Business Directories B2B Web communities and portals Google, Yahoo, Overture, and Froogle Advertising Affiliate programs Promoting your business offline eBay unlocking the secrets of EBay	No strategic framework at all (in terms of objectives and KPI). The work simply includes a list of adverting methods.
Planning Your Internet Marketing Strategy: A Doctor Ebiz Guide Wilson, R. F. (2001)	Structure: Opportunities, purpose, revenue plan, Unique Niche, Core competences, USP, Setting goals, SWOT analysis, Industry analysis, Competitor analysis, understanding customer, Segmenting, differentiating, naming, Building trust, positioning, Product, Price, Promotion, Price, Budgeting, Writing the Internet marketing plan Purposes: 1. Brand development 2. Prospect generation	Goal definition is just a list of examples; the purpose "brand development" for example is not a clear objective but a method to create visibility. No metrics and work packages in objective structure

	3. Revenue generation 4. Cost saving 5. Customer support	
Internet Marketing: Strategy, Implementation and Practice Chaffey, D. / Ellis-Chadwick, F. / Johnston, K., Mayer, R. (2009)	Structure: 1. Introducing Internet marketing 2. The Internet micro-environment 3. The Internet macro-environment 4. Internet marketing strategy 5. The Internet and the marketing mix 6. Relationship marketing using the Internet 7. Delivering the online customer experience 8. Campaign planning for digital media Marketing communications using digital media channels 9. Evaluation and improvement of digital channel performance 10. Business to consumer Internet marketing 11. Business to business Internet marketing Objectives: 1. Sell (customer acquisition and retention) 2. Serve (customer satisfaction) 3. Sizzle (visit duration) 4. Speak (number of engaged customer) 5. Save (efficiency gains) A long list of KPI / metrics (page 230) Implementation based on 4P model	Potentially best reference on Internet marketing strategy. Objective formulation follows artificial naming requirement, therefore "sizzle" or "serve" do not provide a clear marketing objective which can be used to convince senior management. Work packages are based on 4P model which is structured for an overall marketing strategy, not for a specific channel (therefore placement strategy is just a metaphor applied to the Internet) Mentioning of BSC (page 230), but no application in providing 1 structure of objectives, KPI and objectives. No statistical evidence out of explorative or empirical research.
Internet Marketing 101: Strategies from a Young Web Marketing Guru Mirchandani, N. (2005)	Structure: - Building your Website - Relevancy Search engines - The power of google adwords - Pay per click search engines - Comparative analysis - Email advertising - Affiliate marketing - Online auctions - Always keep the customer happy	Consolidation of different advertising methods. No reference to Internet marketing objectives, KPI or work packages
2008 Thumbnail Media Planner Geskey, R. (2008)	Structure: - Market facts - Television - Radio - Magazines - Newspaper - Interactive - Other Media - Top 100 marketing planner	Describes overall marketing strategy with reference to Internet marketing, but does not include any illustration of objectives, KPI or work packages.
Conversation Marketing: Internet Marketing Strategies Lurie, I. (2006)	Structure: What is conversational marketing Before you start: Know your goals Know the room: prepare for your conversation Dress appropriately: belonging in the conversation Sound smart: avoiding conversational stoppers Make a connection: continuing the conversation Brag modestly: polite conversation starters Observe and adjust: keeping the conversation going Conversation marketing Know your goals: 1. What do I need my web site to accomplish? 2. What is my budget? 3. How quickly do I need this done? 4. In light of the first three answers, can I succeed?	Structurally includes objectives but not as a framework, but just as open questions to be answered.
How To Use Internet Marketing Within Your Marketing Strategy: Internet Marketing Strategies	Just 50 pages on fundamentals of Internet advertising	No strategic framework included at all

Quick Easy Guides (2008)		
The Targeted Audience: Internet and Marketing Strategies for Broadcasters Sakai, D. (1999)	How to build communicates Profiling of visitors How to use "new" technologies	New technologies are outdated. No strategic framework included
Internet Marketing: Strategies for Law Firms Webb, N. (2003)	Devising the strategy; researching your approach; designing and building your site; on- and off-line marketing; and on-going maintenance of Web communities	No generic concept of objectives, KPI / metrics and corresponding work packages Focussed on law firms
Internet marketing strategy study for the lodging industry Jeong, M. (2001)	(Bartels, R., 1988) Pure focus on hotel industry.	No generic concept Focus on lodging industry
eCom Market Guide: Internet Marketing Strategies Stein, J. (2008)	select profitable products affiliate marketing search engine optimization advertising techniques	Internet marketing implementation tactics No strategic framework of objectives, KPI / metrics, work packages
Marketing on the Internet: Multimedia Strategies for the World Wide Web Ellsworth, J.H. / Ellsworth, M.V. (1995)	Technical description of Java, VRML, interactive graphics, and electronic commerce	Very early reference describing technical basics (from 1995)
Internet Marketing and Sales Strategies American Productivity & Quality Center (1999)	Based on benchmarking study Examines 14 findings in three focus areas: supporting the customer-focused marketing model, establishing customer-focused e-business capabilities, and providing low-cost-of-ownership technology solutions.	No strategic framework Just simple list of focus areas
3G Marketing on the Internet, Seventh Edition: Third Generation Internet Marketing Strategies for Online Success Sweeney, S. / MacLellan, A. / Dorey, E. (2006)	Structure: 1. Industry overview 2. Understanding your environment 3. Internet marketing techniques 4. Starting with the foundations 5. Campaign Execution 6. Web analytics "List of common objectives": - Generate increased brand awareness - Generate and qualify leads for the internal sales department - Increase revenue as a result of online sales - Provide increased customer service by providing the Web user with more self-service tools and information - Increase customer retention - Decrease internal costs by streamlining the share of information online KPI: Click through rate, unique visitors, time spent, click stream analysis, single-page access, total sales, customer conversion ratio, cost per customer, net dollars per visitor, cost per visitor, average order size, items per order, shopping cart and form abandonment, impact on offline sales, return on investment.	The objectives are not atomic and inconsistent. For example to "provide increased customer service by providing the Web user with more self-service tools and information" describes not an objective but what can be done with a tool. Customer service is not an objective, but a tool to potentially achieve more sales. The listed KPI illustrated are a very good mix (maybe the best identified during the research), but they are not integrated towards the objectives (or work packages) and provide for example no insight into the implementation capabilities or flexibility within the strategic setup. The structure is not an integrated framework or strategy but consolidation of individual elements for Internet marketing.

Appendix B.3 – Website references to Internet marketing strategies

Website	Include Framework
http://www.expansionplus.com/impr/index.html	No
http://www.webdynamic.com.au/internet-marketing-strategy.html	No
falkow.blogsite.com/public/blog/81701	No

http://www.masonworld.com/	No
http://www.websitemarketingplan.com/marketing_management/MarketingPlanningArticle.htm	No
http://marketing.about.com/od/internetmarketingstrategy/Internet_Marketing_Strategy.htm	No
http://www.web-source.net/3steps.htm	No
http://www.marketingsphere.com/	No
http://internetmarketingstrategy.com/	No
http://www.freemarketingzone.com/	No
http://internetmarketingformommies.com/	No
http://www.sarkis-webdesign.com/internet-marketing-strategy.shtml	No
http://www.marketingology.com/	No
http://www.whatsnextblog.com/	No
http://www.targeting.com/	No
http://www.brandtarot.com/	No
http://www.conversationmarketing.com/	No
http://www.purpleinternetmarketing.com/	No
http://internetmarketingstrategydiva.com/	No
http://www.bruceclay.com/web_pt.htm	No
http://www.imswebhost.com/	No
http://en.wikipedia.org/wiki/Internet_marketing	No
http://www.themarketingmentor.com/	No
http://www.subiasoft.com/	No
http://www.stir.ca/	No
http://www.zineguru.com/	No
http://www.daviddalka.com/createvalue/	No

Appendix B.4 – References to Internet marketing Objectives

Reference	Structure / Concept	Evaluation
Search Marketing Strategies: A Marketer's Guide to Objective Driven Success from Search Engines Colborn, J. (2005)	4 objectives: - Branding and awareness - Sales via fully ecommerce driven Web site - Lead acquisition - Formulating a search engine marketing plan	Focus on Search engine marketing, not Internet marketing in general 4th objectives can clearly not be generalized Differentiation between ecommerce driven sales and lead acquisition inconsistent
Internet Marketing Methods Revealed: The Complete Guide to Becoming an Internet Marketing Expert Todaro, M. (2009)	1 short section about advertising objectives	No illustration of objectives (no definition)
Advertising and Integrated Brand Promotion O'Guinn, T., et al. (2008)	3 objectives: - Awareness - Brand identification - Brand feature knowledge	No reference to the aspect of generating revenues, therefore this structure remains difficult to justify towards senior management.
Internet Marketing: a practical approach Charlesworth, A. (2009)	Short mentioning of online marketing objectives (page 27).	No structured approach of objectives, not subsequent metrics or work packages.

Appendix B.5 – References to Internet publications on Internet marketing objectives

Reference	Structure / Concept	Evaluation
Collins, P. J. (2008)	3 Internet marketing objectives: - Communicating a firm's message- about its profile, its services, and its products. - Performing a research- identifying the nature of the market such as the demographics, preferences and needs of the present and the future clients. - Advertise products, services or even advertisement space over the Internet.	No structure focussing on Internet marketing objectives It outlines more the perspective how the Internet can be used in the General marketing theory (e.g. Internet research)
Kyle, B. (NN)	Direct Revenue / e-Commerce	No structure focussing on Internet

	Build Brand Image Enhance Customer Service Lower operating costs	marketing objectives E.g. Lower operating costs has no link to marketing definition

Appendix B.6 - References to Internet marketing KPI

Reference	Structure / Concept	Evaluation
Marketing Metrics: 50+ Metrics Every Executive Should Master Farris et al. (2006)	Share of hearts, minds, and markets Margin and profits Product and portfolio management Customer profitability Sales force and channel management Pricing strategy Promotion Advertising media and Web metrics Marketing and finance	Web metrics mainly focus on awareness (impressions, cost per impressions, reach, effective reach, share of voice, impressions, page-views, hits, visits, visitors, ...)
Multichannel Marketing: Metrics and Methods for On and Offline Success Arikan, A. (2008)	Lift between online and offline 1:1 interactions between online and offline Multi-touch conversion	Focus on the integration of online and offline channels in measurement of general marketing. No concept of Internet marketing KPI.
Advanced Web Metrics with Google Analytics Clifton, B. (2008)	Visitors (map overlay), ecommerce (overview), goals (overview), funnel visualization), traffic sources, top content, site overlay, site search usage)	Just focuses on google analytics
Internet Commerce Metrics and Models in the New Era of Accountability Jagannathan et al. (2001)	E-business model based on 5 elements: - platform - content - community - commerce - service	No focus on Internet marketing strategy but how to build an e-business model Potentially Outdated.
Web Metrics: Proven Methods for Measuring Web Site Success Sterne, J. (2010)	Awareness and branding (reach, duration, frequency), ad interactions (mouse-over, intra-ad clicks, intra-ad purchases, click-through), CPM, sessions, leads, sales, emails sent / opened / bounced / unsubscribed / ..., visitors, technical Web site performance, content value, impressions, site path, conversions, ROI	Very exhaustive list of metrics No corresponding link to objectives or work packages. Just unstructured list, not a KPI framework with reference to a strategy.
Social Media Metrics: How to Measure and Optimize Your Marketing Investment Sterne, J. / Scott, D.M. (2010)	Metrics for: - Getting focussed - Reaching your audience - Identifying influence - Recognizing sentiment - Triggering action - Hearing the conversation - Driving business outcomes - Convincing your colleagues	Extensive work of measurement methods and metrics for social media. Small reference to objectives on page xxvii, but without marketing focus.
Data-Driven Marketing: The 15 Metrics Everyone in Marketing Should Know Jeffery, M. (2010)	10 classical marketing metrics 1. Brand Awareness 2. Test Drive 3. Churn 4. CSAT 5. Take Rate 6. Profit 7. NPV 8. Internal Rate of Return 9. Payback 10. Customer live time value	General KPI for marketing, including several very specific financial KPI. BSC is mentioned, but structure has no reference to overall framework or Internet marketing specific objectives.

Appendix B.7 - References to psychological and consumer behavior literature

Reference	Content	Reference to Internet marketing strategy
Advertising Research: The Internet, Consumer Behavior, and Strategy Zinkhan, G. (2000)	compilation of articles presented at American Marketing Association Educators' Conferences	Focus on advertising research methodology No link to overall strategic framework
Online Consumer Psychology: Understanding and Influencing Consumer Behavior in the Virtual World Haugtvedt, et al. (2009)	How to bring individuals from around the world into one forum Click-through rates and advertising Content placed within gaming online and wireless networks Reasons why consumers customize products and the benefits of customization Psychological effects of site design Asks the question of whether the Internet empowers consumers to make better decisions Research tools that can be used online.	No link to strategic framework
Handbook Of Consumer Behavior, Tourism, And The Internet (Journal of Travel & Tourism Marketing Monographic Separates) Mills, J.E. / Law, R. (2005)	Online travel consumer search behavior Travel Web site user characteristics Perception and quality of online lodging and travel brands E-complaint behavior Website design and development in travel and tourism Website evaluation in hospitality and tourism	Focus on travel industry No link to overall strategic framework
Defining the Internet Shopper: Attitudes, Objectives, and Behavior [The Jupiter/NFO Consumer Survey, Volume 1] Kammer, M. (1998)		Quite outdated. Isolated consumer perspective. No link to potential implementation model for service supplier
Always On : Advertising, Marketing, and Media in an Era of Consumer Control Vollmer, C. (2008)	Match your messages to the right media Learn the leading strategies of consumer-centric pioneers Discover the lessons of laggard marketers Explore viral marketing Track advertising spending shifts Capture emerging opportunities in a world of constant change Master the new marketing metrics Engage your customers on their terms Figuring out the best mix of strategies for any brand requires experimentation, networking, innovation, analytics, and risk taking-qualities that have never been adequately nurtured in a marketer's traditional career path.	
The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present de Vries, J. (2008)	Reveals key strengths and weaknesses of existing consumer theory	No focus on Internet marketing, but just general consumer behavior in the present
Web Copy That Sells: The Revolutionary Formula for Creating Killer Copy That Grabs Their Attention and Compels Them to Buy Veloso, M. (2009)	1. Getting started: The dynamics of Web selling 2. A simple blueprint for writing killer web copy 3. Crafting your copy 4. Email marketing 5. Using psychology to motivate prospects to become purchasers	Reference to AIDA model, but no different models are not aligned to overall objectives and/or objectives. Useful list of methods which should be integrated in an overall strategic model.

	6. The art of changing the prospect's mind 7. Increasing sales through the use of involvement devices 8. Online marketing communication 9. The special rules for web copyrighting 10. Web copyrighting in the age of Web2.0 11. Describing integration of aspects	
Neuro Web Design: What Makes Them Click? Weinschenk, S.M. (2009)	1. Designing Web sites for persuasion and the unconscious mind 2. Wanting to belong: The power of social validation 3. Feeling indebted: How to build in reciprocity and concession 4. Invoking Scarcity – if something seems unavailable, we seem to want it even more 5. Choosing carefully – given too many choices we freeze 6. Its all about you: Speaking to the self-centered, unconscious mind 7. Building commitment – we want to think we're consistent 8. Using similarity, attractiveness, and association: are we the same? 9. Afraid to lose – How fear of loss trumps our anticipation of victory 10. Using pictures and stories – the best way to talk to our unconscious minds 11. We're social animals – finding the next big thing by making it social	Describes social and technical behavior and customizes different implementation models around it. No link to overall strategic objectives and how to measure success. No overall process model for implementation, no overall technical model for implementation.
Designing the Obvious: A Common Sense Approach to Web Application Design Hoekman, R. (2006)	1. Defining the obvious 2. Understand users, than ignore them 3. Build only what is absolutely necessary 4. Support the user's mental model 5. Turn beginners into intermediates, immediately 6. Handle errors wisely 7. Design for uniformity, consistence, and meaning 8. Reduce and refine 9. Don't innovate when you can elevate	Describes how to improve usability of Web sites by maintaining a clear overall Web site model. Psychological behavior is translated into specific activities. The individual tactics are not integrated into an overall strategic framework or objectives / metrics. Also no overall process or technical model is illustrated.
Designing the Moment: Web Interface Design Concepts in Action Hoekman, R. (2008)	1. Designing the first impression 2. Showing your personality 3. Yen and the art of navigation 4. All links are not created equal 5. Getting your head out of the tag cloud 6. Surfacing the trigger words 7. Labeling the interface 8. Beyond words and onto video 9. Making suggestions 10. Getting through the results 11. Refining your search 12. Standardizing playback controls 13. Nailing form layout 14. Conquering the wizard 15. Going the extra mile with inline validation 16. Simplifying long forms 17. Getting them signed in 18. Counting characters 19. Building profiles 20. Editing 21. Making social connection	Exhaustive list of different tactics considering consumer behavior. The tactics are again not integrated into an overall strategic framework or objectives / metrics. The different methods are structured via 7 Chapters (e.g. "moving on" or "managing information") which do not provide a strategic direction. Also no overall process or technical model is illustrated.

	22. Designing the obvious blog 23. Inviting discussion 24. Getting a good rating 25. Making RSS meaningful 26. Tagging it 27. Getting reorganized with drag-and-drop 28. Managing interruption with system notifications 29. Signing off 30. Dusting off dusty users 31. Letting them go	
Designing for the Social Web Porter, J. (2008)	Goal: better design 1. The rise of social web 2. A framework for social web design 3. Authentic conversations 4. Design for sign-up 5. Design for ongoing participation 6. Design for collective intelligence 7. Design for sharing 8. Funnel analysis	Included AOF Framework describes model of "focus on primary activities", "identifying social objects", and choosing core features". This structure provides a valid outline for social media, but more from an implementation – and not from a strategic – perspective. Also no objectives & corresponding KPIs are illustrated.
The Design of Sites: Patterns for Creating Winning Web Sites Von Duyne, D.K. / Landay, J.A. (2006)	Part 1: Foundation of web design Part 2: Patterns (site genres, navigation framework, homepages, content management, trust, e-commerce, task orientation, layout, search fast, navigation, speed, mobile web)	Very broad selection of technical implementation methods. No link to strategic direction or objectives / KPI
Buyology: Truth and Lies About Why We Buy Lindstrom, M. / Underhill, P. (2008)	1. A rush of blood to the head 2. This must be the place 3. I'll have what she's having 4. I cant see clearly now 5. Do you believe in magic? 6. I say a little prayer 7. Why did I choose you ? 8. A sense of wonder 9. An the answer is... 10. Let's spend the night together	Studies and different tactis on consumer behavior and Web sites. No link to strategic direction or objectives / KPI

Appendix B.8 - References to psychological impact on Internet transactions

Reference	Interpretation of perceived risk	Impact
Jervenpaa et al. (1999)	Perceived risk associated with consumers willingness to purchase from supplier	Negative outcome based on potential of loss and negative situation from the specific purchase decision
Tan (1999)	Perceived risk associated with Online shopping behavior	Negative outcomes based on product performance and price compared to alternatives
Kim et al. (2000)	Perceived risk associated with the amount and frequency of online purchasing	Negative outcome based on price-oriented (cost and charges, rewards, discounts), net-oriented (Internet exposure and skills) and time oriented (Internet experience) style
Miyzaki / Fernandez (2001)	Perceived risk associated with Internet experience and concerns regarding the privacy and security of online purchases	Negative outcomes based on general risk towards online purchasing
Kim / Montalto (2002)	Perceived risk towards the use of online technology	Negative outcomes based on privacy invasion
Ha (2002)	Perceived risk associated with online pre-purchase information	Negative outcomes based on the expectation of product quality, psychological risk (effect on consumer image), financial risk (cost of loss), and time-loss risk (search time)
Heijden et al. (2003)	Perceived risk associated with attitude towards online purchasing and buyer's intention to purchase online	Negative outcomes based on risk, potential for loss and negative situation from the decision to purchase online
Dillon / Reif (2004)	Perceived risk associated with the online	Negative outcome based on personal risk,

	purchasing decision	privacy loss and product quality
Pires et al. (2004)	Perceived risk associated with the frequency of online purchasing	Negative outcome from a potential loss from the purchase based on overall risk
Doolin et al. (2005)	Perceived risk associated with the amount and frequency of online purchases of the consumer	Negative outcome based on product quality, product price (compared to alternatives=, security risk (credit card abuse) and privacy risk (loss of personal information)

Appendix B.9 - References to Domain names and Internet Marketing

Reference	Main illustrations
The Domain Game Kesmodel, D. (2008)	Explains value of domains and strategies how to protect the right domains
The Profitable Domain Investor Morse, S.A. (2008)	How to identify high value domains
Domain Names: How to Choose & Protect a Great Name for Your Website Elias, S. & Gima, P. (2001)	How to choose, register and protect a domain name
The Domain Name Handbook; High Stakes and Strategies in Cyberspace Rony, E. & Rony, P.R. (1998)	Illustrates Internet domain policies, administrative procedures and trademark law.
Signposts in Cyberspace: The Domain Name System and Internet Navigation Committee on Internet Navigation and the Domain Name System: Technical Alternatives and Policy Implications & National Research Council (2005)	Economic, social, and political value of domains
Addressing the World: National Identity and Internet Country Code Domains Wass, E.S. (2003)	International domains and national identities and priorities
Naming a Web Site on the Internet: How to Choose, Register and Protect the Right Domain Name for Your Web Site Jones, G. (2000)	How to choose, register and protect a domain name
Internet-Domains: Aufbau - Namensfindung - Bewertungsgrundlagen Lenz, B. (2006)	Components, selection and evaluation of domains.

Appendix B.10 – References to Server setup and Internet marketing

Administrating Web Servers, Security, & Maintenance Interactive Workbook (Foundations of Website Architecture Series) Larson, E. & Stephens, B. (2000)	Web Server Security aspects Maintenance processes No link to Internet marketing

Appendix B.11 - References to Web site architecture and Internet marketing

Reference	Content
Scalable Internet Architectures (Developer's Library) Schlossnagle, R. (2006)	Illustrates good design methodologies for building robust and highly available Web sites
Analyzing E-Commerce and Internet Law Interactive Workbook (Foundations of Website Architecture Series) Brinson, J.D., et al. (2001)	Building advanced e-commerce Web sites
Website Information Architecture Kahn (1998)	Outdated.
Information Architecture for the World Wide Web: Designing Large-Scale Web Sites Rosenfeld, L. & Morville, P. (2009)	Principles, processes & methodologies and practical examples of Web site architecture
Practical Information Architecture: A Hands-On Approach to Structuring Successful Websites Reiss, E.L. (2000)	More focus on Web design (Information architecture)

Information Architecture for Designers: Structuring Websites for Business Success Van Dijck, P. (2003)	Templates, concepts, tools and many examples of Web site architecture

Appendix B.12 - References to social media and marketing

Reference	Content / Structure	Strategic Perspective
Twitter Power: How to Dominate Your Market One Tweet at a Time Comm , J. et al. (2009)	What is social media What is twitter and why is it so powerful Strategies using twitter for product placement	Just limited information what specifically twitter will support within strategic framework
Social Media Marketing: An Hour a Day Evans, D. / Bratton, S. (2008)	1. Backlash 2. The marketer's dilemma 3. What is social media 4. Week 1: Web 2.0: The social web 5. Week 2: The social feedback cycle 6. Week 3: Touchpoint analysis 7. Week 4: Influence and measurement 8. Week 1: Build a social media campaign 9. Week 2: Social platforms 10. Week 3: Social Content: Multimedia 11. Week 4: Social Content: Review, Ratings, and Recommendations 12. Week 5: Social interactions 13. Week 1: Objectives, metrics, and ROI 14. Week 2: Present your social media plan	Primarily operational work plan for social media campaigns No single reference to overall Internet marketing strategy, just indication on page 291. Chapter 14 highlights managerial perspective, but entire structure is reverse (first all work packages than strategy definition, not the other way around) Illustration of specific metrics from page 294 onwards
Advertising 2.0: Social Media Marketing in a Web 2.0 World Tuten, T.L. (2008)	How to engage consumers Socialcentricity and the emergence of social media Friendvertising Vlobalization Advertising with social play Building brands Brand Folklore Product Reviews Social Fiction Ads in Play Social media Impact	Mainly operational focus. Certain strategic elements on how to use social media from page 159 onwards, e.g. objectives or measurement of SMROI (social media return on investment (page 166)), but no reference how to position social media in overall Internet marketing strategy. At least a reference
The Age of Engage: Reinventing Marketing for Today's Connected, Collaborative, and Hyperinteractive Culture Shiffman, D. (2008)	How to deploy new marketing tools to break through, build momentum, and gain recognition How to open meaningful interactions with your customers, develop authenticity, share recognition, and engage.	Operational focus, no strategic reference. No information how to translate social media "engagement" towards transactions
Social Media Is A Cocktail Party: Why You Already Know The Rules Of Social Media Marketing Tobin, J. / Braziel, L. (2008)	1. Cocktail party rules 2. What is social media? 3. Why social media marketing is different 4. Brand Building 2.0 5. The social media marketing plan 6. Social media optimization 7. When you arrive at the party, listen first 8. Preparing to enter the conversation 9. Transparency 10. The pull economy 11. Viral marketing 12. Marketing in second life 13. Social media for customer support 14. Social media for product development 15. Measurement	Solely brand building perspective. Strategic perspective is not guiding principle but attached after main work packages as last Chapter 15 (focusing on measurement) Objectives (on page 176) and metrics (page 180) are for example entirely disconnected
Secrets of Social Media Marketing: How to Use Online Conversations and Customer Communities to Turbo-Charge Your Business!	1. Making the case 2. Making choices 3. Ear to the ground 4. Courting online influencers 5. Corporate soapboxes 6. Customer Conversations 7. The social network gorillas	Operational user-guide. No insight into overall strategy or specific objectives. Just "Measuring results" part of Chapter 15.

Gillin, P. (2008)	8. Niche innovators 9. Learning from conversations 10. Basics of social media content 11. Picking your spots 12. Telling stories with words and images 13. Engagement through interaction 14. Promote Thyself 15. Measuring results 16. Celebrating change	
Social Media Marketing: How Data Analytics helps to monetize the User Base in Telecoms, Social Networks, Media and Advertising in a Converged Ecosystem Jaokar, A.V. et al. (2009)	World of Social media from the perspective of the Web (social media), mobile/telecoms and traditional media Significance of data within social networks Social media metrics like Alpha users, cost-per-relevant-audience Case studies from enterprises who have successfully used the social media marketing approach How to deploy social media marketing campaigns	Guide for standalone social media campaigns. No reference to overall strategic marketing approach.
A Step by Step Guide to Social Media Marketing and Web 2.0 Optimization Hay, D. (2008)	Creating an optimized Web site Starting a blog or podcast Optimizing your blog or RSS feed Social Bookmarking sites like Technorati and del.icio.us Sharing on sites like Digg and Propeller Sharing media sites like Flickr and YouTube Using Social Networking sites like Facebook and MySpace Creating Social Media Newsrooms and Releases Using widgets and badges	Technical implementation for Web 2.0 components. No references to strategic framework.
The Social Media Bible: Tactics, Tools, and Strategies for Business Success Safko, L. / Brake, D. (2009)	Massive resource with 43 Chapters on 775 pages. 3 main parts: 1. basics and tactics, 2. tools, 3. strategy - How to increase company and brand value by engaging people in new forms of communication, collaboration, education, and entertainment - How to determine which social media tactics should be used with customers and employees - How to evaluate and categorize tools and applications that constitute the rapidly evolving social media ecosystem - How to make social media tools like Facebook, MySpace, YouTube, Twitter, blogging, podcasting, and hundreds of others a part of the business strategy - How to conduct a social media analysis inside the company to improve internal operations and outside the company to create and monetize relationships with customers and prospects - How to implement social media micro- and macro-strategies to give the business the competitive edge	No substantial reference to objectives (word is mentioned 8 times, but without referring to Internet marketing or social media campaign objectives) Word "metrics" is just 10 times mentioned (considering that book has 775 pages), but no reference to comprehensive list of KPI. Reference to social media strategy (four pillars – communication, collaboration, education, entertainment), provide no indication of strategic framework
Facebook Marketing: Leverage Social Media to Grow Your Business Holzner, S. (2008)	1. Targeting your profile 2. Facebook groups 3. Creating your own pages 4. Hosting your own Facebook events 5. Introducing advertising 6. Optimizing and monitoring your advertising 7. Using the marketplace 8. Beacon, polls, and networks 9. Facebook applications 10. Developing your own application	Focus on Facebook No reference to overall Internet marketing strategy. No single reference to "Objectives".

Appendix B.13 - References to search engine optimization strategies

Reference	Structure / Content	Long term / Sustainability considerations
Search Engine Optimization: Your Visual Blueprint for Effective Internet	1. Getting started [...] 2. Keyword generation	All (optimization) techniques are based on current platform setups.

Marketing Jones, K.B. (2008)	3. Creating pages 4. Basic web site structures 5. Advanced web site structuring 6. Creating content 7. Creating communities 8. Building links 9. Using google analytics 10. Social media optimization 11. Creating pay-per-click campaigns 12. Optimizing PPC campaigns [...] 13. Optimizing for other search engines 14. Monetizing traffic 15. Installing SEO plug-ins	Word "sustainability" does not appear once in the book. The aspect of maintenance is just mentioned once in relation to technical aspects. No explicit mentioning of sustainability or maintenance considerations
Search Engine Optimization For Dummies (For Dummies (Computer/Tech)) Kent, P. (2008)	1. Search engine basics 2. Building search engine friendly sites 3. Adding your sites to indexes and directories 4. After you have submitted your site 5. The part of tens	Onsite SEO based on current Google algorithm. Continuous optimization limited to spreading hyperlinks. Word "sustainability" and "maintenance" not mentioned once in the book. (word "maintenance" just mentioned in 1 screenshot of a particular Web site)
The Truth About Search Engine Optimization Lieb, R. FT Press; 1 edition (2009)	1. The Basics of Search 2. The Truth About Being Site-Specific 3. Tag, You're It! (Description of meta-tags) 4. The Truth About Links 5. You Call That a Search Engine? 6. Get a Social Life 7. Search Ranking 8. The Truth About SEO Management 9. Don't Be Evil 10. Going Beyond	Optimization based on current SE technologies Just maintenance aspect illustrated as part of the in-house or outsource decision (truth 41, page 165)
Search Engine Optimization: An Hour a Day Grappone , J. / Couzin, G. (2008)	1. Clarify your goals 2. Customize your approach 3. Eternal truth of SEO 4. How SE work right now 5. Getting your team onboard 6. Your 1-month prep 7. Kick it into gear 8. Establish the habit 9. It's a way of life 10. Extra credit / guilt-free slacking	Structured approach for first time SEO Word "sustainability" does not appear once in the book. Book mentions once that maintenance is required (page 167), but does not explain how it can be implemented.
Ultimate Guide to Search Engine Optimization: Drive Traffic, Boost Conversion Rates and Make Lots of Money (Entrepreneur Magazine's Ultimate Guides) Rognerud , J. (2008)	1. History of search 2. Search technology 3. The Web site 4. Competitive Research 5. Keyword search 6. Psychology 7. SEO Ethics 8. Link Love 9. Ready to launch 10. Food, gas, great Web site (Pay per click campaigns) 11. Conversion	Generic guide of SEO based on current technologies Word "sustainability" does not appear once in the book. "Maintenance" mentioned once (page 22) without any elaboration on processes or impact
Get to the Top on Google: Tips and Techniques to Get Your Site to the Top of the Search Engine Rankings - and Stay There Viney, D. (2008)	1. Phrases that pay 2. Courting the crawl (SE crawling technique) 3. Priming your pages 4. Landing the links 5. Paying for position 6. Making the map 7. Tracking and tuning	Short bug concise SEO framework (just focused on Google) Word "sustainability" does not appear once in the book. A Phase 3 is called "Ongoing Maintenance" (consisting of 4 sub-elements) focus solely on technical considerations.
Website Optimization: Speed, Search Engine & Conversion Rate Secrets King, A. (2008)	1. Natural search engine optimization 2. SEO Case Study 3. Pay-Per-Click Optimization	Largely focused on PPC models. Word "sustainability" does not

	4. PPC Case Study 5. Conversion Optimization 6. Web page optimization 7. CSS Optimization 8. AJAX Optimization 9. Advanced Web Performance Optimization 10. Website optimization metrics	appear once in the book. "Maintenance" just mentioned once (page 182), in relationship to CSS setup.
SEO: Search Engine Optimization Bible Ledford, J. (2009)	1. Understanding SEO 2. SEO Strategies 3. Optimizing Search strategies 4. Maintaining SEO	One of the rare references going beyond the initial setup of SEO. Word "sustainability" does not appear once in the book. Word "maintenance" appears 7 times. Dedicated Chapter to "SEO beyond the launch" just outlines 4 steps (monitor position, web analytics, keywords and links, update content). An overall review due to changing SE technology is not mentioned.
Search Engine Marketing, Inc.: Driving Search Traffic to Your Company's Web Site (2nd Edition) Moran, M. / Hunt, B. (2008)	1. Why Search Marketing is important [...] 2. How SE work 3. How Search marketing works 4. How searchers work 5. Identify your [...] goals 6, & 7. Measure your [...] success 8. Define your strategy 9. Sell your marketing proposal 10. Get your site indexed 11. Choose your target keywords 12. Optimize your content 13. Attract links [...] 14. Optimize paid search programs 15. Make search marketing operational 16. Explore new (social) media 17. Optimize web site search 18. What's next	Good overall model of objectives, KPI towards Search engine optimization Word "sustainability" does not appear once in the book. 3 components of Chapter 15 (Set up your central search team, establish marketing best practice, track search marketing success) do not described maintenance concept.
Be #1 on Google: 52 Fast and Easy Search Engine Optimization Tools to Drive Customers to Your Web Site Smith, J. (2009)	SEO just for Google	Just Google specific
The Complete Idiot's Guide to Search Engine Optimization Miller, M. (2009)	1. How SE work 2. How SEO works 3. Which SE to cover 4. Optimizing site content 5. Optimizing keywords 6. Optimizing HTML 7. Optimizing design 8. Optimizing links 9. Optimizing images & videos 10. Submitting sites to SE and directories 11. Mapping your site for best results 12. Optimization for local search 13. Optimization for mobile search 14. Optimizing for social media 15. optimizing a blog 16. Tracking SE performance 17. SEO Tools 18. Avoiding mistakes 19. Maintaining SEO on an ongoing basis 20 Creating an SEO strategy 21. Integrating SEO into marketing plan 22. Integrating shopping directories	At least Chapter 19 (page 221 and below) described a fundamental maintenance plan. Just considering technical aspects the plan appears comprehensive, but it is largely disconnected from external determinants (e.g. products development, customer segments). The overall aspect of sustainability of the entire search engine marketing strategy is not mentioned at all. The word "sustainability" does not appear once in the book. Re-integration of SEO strategy into overall marketing plan seems to have the wrong perspective.

	into your plan 23. Integrating PPC into your plan 24. Evaluating performance	
The secrets to getting listed at the top of search engines Saieh, A. (2008)	1. SE and how they work 2. Research target market 3. Perform site audit 4. Keyword usage and meta tags 5. The need for content 6. Search submission 7. Keep a constant watch on competition and market 8. Other necessary files 9. Mind your link popularity 10. Search enginefor the future 11. Keep your top rankings	Chapter 7 and Chapter 11 touch long term perspective of SEO in general. Methods illustrated in those Chapters do not describe maintenance concept as such but certain components which can be integrated into a Web site to remain attractive (e.g. forum or blog). Aspect of sustainability not mentioned once. The word "sustainability" does not appear in the book.
The Findability Formula: The Easy, Non-Technical Approach to Search Engine Marketing Lutze, H. F. (2009)	1. Basics 2. First things first (Paid search campaigns and click stream) 3. How people search, shop and buy [...] 4, 5, 6, 7. Keywords, alignment, discovery and grouping 8. Location 9. Seasonality 10. Writing ads 11. After the click 12. Bidding and budgeting 13. Account deployment 14. Care and feeding of campaign 15. Hiring 16. SEO	Non-technical descriptions about Search engine optimization. Word "sustainability" not mentioned once. Book mentions "maintenance" 7 times, but without any reference to what to do to maintain the search engine optimization strategy.

Appendix B.14 - References to Web design and Internet marketing

| Reference	Structure / Content	Strategic / psychological considerations
Learning Web Design: A Beginner's Guide to (X)HTML, StyleSheets, and Web Graphics Robbins, J. N. / Gustafson, A. (2009)	How to create (X)HTML page Web standards Cascading Style Sheets & formatting Web graphics Web site development process Publishing the Web site	No strategic focus No product specific psychological considerations
The Web Designer's Idea Book: The Ultimate Guide To Themes, Trends & Styles In Website Design Mcneil, P. (2008)	Long library of example Web sites	No strategic focus No product specific psychological considerations
The Principles of Beautiful Web Design Beaird, J. (2007)	Design process What makes "good design" Pleasing layouts using grids, the rule of thirds, balance and symmetry Color schemes and palette Textures, lines, points, shapes, volumes and depth Typography Choosing, editing and placing images	No strategic focus No product specific psychological considerations
Don't Make Me Think: A Common Sense Approach to Web Usability, 2nd Edition Krug, S. (2005)	Guiding principles Things you need to get right Making sure you got them right Larger concerns and outside influences	No strategic focus No product specific psychological considerations
Bulletproof Web Design: Improving flexibility and protecting against worst-case scenarios with XHTML and CSS (2nd Edition) Cederholm, D. (2007)	Flexible Text Scalable Navigation Expandable rows Creative floating Indestructible boxes No images? No CSS? No problem Convertible tables Fluid and elastic layouts	No strategic focus No product specific psychological considerations

	Putting it all together	
Principles of Web Design Sklar, J. (2008)	Understanding the Web design environment Web site design principles Planning the site Planning site navigation Working with tables Introducing cascading style sheets Web typography Graphics and colors Using the box property Creating framed layouts Working with forms Web page design studio	No strategic focus No product specific psychological considerations
Build Your Own Web Site The Right Way Using HTML & CSS Lloyd, I. (2008)	Setting up shop Your first Web pages Adding some style Shaping up using CSS Using images, tables and forms Launch Adding blogs, statistics, forums	No strategic focus No product specific psychological considerations
Sexy Web Design: Creating Interfaces that Work Stocks. E. (2009)	How to make "Sexy" structures, navigations	No strategic focus No product specific psychological considerations

Appendix C – Title tag and search engine result pages

This appendix includes examples in regards to HTML title tag and corresponding illustrations on search engine result pages (Images are from 14th of March 2009).

Example 1:

Google: Title for flowershopnetwork.com
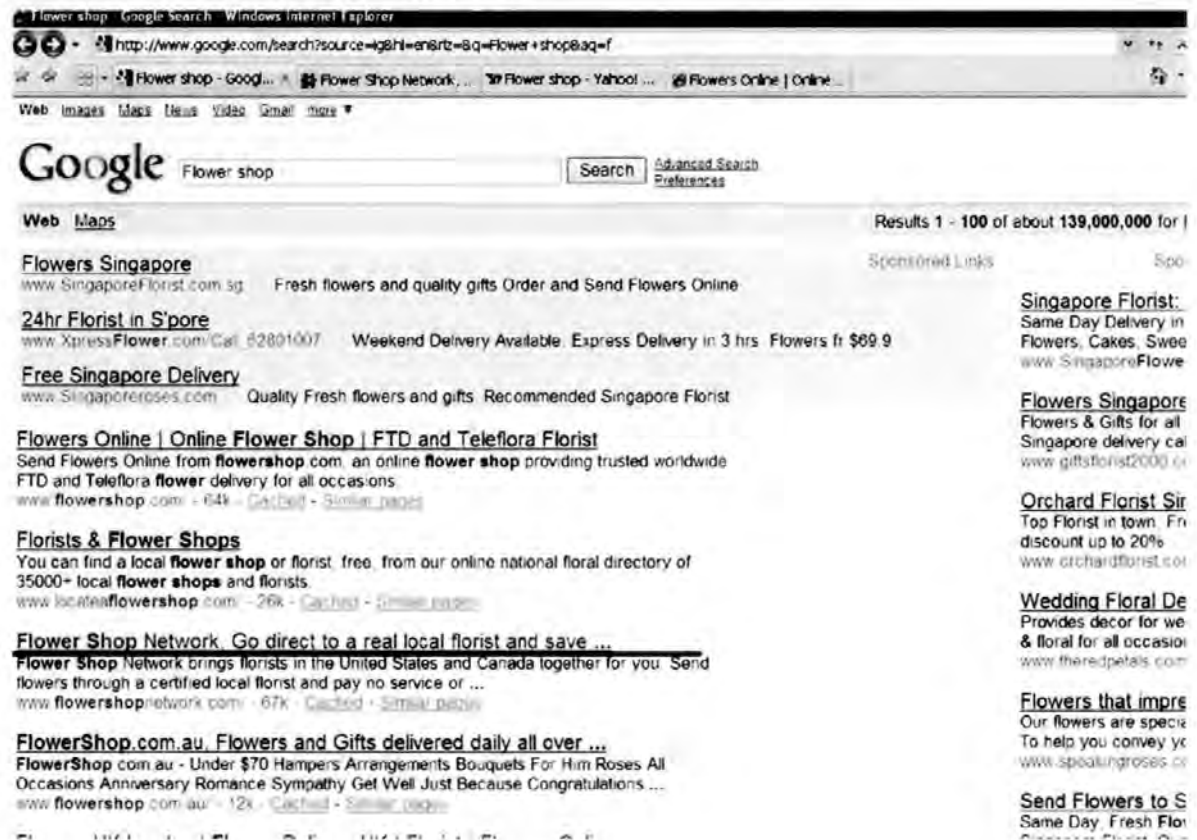
Source code of flowershopnetwork.com

(same html meta title)
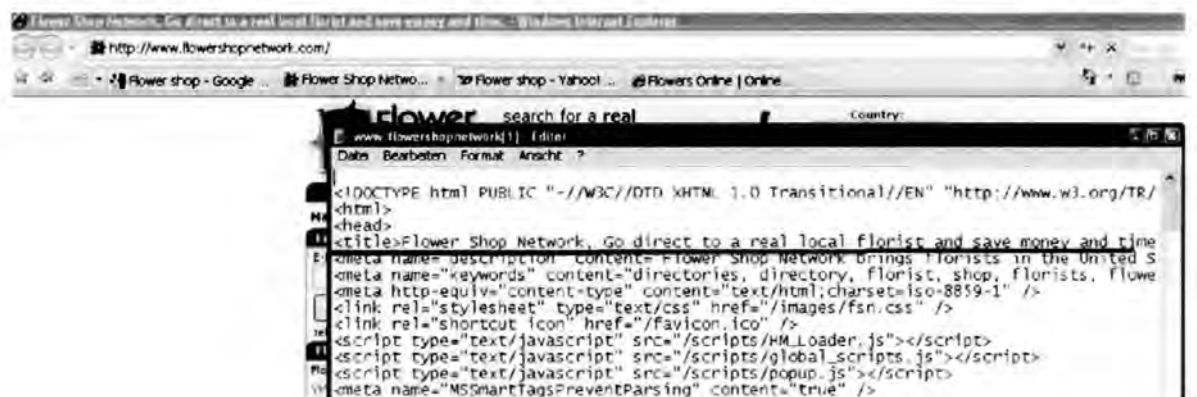
Example 2:

Yahoo: Title for flowershop.com
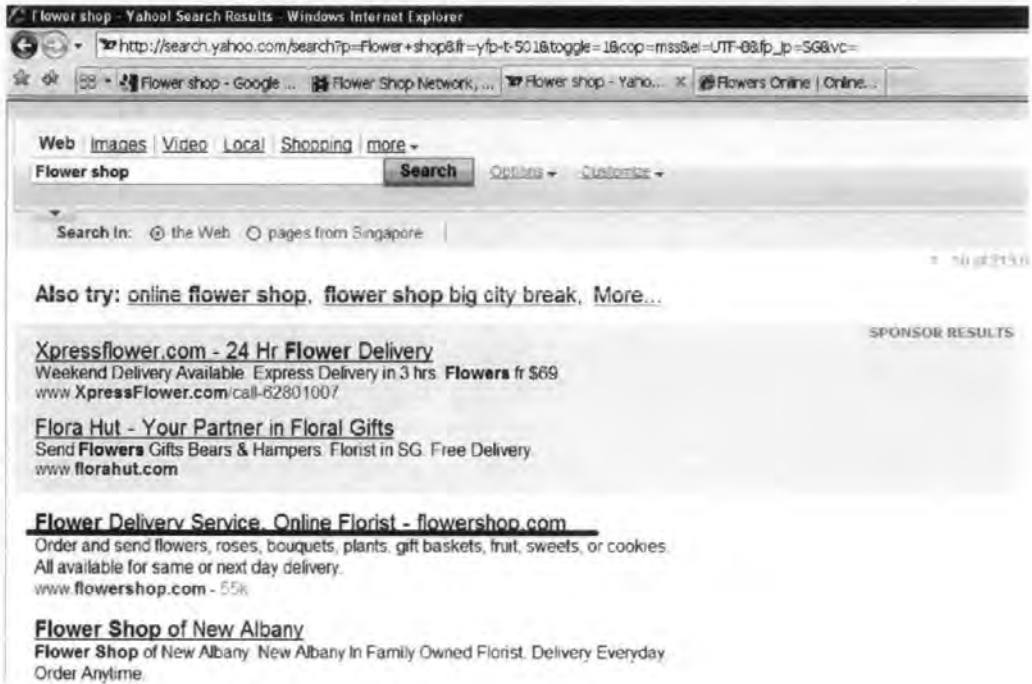
Source code flowershop.com:

(Not the same html meta title)

Appendix D – Google Heatmap

The Google Heatmap provides an insight about areas of highest attention on a Web site. Based on this map content as well as advertisement can be positioned:

NAVIGATION BAR

PRIMARY CONTENT

PAGE FOOTER
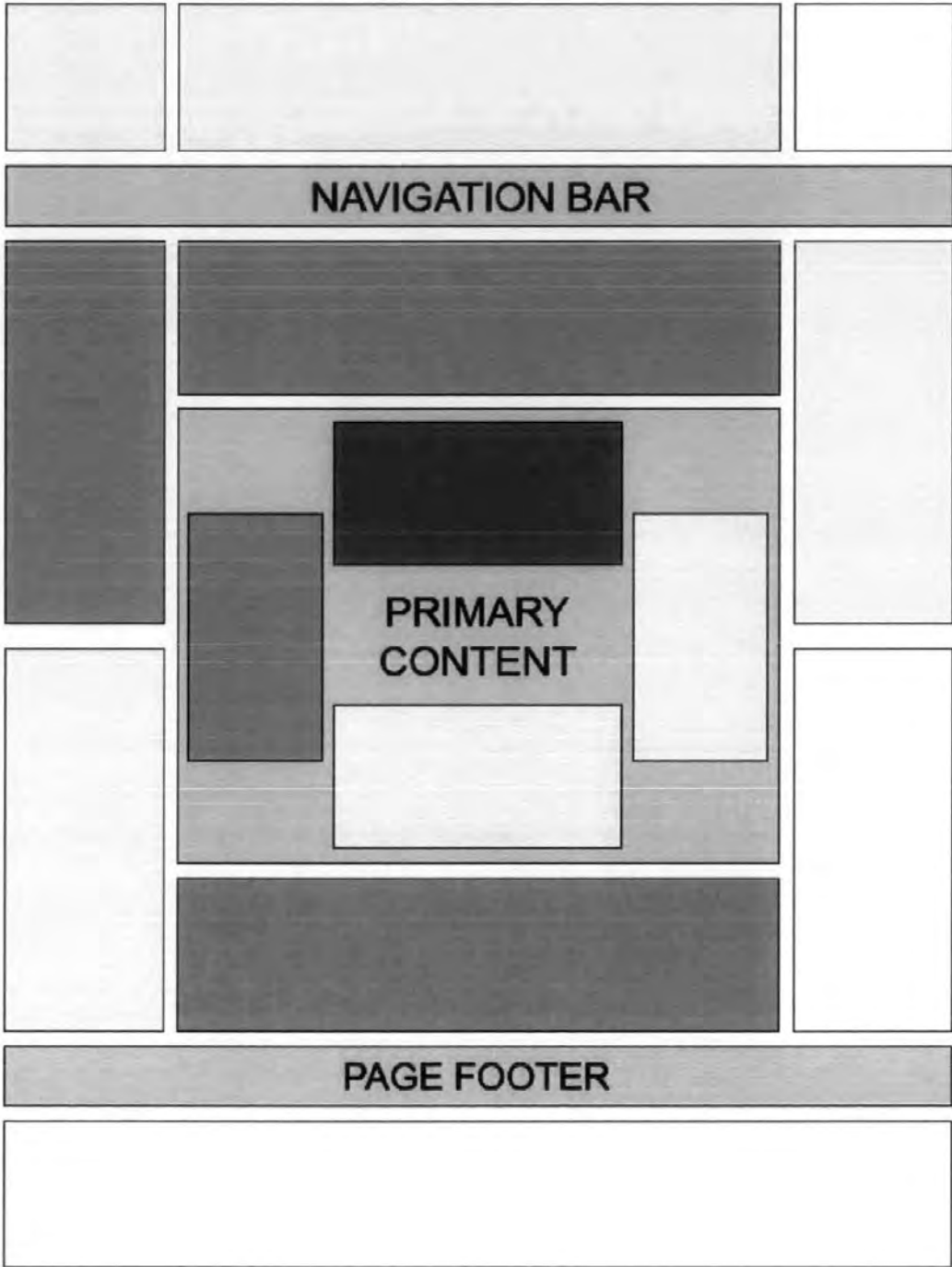
Appendix E – Eye movement on Web site

This appendix illustrates an example from an external reference about how the eye moves over a specific Web site.

"Not only do you have the 25 seconds window to contend with, you also have to take into account that visitors don't read websites, they scan them.
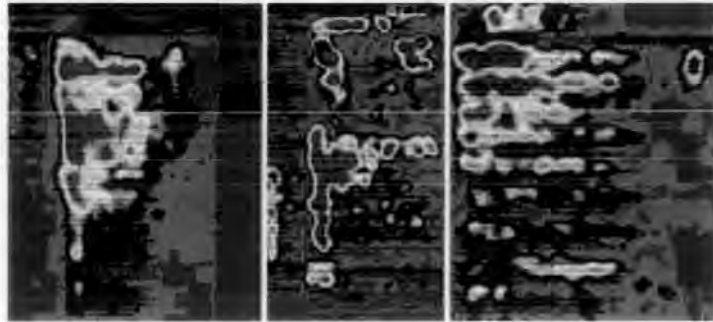
The above picture is the result of an experiment where a user was fitted with a device that tracked the movement of their eyes, and they were asked to look at a web page. The light areas are indicating the areas where the user spends most of his time looking for details.

As you can see, very few lines are read completely, and the concentration is at the top of the page, with attention being drawn to bullet points. Visitors do this because they know that the internet has a huge number of pages about nearly every subject, and in order to make sure they land on the most appropriate site, they scan and prioritize – quickly making a decision about whether or not to stay on this site, or move on to another."

(http://www.emincubation.co.uk/main/Business%20Support/I.T./Conversion%20Maximisat ion?page=1#section4)

Appendix F – Survey form

This appendix shows the survey form used in Chapter 6. Chapter 6 provides details about the questions and answers of this questionnaire.

Appendix G – Calculation of PageRank

This table illustrates the detailed values for the PageRank in a specific Website structure over 52 iterations.

Damping Factor		0,850000000000000	0,150000000000000	
	Site 1	Site 2	Site 3	Site 4
Links out	3	1	1	1
1	1	1	1	1
2	2,7000000000000000	0,4333333333333330	0,4333333333333330	0,4333333333333330
3	1,2550000000000000	0,9150000000000000	0,9150000000000000	0,9150000000000000
4	2,4832500000000000	0,5055833333333330	0,5055833333333330	0,5055833333333330
5	1,4392375000000000	0,8535875000000000	0,8535875000000000	0,8535875000000000
6	2,3266481250000000	0,5577839583333330	0,5577839583333330	0,5577839583333330
7	1,5723490937500000	0,8092169687500000	0,8092169687500000	0,8092169687500000
8	2,2135032703125000	0,5954989098958330	0,5954989098958330	0,5954989098958330
9	1,6685222202343700	0,7771592599218750	0,7771592599218750	0,7771592599218750
10	2,1317561128007800	0,6227479623997390	0,6227479623997390	0,6227479623997390
11	1,7380073041193400	0,7539975652935550	0,7539975652935550	0,7539975652935550
12	2,0726937914985600	0,6424354028338120	0,6424354028338120	0,6424354028338120
13	1,7882102772262200	0,7372632409245930	0,7372632409245930	0,7372632409245930
14	2,0300212643577100	0,6566595785474290	0,6566595785474290	0,6566595785474290
15	1,8244819252959400	0,7251726915680190	0,7251726915680190	0,7251726915680190
16	1,9991903634984500	0,6669365455005170	0,6669365455005170	0,6669365455005170
17	1,8506881910263200	0,7164372696578930	0,7164372696578930	0,7164372696578930
18	1,9769150376276300	0,6743616541241240	0,6743616541241240	0,6743616541241240
19	1,8696222180165200	0,7101259273278280	0,7101259273278280	0,7101259273278280
20	1,9608211146859600	0,6797262951046790	0,6797262951046790	0,6797262951046790
21	1,8833020525169300	0,7055659824943560	0,7055659824943560	0,7055659824943560
22	1,9491932563606100	0,6836022482131310	0,6836022482131310	0,6836022482131310
23	1,8931857329434800	0,7022714223521720	0,7022714223521720	0,7022714223521720
24	1,9407921269980400	0,6864026243339870	0,6864026243339870	0,6864026243339870
25	1,9003266920516700	0,6998911026494440	0,6998911026494440	0,6998911026494440
26	1,9347223117560800	0,6884258960813060	0,6884258960813060	0,6884258960813060
27	1,9054860350073300	0,6981713216642240	0,6981713216642240	0,6981713216642240
28	1,9303368702437700	0,6898877099187430	0,6898877099187430	0,6898877099187430
29	1,9092136602927900	0,6969287799024020	0,6969287799024020	0,6969287799024020
30	1,9271683887511200	0,6909438704162920	0,6909438704162920	0,6909438704162920
31	1,9119068695615400	0,6960310434794850	0,6960310434794850	0,6960310434794850
32	1,9248791608726900	0,6917069463757710	0,6917069463757710	0,6917069463757710
33	1,9138527132582200	0,6953824289139280	0,6953824289139280	0,6953824289139280
34	1,9232251937305200	0,6922582687564940	0,6922582687564940	0,6922582687564940
35	1,9152585853290600	0,6949138048903130	0,6949138048903130	0,6949138048903130
36	1,9220302024703000	0,6926565991765670	0,6926565991765670	0,6926565991765670
37	1,9162743279002500	0,6945752240332510	0,6945752240332510	0,6945752240332510
38	1,9211668212847900	0,6929443929050700	0,6929443929050700	0,6929443929050700
39	1,9170082019079300	0,6943305993640240	0,6943305993640240	0,6943305993640240
40	1,9205430283782600	0,6931523238739130	0,6931523238739130	0,6931523238739130
41	1,9175384258784800	0,6941538580405070	0,6941538580405070	0,6941538580405070
42	1,9200923380032900	0,6933025539989020	0,6933025539989020	0,6933025539989020
43	1,9179215126972000	0,6940261624342670	0,6940261624342670	0,6940261624342670
44	1,9197667142073800	0,6934110952642070	0,6934110952642070	0,6934110952642070
45	1,9181982929237300	0,6939339023587580	0,6939339023587580	0,6939339023587580
46	1,9195314510148300	0,6934895163283890	0,6934895163283890	0,6934895163283890
47	1,9183982666373900	0,6938672444542020	0,6938672444542020	0,6938672444542020
48	1,9193614733582200	0,6935461755472610	0,6935461755472610	0,6935461755472610
49	1,9185427476455200	0,6938190841181610	0,6938190841181610	0,6938190841181610
50	1,9192386645013100	0,6935871118328960	0,6935871118328960	0,6935871118328960
51	1,9186471351738900	0,6937842882753710	0,6937842882753710	0,6937842882753710
52	1,9191499351022000	0,6936166882992680	0,6936166882992680	0,6936166882992680

Appendix H – Amazon Checkout

This appendix illustrates the checkout screen, including delivery options, on the Website Amazon.com:

Appendix I – Database layer of phpbb

This appendix illustrates an example for the source code of the database layer of phpbb.

Sourcecode file: oracle.php:

```php
<?php
/**************************************************************
*                     oracle.php
*                     ------------------
*    begin          : Thrusday Feb 15, 2001
*    copyright       : (C) 2001 The phpBB Group
*    email          : support@phpbb.com
*
*    $Id: oracle.php,v 1.18.2.1 2002/11/26 11:42:12 psotfx Exp $
*
**************************************************************/
/**************************************************************
*   This program is free software; you can redistribute it and/or modify
*   it under the terms of the GNU General Public License as published by
*   the Free Software Foundation; either version 2 of the License, or
*   (at your option) any later version.
**************************************************************/

if(!defined("SQL_LAYER"))
{
define("SQL_LAYER","oracle");
class sql_db
{
        var $db_connect_id;
        var $query_result;
        var $in_transaction = 0;
        var $row = array();
        var $rowset = array();
        var $num_queries = 0;
        var $last_query_text = "";

        //
        // Constructor
        //
        function sql_db($sqlserver, $sqluser, $sqlpassword, $database="", $persistency = true)
        {
                $this->persistency = $persistency;
                $this->user = $sqluser;
                $this->password = $sqlpassword;
                $this->server = $sqlserver;
                $this->dbname = $database;

                if($this->persistency)
                {
                        $this->db_connect_id = @OCIPLogon($this->user, $this->password, $this->server);
                }
                else
                {
                        $this->db_connect_id = @OCINLogon($this->user, $this->password, $this->server);
                }
                if($this->db_connect_id)
                {
                        return $this->db_connect_id;
                }
                else
                {
                        return false;
                }
```

```
        }

//
// Other base methods
//
function sql_close()
{
        if($this->db_connect_id)
        {
                // Commit outstanding transactions
                if($this->in_transaction)
                {
                        OCICommit($this->db_connect_id);
                }

                if($this->query_result)
                {
                        @OCIFreeStatement($this->query_result);
                }
                $result = @OCILogoff($this->db_connect_id);
                return $result;
        }
        else
        {
                return false;
        }
}

//
// Base query method
//
function sql_query($query = "", $transaction = FALSE)
{
        // Remove any pre-existing queries
        unset($this->query_result);

        // Put us in transaction mode because with Oracle as soon as you make a query you're in a transaction
        $this->in_transaction = TRUE;

        if($query != "")
        {
                $this->last_query = $query;
                $this->num_queries++;
                if(eregi("LIMIT", $query))
                {
                        preg_match("/^(.*)LIMIT ([0-9]+)[, ]*([0-9]+)*/s", $query, $limits);

                        $query = $limits[1];
                        if($limits[3])
                        {
                                $row_offset = $limits[2];
                                $num_rows = $limits[3];
                        }
                        else
                        {
                                $row_offset = 0;
                                $num_rows = $limits[2];
                        }
                }

                if(eregi("^(INSERT|UPDATE) ", $query))
                {
                        $query = preg_replace("/\\\/s", "''", $query);
                }

                $this->query_result = @OCIParse($this->db_connect_id, $query);
                $success = @OCIExecute($this->query_result, OCI_DEFAULT);
        }
        if($success)
        {
                if($transaction == END_TRANSACTION)
```

```
                        {
                                OCICommit($this->db_connect_id);
                                $this->in_transaction = FALSE;
                        }

                        unset($this->row[$this->query_result]);
                        unset($this->rowset[$this->query_result]);
                        $this->last_query_text[$this->query_result] = $query;

                        return $this->query_result;
                }
                else
                {
                        if($this->in_transaction)
                        {
                                OCIRollback($this->db_connect_id);
                        }
                        return false;
                }
        }

//
// Other query methods
//
function sql_numrows($query_id = 0)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                $result = @OCIFetchStatement($query_id, $this->rowset);
                // OCIFetchStatment kills our query result so we have to execute the statment again
                // if we ever want to use the query_id again.
                @OCIExecute($query_id, OCI_DEFAULT);
                return $result;
        }
        else
        {
                return false;
        }
}
function sql_affectedrows($query_id = 0)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                $result = @OCIRowCount($query_id);
                return $result;
        }
        else
        {
                return false;
        }
}
function sql_numfields($query_id = 0)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                $result = @OCINumCols($query_id);
                return $result;
        }
        else
```

```
                {
                        return false;
                }
}
function sql_fieldname($offset, $query_id = 0)
{
        // OCIColumnName.uses a 1 based array so we have to up the offset by 1 in here to maintain
        // full abstraction compatibitly
        $offset += 1;
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                $result = strtolower(@OCIColumnName($query_id, $offset));
                return $result;
        }
        else
        {
                return false;
        }
}
function sql_fieldtype($offset, $query_id = 0)
{
        // This situation is the same as fieldname
        $offset += 1;
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                $result = @OCIColumnType($query_id, $offset);
                return $result;
        }
        else
        {
                return false;
        }
}
function sql_fetchrow($query_id = 0, $debug = FALSE)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                $result_row = "";
                $result = @OCIFetchInto($query_id, $result_row, OCI_ASSOC+OCI_RETURN_NULLS);
                if($debug)
                {
                        echo "Query was: ".$this->last_query . "<br>";
                        echo "Result: $result<br>";
                        echo "Query ID: $query_id<br>";
                        echo "<pre>";
                        var_dump($result_row);
                        echo "</pre>";
                }
                if($result_row == "")
                {
                        return false;
                }

                for($i = 0; $i < count($result_row); $i++)
                {
                        list($key, $val) = each($result_row);
                        $return_arr[strtolower($key)] = $val;
                }
                $this->row[$query_id] = $return_arr;
```

```
                                return $this->row[$query_id];
                }
                else
                {
                                return false;
                }
        }
// This function probably isn't as efficant is it could be but any other way I do it
// I end up losing 1 row...
function sql_fetchrowset($query_id = 0)
{
                if(!$query_id)
                {
                                $query_id = $this->query_result;
                }
                if($query_id)
                {
                                $rows = @OCIFetchStatement($query_id, $results);
                                @OCIExecute($query_id, OCI_DEFAULT);
                                for($i = 0; $i < $rows; $i++)
                                {
                                                @OCIFetchInto($query_id, $tmp_result, OCI_ASSOC+OCI_RETURN_NULLS);

                                                for($j = 0; $j < count($tmp_result); $j++)
                                                {
                                                                list($key, $val) = each($tmp_result);
                                                                $return_arr[strtolower($key)] = $val;
                                                }
                                                $result[] = $return_arr;
                                }
                                return $result;
                }
                else
                {
                                return false;
                }
}
function sql_fetchfield($field, $rownum = -1, $query_id = 0)
{
                if(!$query_id)
                {
                                $query_id = $this->query_result;
                }
                if($query_id)
                {
                                if($rownum > -1)
                                {
                                                // Reset the internal rownum pointer.
                                                @OCIExecute($query_id, OCI_DEFAULT);
                                                for($i = 0; $i < $rownum; $i++)
                                                {
                                                                // Move the interal pointer to the row we want
                                                                @OCIFetch($query_id);
                                                }
                                                // Get the field data.
                                                $result = @OCIResult($query_id, strtoupper($field));
                                }
                                else
                                {
                                                // The internal pointer should be where we want it
                                                // so we just grab the field out of the current row.
                                                $result = @OCIResult($query_id, strtoupper($field));
                                }
                                return $result;
                }
                else
                {
                                return false;
                }
}
```

```
function sql_rowseek($rownum, $query_id = 0)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id)
        {
                @OCIExecute($query_id, OCI_DEFAULT);
                for($i = 0; $i < $rownum; $i++)
                {
                        @OCIFetch($query_id);
                }
                $result = @OCIFetch($query_id);
                return $result;
        }
        else
        {
                return false;
        }
}
function sql_nextid($query_id = 0)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id && $this->last_query_text[$query_id] != "")
        {
                if(   eregi("^(INSERT{1}|^INSERT   INTO{1})[[:space:]][\"]?([a-zA-Z0-9\_\-]+)[\"]?",   $this-
>last_query_text[$query_id], $tablename))
                {
                        $query = "SELECT ".$tablename[2]."_id_seq.currval FROM DUAL";
                        $stmt = @OCIParse($this->db_connect_id, $query);
                        @OCIExecute($stmt,OCI_DEFAULT );
                        $temp_result       =           @OCIFetchInto($stmt,         $temp_result,
OCI_ASSOC+OCI_RETURN_NULLS);
                        if($temp_result)
                        {
                                return $temp_result['CURRVAL'];
                        }
                        else
                        {
                                return false;
                        }
                }
                else
                {
                        return false;
                }
        }
        else
        {
                return false;
        }
}

function sql_nextid($query_id = 0)
{
        if(!$query_id)
        {
                $query_id = $this->query_result;
        }
        if($query_id && $this->last_query_text[$query_id] != "")
        {
                if(   eregi("^(INSERT{1}|^INSERT   INTO{1})[[:space:]][\"]?([a-zA-Z0-9\_\-]+)[\"]?",   $this-
>last_query_text[$query_id], $tablename))
                {
                        $query = "SELECT ".$tablename[2]."_id_seq.CURRVAL FROM DUAL";
                        $temp_q_id = @OCIParse($this->db_connect_id, $query);
                        @OCIExecute($temp_q_id, OCI_DEFAULT);
```

```
                                    @OCIFetchInto($temp_q_id, $temp_result, OCI_ASSOC+OCI_RETURN_NULLS);

                                    if($temp_result)
                                    {
                                            return $temp_result['CURRVAL'];
                                    }
                                    else
                                    {
                                            return false;
                                    }
                            }
                            else
                            {
                                    return false;
                            }
                    }
                    else
                    {
                            return false;
                    }
            }


        function sql_freeresult($query_id = 0)
        {
                if(!$query_id)
                {
                            $query_id = $this->query_result;
                }
                if($query_id)
                {
                            $result = @OCIFreeStatement($query_id);
                            return $result;
                }
                else
                {
                            return false;
                }
        }
        function sql_error($query_id = 0)
        {
                if(!$query_id)
                {
                        $query_id = $this->query_result;
                }
                $result = @OCIError($query_id);
                return $result;
        }
} // class sql_db

} // if ... define

?>
```

Sourcecode file: mysql4.php

```
<?php
/**********************************************************************
*                    mysql4.php
*                    -------------------
*   begin          : Saturday, Feb 13, 2001
*   copyright       : (C) 2001 The phpBB Group
*   email           : supportphpbb.com
*
*   $Id: mysql4.php,v 1.5 2002/04/02 21:13:47 the_systech Exp $
*
**********************************************************************/
```

```
/*****************************************************************
 *
 *  This program is free software; you can redistribute it and/or modify
 *  it under the terms of the GNU General Public License as published by
 *  the Free Software Foundation; either version 2 of the License, or
 *  (at your option) any later version.
 *
 *****************************************************************/

if(!defined("SQL_LAYER"))
{

define("SQL_LAYER","mysql4");

class sql_db
{

        var $db_connect_id;
        var $query_result;
        var $row = array();
        var $rowset = array();
        var $num_queries = 0;
        var $in_transaction = 0;

        //
        // Constructor
        //
        function sql_db($sqlserver, $sqluser, $sqlpassword, $database, $persistency = true)
        {
                $this->persistency = $persistency;
                $this->user = $sqluser;
                $this->password = $sqlpassword;
                $this->server = $sqlserver;
                $this->dbname = $database;

                $this->db_connect_id = ($this->persistency) ? mysql_pconnect($this->server, $this->user, $this->password) : mysql_connect($this->server, $this->user, $this->password);

                if( $this->db_connect_id )
                {
                        if( $database != "" )
                        {
                                $this->dbname = $database;
                                $dbselect = mysql_select_db($this->dbname);

                                if( !$dbselect )
                                {
                                        mysql_close($this->db_connect_id);
                                        $this->db_connect_id = $dbselect;
                                }
                        }

                        return $this->db_connect_id;
                }
                else
                {
                        return false;
                }
        }

        //
        // Other base methods
        //
        function sql_close()
        {
                if( $this->db_connect_id )
                {
                        //
                        // Commit any remaining transactions
                        //
                        if( $this->in_transaction )
```

```
                                {
                                        mysql_query("COMMIT", $this->db_connect_id);
                                }

                                return mysql_close($this->db_connect_id);
                        }
                        else
                        {
                                return false;
                        }
        }

        //
        // Base query method
        //
        function sql_query($query = "", $transaction = FALSE)
        {
                //
                // Remove any pre-existing queries
                //
                unset($this->query_result);

                if( $query != "" )
                {
                        $this->num_queries++;
                        if( $transaction == BEGIN_TRANSACTION && !$this->in_transaction )
                        {
                                $result = mysql_query("BEGIN", $this->db_connect_id);
                                if(!$result)
                                {
                                        return false;
                                }
                                $this->in_transaction = TRUE;
                        }

                        $this->query_result = mysql_query($query, $this->db_connect_id);
                }
                else
                {
                        if( $transaction == END_TRANSACTION && $this->in_transaction )
                        {
                                $result = mysql_query("COMMIT", $this->db_connect_id);
                        }
                }

                if( $this->query_result )
                {
                        unset($this->row[$this->query_result]);
                        unset($this->rowset[$this->query_result]);

                        if( $transaction == END_TRANSACTION && $this->in_transaction )
                        {
                                $this->in_transaction = FALSE;

                                if ( !mysql_query("COMMIT", $this->db_connect_id) )
                                {
                                        mysql_query("ROLLBACK", $this->db_connect_id);
                                        return false;
                                }
                        }

                        return $this->query_result;
                }
                else
                {
                        if( $this->in_transaction )
                        {
                                mysql_query("ROLLBACK", $this->db_connect_id);
                                $this->in_transaction = FALSE;
                        }
                        return false;
```

```
        }
}

//
// Other query methods
//
function sql_numrows($query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }

        return ( $query_id ) ? mysql_num_rows($query_id) : false;
}

function sql_affectedrows()
{
        return ( $this->db_connect_id ) ? mysql_affected_rows($this->db_connect_id) : false;
}

function sql_numfields($query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }

        return ( $query_id ) ? mysql_num_fields($query_id) : false;
}

function sql_fieldname($offset, $query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }

        return ( $query_id ) ? mysql_field_name($query_id, $offset) : false;
}

function sql_fieldtype($offset, $query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }

        return ( $query_id ) ? mysql_field_type($query_id, $offset) : false;
}

function sql_fetchrow($query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }

        if( $query_id )
        {
                $this->row[$query_id] = mysql_fetch_array($query_id, MYSQL_ASSOC);
                return $this->row[$query_id];
        }
        else
        {
                return false;
        }
}

function sql_fetchrowset($query_id = 0)
{
```

```
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }

        if( $query_id )
        {
                unset($this->rowset[$query_id]);
                unset($this->row[$query_id]);

                while($this->rowset[$query_id] = mysql_fetch_array($query_id, MYSQL_ASSOC))
                {
                        $result[] = $this->rowset[$query_id];
                }

                return $result;
        }
        else
        {
                return false;
        }
}

function sql_fetchfield($field, $rownum = -1, $query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }
        if( $query_id )
        {
                if( $rownum > -1 )
                {
                        $result = mysql_result($query_id, $rownum, $field);
                }
                else
                {
                        if( empty($this->row[$query_id]) && empty($this->rowset[$query_id]) )
                        {
                                if( $this->sql_fetchrow() )
                                {
                                        $result = $this->row[$query_id][$field];
                                }
                        }
                        else
                        {
                                if( $this->rowset[$query_id] )
                                {
                                        $result = $this->rowset[$query_id][$field];
                                }
                                else if( $this->row[$query_id] )
                                {
                                        $result = $this->row[$query_id][$field];
                                }
                        }
                }
                return $result;
        }
        else
        {
                return false;
        }
}

function sql_rowseek($rownum, $query_id = 0)
{
        if( !$query_id )
        {
                $query_id = $this->query_result;
        }
        return ( $query_id ) ? mysql_data_seek($query_id, $rownum) : false;
```

```
        }

        function sql_nextid()
        {
                return ( $this->db_connect_id ) ? mysql_insert_id($this->db_connect_id) : false;
        }

        function sql_freeresult($query_id = 0)
        {
                if( !$query_id )
                {
                        $query_id = $this->query_result;
                }
                if ( $query_id )
                {
                        unset($this->row[$query_id]);
                        unset($this->rowset[$query_id]);

                        mysql_free_result($query_id);
                        return true;
                }
                else
                {
                        return false;
                }
        }

        function sql_error()
        {
                $result['message'] = mysql_error($this->db_connect_id);
                $result['code'] = mysql_errno($this->db_connect_id);
                return $result;
        }
} // class sql_db
} // if ... define
?>
```
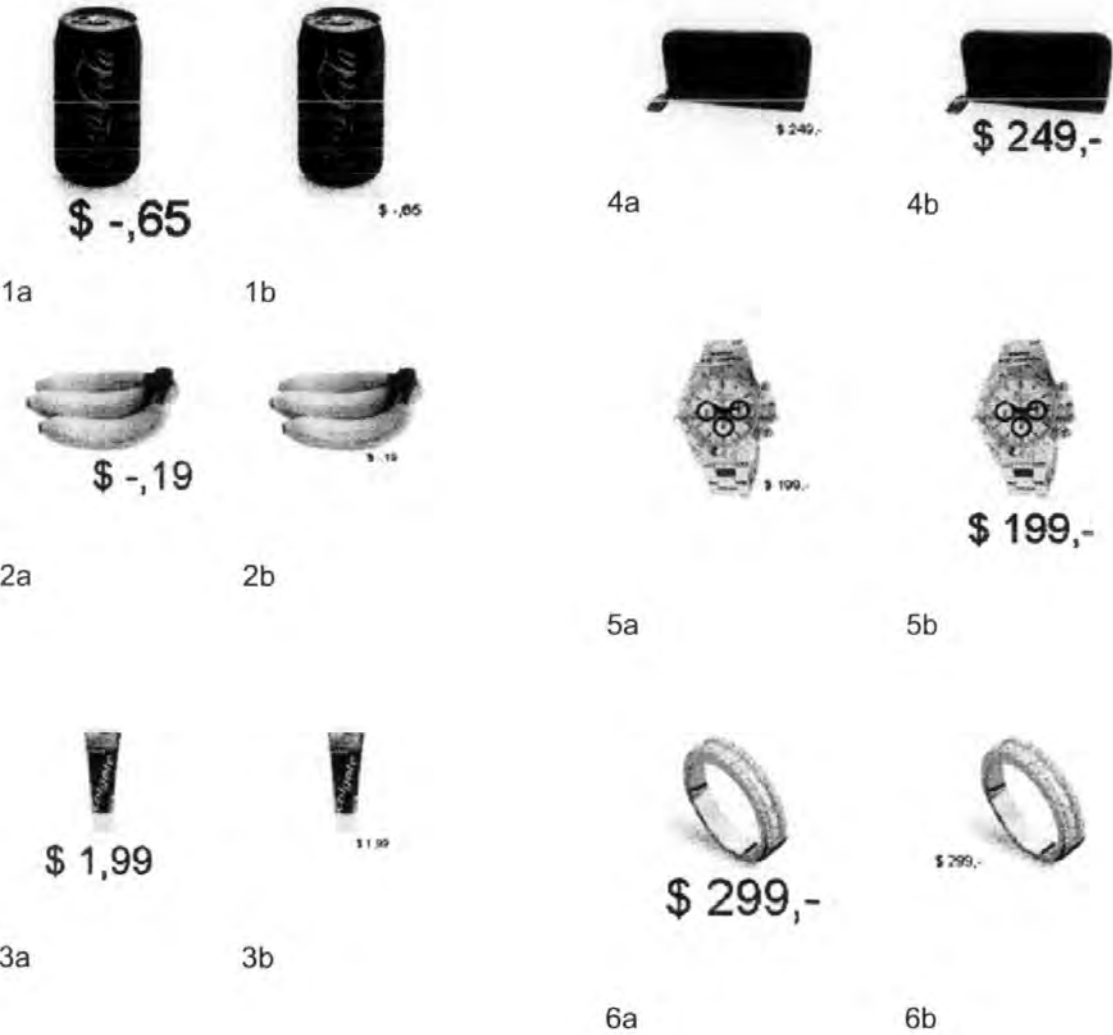
Appendix J – Images of consumer survey

This appendix illustrated the images provided in a small consumer survey regarding price positioning / focus in advertisement.

$ -,65

1a

$ -,65

1b

$ 240,-

4a

$ 249,-

4b

$ -,19

2a

$ -,19

2b

$ 199,-

5a

$ 199,-

5b

$ 1,99

3a

$ 1,99

3b

$ 299,-

6a

$ 299,-

6b

Appendix K – Analytic tools

This appendix is an external reference to a product comparison from Clicky in regards to analytic tools:

	Clicky	Google	StatCounter	SiteMeter	Woopra	W3counter	Mint
Customizable dashboard							
Powerful filtering and segmentation							
Developer API							
Twitter analytics							
Dedicated mobile and iPhone versions							
Goals and conversions							
Campaign tracking							
Real time goals, conversions, and campaigns							
Tracks Ajax and Flash events							
Juicy details about each individual visitor							
See every action by every visitor							
Compatible with secure (https) sites							
Track outbound links							
Track downloads							
Available in multiple languages							
Bounce rates							
Visitor organizations (e.g. Microsoft Corp)							
Visitor hostnames (e.g. comcast.net)							
Track custom data for every visitor (usernames, cookies, etc)							
Email reports							
IP tags							
IP filters							
Real time data							
Widgets to put on your web site							
Get your stats via RSS feeds							
View popular data in a TagCloud							
Aggregate (multi-day) view for all data							
Data export to CSV and XML							
Spy (a live view of your web site)							
Works with visitors who have disabled JavaScript							
White label as your own product							
Official WordPress plugin for easy integration with your blog							
FeedBurner RSS stats integration							
Google Maps integration							
Clean, modern interface							
Public statistics							
New features every week							
Free service							
Insanely affordable premium service		n/a				n/a	
Affiliate program to earn you cash or free premium service							

http://getclicky.com/#theotherguys

Appendix L – Script comparison

This appendix is an external reference to a comparison of Web programming languages / scripts:

Active Web Sites and Comparison of Scripting Languages

The tools and technology for building websites has come a long way since the first simple websites were built in the mid-1990s, with text-editors and a book about basic HTML. Abandoning brochure-like glossy websites, much of the industry has finally understood that, as we predicted, live content has become the standard by which sites are judged.

Live content websites inevitably have a database behind them and use some form of content generation to produce the HTML pages. There are numerous ways of doing this, including not ony proprietary specialist solutions but also general purpose programming and scripting tools.

We've had quite a lot of experience of developing with the various scripting languages and have frequently been asked to compare PHP versus ASP, Perl vs JSP, or any combination of these four, e.g. we are often asked for comparative evaluations from companies thinking about building our Perl training or our PHP training into their website development strategy.

We thought it might be useful to outline our findings in the paragraphs below. If time permits we'll expand this to include more, but for the moment here is our brief view of the strengths and weaknesses of the tools available, starting with

* PHP
* Perl
* ASP
* JSP

PHP
PHP – www.php.net is a remarkable success story. Starting as a simple scripting language for adding basic dynamic content to websites, it has grown to become one of the most used web programming languages into a major project. PHP is free for download and works very well on all of the Unix-like, Linux and Windows platforms. It is said to be the 4th most popular programming language. Since PHP pages work well on all of those platforms, a particular strength is that it can be used to develop websites on a desktop system and then deployed on industrial-strength and secure servers such as those found commonly only running Unix or Linux.

The hugely successful xampp bundle of Apache, MySQL, PHP and perl has helped the rapid uptake of PHP on platforms, helping to replace the notoriously insecure IIS server. Since none of Apache, MySQL or PHP requires any form of commercial licence and all are battle-proven on high volume websites, these are very attractive options for those who come from the world of highly-priced proprietary packages.

PHP has a thriving developer community, numerous contributors, a wide range of features (extensible through plug-ins) and is used in thousands of websites around the world. The range of back-end databases supported by PHP meets all but the most unusual need.

Language purists will point to some of the design choices in the implementation of PHP with some disdain – many indicating a preference for Perl – but PHP has proved itself easy to learn and tends to be particularly popular with those who have to deliver results rapidly and who aren't necessarily committed to taking advanced courses in programming and languages.

The world-leading Apache webserver is usually shipped with a built-in interpreter for PHP (a module called mod_php).

The PHP drawbacks that we have found are: the inability to insist that variables be declared before use; underdeveloped library mechanism (lacking Perl's true 'module' concept) and occasional linguistic quirks.

Its benefits are its ease of deployment, large number of programming libraries available from PHP (177 in May 2006), ease of use and huge body of support in the industry.

Perl
Perl – www.perl.com is one of the longest running and most successful free open-source projects. Embracing both a programming language and a whole philosophy of usage and design, Perl has quietly and without much hype, provided a better case-study of extensible and reusable software design than almost anything that has gone before it. It is very hard to find a computer system that hasn't some form of support for Perl available. Those who like to think of themselves as serious programmers, or programming language specialists, tend to speak in very high terms of the language.

An astonishing range of free extensions (modules) exist for Perl, by far outweighing the impact of Perl simply as a vehicle for expressing programs

The database-independent library for Perl (DBI) is simply one example; programs which take advantage of this are largely independent of the underlying database engine; which is hidden by database-specific drivers all working transparently throught the DBI interface.

The Perl interperter for Apache (mod_perl) was one of the first plugins for Apache to become widely used.

Whilst it is hard to find bad things to say about Perl, it probably presents a more daunting challenge for non-programmers who want to complete simple tasks with active websites, requiring rather more learning before starting than say ASP or PHP.

It is, however, likely to be one of the best choices in the long run, especially where a considerable volume of software development and site maintenance is required, i.e. for large, complex sites subject to many and radical changes.

ASP/VBscript

ASP – www.microsoft.com (Active Server Pages) is a rounded proprietary product from Microsoft. Although ASP is really a framework into which various languages can plug, most people consider it implies using VB Script language (java-script can also be used out-of-the-box). Regrettably, it is only properly supported on Microsoft's IIS platform thus ruling it out of contention for serious commercial users who care about security and reliability (IIS is, in most expert opinion, not fit for use outside an Intranet). If you are unfortunate enough to have an existing site developed in ASP the Chilisoft package may help to port it to a more suitable platform.

VB Script is a version of Visual Basic (without the visuals) and with features tailored to make it suitable for use for building websites on Microsoft platforms. As you would expect with a giant like Microsoft it has spawned a considerable sub-industry of bolt-ons and plugins, mostly attracting licensing fees.

Since ASP and VB Script are closed-source, any bugs or security advisories that are discovered linger at the whim of the Microsoft until they are fixed. One website we built discovered a severe (showstopping) bug in ASP / SQL Server 2000 which remained unfixed for more than six months and cost us two staff-months of wasted time trying to find workarounds. In the Perl or PHP worlds, it would have been quicker and cheaper for us to find the cause of the bug, fix it, submit it back to the maintainers and then carry on.

VB Script uses Active Data Objects and (typically) the ODBC interface to provide good database independence. It is an adequate programming language, but is liked even less than PHP by our purists. Simple websites are easy to build and there is a range of supporting tools to help beginners. Unfortunately, since it isn't really cross-platform we can't recommend it.

JSP

Java Server Pages (link to Jakarta project) is reminiscent in nature of the Microsoft ASP framework, but intended from the ground up for enthusiasts of Java, Enterprise Beans and the whole industry that has grown up around them. A detractor of the juggernaut might describe it as being for people with more money than sense but we try to remain agnostic.

Choosing to use the panoply of tools and techniques engrossed by this world is not a tactical or pragmatic choice of how to get something built but is likely to based more on a strategic perception of how you believe the industry will develop. If all you want is an active website with a database backend, this is going to be overkill unless you already have the range of skills in-house. Entrance to this world is a cultural conversion, not a choice of one simple programming language over another.

(http://training.gbdirect.co.uk/courses/php/comparison_php_versus_perl_vs_asp_jsp_vs_vbscript_web_scripting.html)

Appendix M – Initial Survey

As highlighted in section 1.2 the research followed an iterative approach. While the new framework was deducted from the overall principles of strategic management and marketing, a first model was evaluated in a survey. The descriptions below show the model and result of the initial survey.

The explorative survey conducted as part of the research targeted representatives of SMEs (profit organizations) to identify priorities of the different objectives in the past and future. Within a questionnaire distributed via email to 153 participants a part A was composed of three closed and three open questions. The three closed questions allowed the individual rating of importance for the three objectives. The 3 open questions allowed the participants to elaborate additional objectives of Internet marketing or alternative terminology. An explorative survey format was chosen as this part of the research primarily focused on the free conceptualization of a new comprehensive structure and not a statistical confirmation of an established approach. Based on 78 responses the following result was assessed in regards to prioritizing the objectives of Internet marketing:

	Now			Future		
Importance	Low	Med.	High	Low	Med.	High
Create awareness	0	16	62	0	7	71
Create desire	13	44	21	7	47	24
Generate transactions	14	48	16	3	31	44

Within the same survey the utilization of key performance indicators was assessed in part B. From the 153 contacted SMEs 78 responded on 12 closed and 3 open questions. The 12 closed questions allowed the choice to confirm the (current and future) utilization of the suggested KPIs. The three open questions enabled the participants to provide additional KPIs. Equivalently to the part A of the survey an explorative approach was chosen to enable the conceptualization – not confirmation – of the model. The result of the closed questions is illustrated in the table below:

	Now		Future	
Key Performance Indicators	Yes	No.	Yes	No
Measure the awareness				
Product and service spread	7	71	55	13
Exposed visitors	66	12	72	6
Distribution turn-around time	0	78	27	51
Channel effectiveness	5	73	23	55
Measure the desire				
Onsite duration	9	69	36	42

Convinced visitors / Conversion rate	56	22	73	5
Happy case click stream	3	75	29	49
Conversion turn around time	4	74	24	54
Measure the transactions				
Qualified transactions	55	23	75	3
Transaction channel	12	66	49	29
Transaction turn around time	19	59	72	6
Transaction target groups	2	76	53	25

The result of the initial survey illustrated a clear picture. The current focus was 'number of visitors', 'conversion ratio' and 'number of transactions'. Based on the opinion of the 78 participants the transparency in all area has to be raised. The highest focus lies on 'product and service spread', 'exposed visitors', 'conversion rate', 'qualified transactions', 'transaction channel', 'transaction turn-around time' and 'transaction target groups'. The overall result indicates that especially certain input (awareness) and output (transaction) factors are measured. Due to the limited consideration of the middle section (desire), the current environment included a major black box. Based on the current measurement pattern very little information can be generated how to increase the number and return out of transactions. The survey therefore confirms the necessity of using a more comprehensive measurement system for the Internet marketing strategy as illustrated within this chapter.

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