Global Delivery of a Knowledge-Intensive Business Service

Strategy for a Remote Sales and Marketing Implementation

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Arne Schmidt

University of Twente

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Instructor: Professor Dr Carla C.J.M. Millar

Abstract

The market demand for knowledge-intensive business services rises on a global scale while customers demand more for less. Suppliers therefore have to go global as well and face new potential customers in not yet before experienced national environments. The purpose of this thesis is to show how suppliers can capitalize on transactional relationships with new customers to keep costs for both parties low while simultaneously coping with the challenges of a knowledge asymmetry between customers and suppliers and the need for a trustworthy relationship between both parties. Central stays a marketing approach via the internet and a strategy based on consistent processes and outcomes and the symbolic value of gift giving of information. It will be shown that information has to be measurable, should be customer-specific and directly applicable by the customer in its own environment to be regarded as valuable knowledge by the customer. Warranties and certifications provided by the supplier and/or a trustworthy third party are useful to increase the value of information for customers. A combination of standardization and customization in regard to the service and its marketing is decisive in the task of keeping costs low while simultaneously being meaningful to the customer. Promising geographical markets are low context countries with loose cultures. Organizations that follow a prospector-like strategy will be shown to be the most valuable target group at the beginning of a market launch of a knowledge-intensive business service. Thereby the in scholarly literature agreed on importance of interpersonal relationships in marketing and sales of knowledge-intensive business services will be questioned. The author undertook a literature review conform the Grounded Theory method and developed on basis of the insights an innovative web-based instantiation, validated by expert reviews. The instantiation is tailored to a specific supplier, to underline its practical impact on the challenges under study. The thesis addresses scholars as well as practitioners. To support both parties in selective reading the thesis is split up in a theoretical and a practical part. By developing innovative ways to establish customer trust on a remote basis the author hopes to contribute to the content of the knowledge base for further research and practice.

Keywords: kibs, b2b iim, international marketing, trust, knowledge asymmetry, freemium

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B2B	business-to-business
B2B IIM	business-to-business international internet marketing
C-KIBS(s)	computer and software-related knowledge-intensive-business-service(s)
CSF(s)	critical success factor(s)
HC	high context
IM	internet marketing
KIBS(s)	knowledge-intensive business service(s)
KISA(s)	knowledge-intensive service activity/ies
LC	low context
MoP	Management of Portfolios
MSP	Managing Successful Programmes
OECD	Organisation for Economic Co-operation and Development
OGC	Office of Government Commerce
P3M	Project, Programme, and Portfolio Management
P3O	Portfolio, Programme and Project Offices
SEM	Search Engine Marketing

1. Global Delivery of a Knowledge-Intensive Business Service – Strategy for a Remote Sales & Marketing Implementation

The purpose of this study is to explore the possibilities for a software developer to market and sell a cloud application internationally without performing face-to-face communication with the buying organizations.

The cloud application is a portfolio management software solution. The software bases heavily on portfolio management knowledge of the supplier while its impact on the customer's performance is hard to predict by the customer prior to installation.

The rationale for the study is that there is much scholarly literature about e.g. international business-to-business (B2B) marketing and selling and also a growing contingent of literature that focusses on the impact of different forms of communication (inter alia the possibility to dispense face-to-face communication between customers and suppliers). But a lack of connection to *real life circumstances* can be noticed mostly in these publications. For example, the importance of references, referrals and reputation for generating new customers are beyond all question but what does this mean for a supplier that did not yet generate any reference cases or his reference cases have a low impact on the prospect e.g. due to geographical, national or cultural distance between the reference case and the prospect? Does this mean internationalization or globalization is reserved for this kind of suppliers that already have reference cases with an international impact, e.g. due to the international recognized reputation of the customer? This is only an example but shows well the importance and necessity of connecting scholarly knowledge to specific real life circumstances, which is done in this study in regard to the environmental circumstances of the before mentioned software developer.

The computer and software-related service providers operating in a (B2B) context face two major challenges currently. First of all, due the recession in the first ten years of the 21st century and the financial crisis in 2008/2009 B2B suppliers have to look for possibilities to raise the efficiency of their sales activities by improving the existing sales channels or searching for new sales channels. (Davie, Stephenson, & Uster, 2010, p. 2) Secondly, as portfolio management software is a knowledge-intensive business service (KIBS), suppliers face the challenge of creating a trustworthy environment because of the knowledge asymmetry between the customers and suppliers (I. Miles, 2003). In the context of this research the creation of trust is challenged even more as the impersonal approach to marketing and sales and the international focus intensifies uncertainty between customer and supplier (A. Agarwal & Shankar, 2003; Furnell & Karweni, 1999). The financial crisis also

seems to call standardization of KIBS outputs into question (Millar & Choi, 2011, p. 3) which is important in regard to the investment structure for international marketing and sales strategies.

This thesis addresses decision makers of computer and software-related service providers operating in a B2B context and scholars similarly but not simultaneously. The thesis will start with a theory/literature review in which not only the status quo in KIBS related research is investigated critically but also other research areas are incorporated. The current practice in KIBS research, where mostly one or two concepts are in depth investigated (e.g. trust and customer-supplier relationships) while it is left to the KIBS practitioner to evaluate by himself which other aspects of his sales and marketing strategy should be adapted and transformed into his environment to generate new business, are challenged. Furthermore the need for adjustment of certain 'traditional' scholarly gained and accepted insights will be stressed in regard to the opportunities and threats of the 21st century. Eventually this part of the thesis addresses primarily scholars. Additionally this thesis will finish with recommendations for future research.

In the second part of this thesis, the development of an instantiation will be described that demonstrates how a careful observation of an individual company's environment with the help of scholarly insights and *creative thinking* can establish or improve international sales and marketing of knowledge-intensive business services. In this part, primarily decision makers of computer and software-related service providers are the target audience. Therefore not only one or two implications of KIBS will be discussed but a marketing strategy developed that incorporates KIBS, globalization, and international marketing. For example, this thesis will show how to overcome the knowledge asymmetry between the customer and supplier of KIBS in the international market to create and govern trust between both parties. All three aspects are of great interest in today's economy but so far no study incorporated all three concepts and applied it to an existing business case – to the best of the author's knowledge.

The study is guided by a pragmatic worldview (Creswell, 2009, pp. 10-11). The focus lies on the problem under study and incorporates different strategies of inquiry to understand and eventually solve the problem.

Two research questions are investigated in this thesis to solve the problem for the research sponsor.

- *How can knowledge-intensive-business-service providers perform remote sales and marketing activities on a global scale?*
- *What are possible marketing and sales practices and techniques available to KIBS providers that are aligned with the identified circumstances, opportunities, and obstacles which affect the applicability of remote communication between a C-KIBS supplier and a customer in a global context?*

To answer the first research question an extensive and systematic narrative literature review (Shadish, Cook, & Campbell, 2002, pp. 422-425) will be done, guided by the framework of Wolfswinkel, Furtmueller, and Wilderom (2011). The result will be a list of aspects/an inventory of mechanisms and activities where things must go right when a KIBS supplier wants to globalize. Examples are the need for building trust on the customer's side or cultural and national adaptation of marketing and sales activities. The aim is to reveal a general direction of the numerous study results instead of a real quantitative synthesis of study results. The answer of this research question is narrowed down to KIBS suppliers but not yet down to the specific circumstances of the specific research sponsor.

For answering the second research question the inventoried mechanisms and activities will be investigated more detailed and *adapted* to the research sponsor's own capacities and certain contingencies. This combination of the appropriate marketing and sales channels, activities and to be considered mechanisms that aim at inducing customer purchases in a situation where customer and supplier are unknown to each other, will be transformed into several hypotheses that guide the development of an artefact – a mock-up. This mock-up is finally reviewed by certain experts and based on this feedback an instantiation – a fully functional prototype application – will be presented. In the way that the sponsor's own capacities and certain contingencies frame the artefact, a resource based view is applied that establishes the feasibility of the artefact.

During the investigation and answer of these questions the study will create a funnel, during which the level of abstraction is continually reduced until finally a directly applicable marketing and sales strategy for the research sponsor is derived.

There is a strong focus on applicable solutions, hence incorporating real world contingencies that shape the suitability of the study results. Thereby it should be acknowledged that the study aims at the creation of a solution that works at the time. The pragmatism is also underlined by the fact that the study looks "(…) to the *what* and *how* to

research, based on the intended consequences (…)" (Creswell, 2009, p. 11). In light of the multiplicity of the pragmatism (Creswell, 2009, p. 11) the study also incorporates a postpositivist worldview as it reduced the problem into a small and discrete set of research questions and follows a process of theory identification, data collection, making revisions and making additional tests for verification.

The research sponsor desires to perform a primarily standardized marketing approach or rather only invest marginally in local adaptation to reduce the resource investment as well as the time-to-market. Thus, the research is delimited to standardizable solutions or solutions than can be adapted to different national and cultural regions with little effort. Eventually literature that tackled successful international marketing models with e.g. a local sales force was not included. Furthermore, as the sponsor's service is of primary interest for organizations handling complex and cost-intensive value chains on a project basis, another delimitation is the research focus on countries with developed industries. While in other research areas, like for example business-to-business international internet marketing (B2B IIM), often the complete sales and marketing process is investigated, this thesis focusses on the induction of sales in customer-supplier pre-relationship stages. The focus on the induction of sales in situations where customers and suppliers did not have any contact yet is because this situation is the most common in global expansions and forms the biggest challenge to the supplier. The author also focused rather on aspects that are specific to the marketing and selling of a KIBS than on techniques that have a general meaning in the marketing and sales concept like e.g. market segmentation or target group definition.

In the theory/literature review of the thesis the first research question (*How can knowledge-intensive-business-service providers perform remote sales and marketing activities on a global scale?*) will be answered in complete. The second research question (*What are possible marketing and sales practices and techniques available to KIBS providers that are aligned with the identified circumstances, opportunities, and obstacles which affect the applicability of remote communication between a C-KIBS supplier and a customer in a global context?*) will be answered in part, whereat the application to the real world is done by means of the development of an instantiation. The aim is to develop an inventory of factors the KIBS supplier has to account for to generate business internationally via remote communication and transaction and to apply these insights to real word contingencies.

The structure of the theory/literature review is as follows; first of all the author will shed light generally on current opportunities, challenges, and necessities for suppliers operating in a B2B environment and more specific in a KIBS environment. After a definition

of KIBSs[1] the author investigates the concepts of knowledge asymmetry and eventually trust between KIBS suppliers and customers. Trust-building mechanisms will be defined and its adaptability in a global context investigated. Finally the suitability and opportunities for the abdication of interpersonal relationships between suppliers and customers will be shown.

2. The Research Sponsor

Fortes Solutions BV (Fortes) is a developer of project, programme, and portfolio management (P3M) software. Its goal is to reduce customer project processing time and project risks by knowledge management support and eventually to reduce customer project costs.

Fortes was founded in 2000 and employs around 40 people. Fortes' headquarter is in Enschede, Netherlands and has a sales office in Amersfoort, Netherlands.

Customers of the Principal Toolbox are inter alia ING Groep N.V., TomTom or the Dutch 'voorziening tot samenwerking Politie Nederland' and Ministry of Defence. Fortes was several times gripped in the list of the 50 fastest growing technology organization of the Benelux.

Fortes' portfolio consists currently of one software solution – the Principal Toolbox – that is continually updated and adapted based on user experiences and input. Furthermore the software is periodically enriched with additional functionalities. The Principal Toolbox compromises best management practices from the P3M world like Portfolio, Programme and Project Offices (P3O) or Six Sigma and relies on established P3M methodologies, like PRINCE2, Scrum, and Managing Successful Programmes (MSP). But the software can also be customized completely to the customers own methodologies and management practices. Indeed the Principal Toolbox is in every transaction adapted to the customer's organization to a certain extent. The target markets are The Netherlands, Germany, France, United Kingdom, and Australia.

Fortes develops currently a new software tool – the MoP Toolbox (working title) – that focuses primarily on portfolio management conform to the Management of Portfolios (MoP) methodology and practice, designed by the Office of Government Commerce (OGC). In comparison to the Principal Toolbox, the MoP Toolbox is an out of the box service and planned to run primarily as Vanilla software installation, hence it is a standardized software system (M. L. Nielsen & Newman, 2008, p. 1). The MoP Toolbox will be marketed

[1] In this thesis when the term KIBS(s) stands alone, the author refers to the service(s) under question.

internationally in all suitable countries. Answering the question for which countries this will be, is inter alia part of this thesis.

The MoP Toolbox has two distinctive features. Firstly it is currently the only marketed software service that focusses on portfolio management on basis of best practices and a common methodology. Thus it can be classified as a 'new-to-the-world' service. (Trott, 2008, p. 399) Secondly, the MoP Toolbox integrates smoothly with the customers' established software configuration. Thereby the customer can keep working with his known tools and use the MoP Toolbox primarily for Portfolio Management-specific functions. The advantage of this approach is that the threat of constrained or stereotypical work behaviour (Hayward, 2000 cited according to Markus, Majchrzak, & Gasser, 2002, p. 185) after the MoP Toolbox implementation of users can be avoided and 'junk computing' (Guthrie & Gray, 1996, p. 23) – managing the tool instead of working with it – can be reduced. Furthermore a simple and fast integration with established tools raises the users' willingness to use the tool. (Markus & Keil, 1994)

New customers for the Principal Toolbox are primarily generated through referrals and seminars and the sales process is based on interpersonal contact between Fortes' sales reps and the prospect. The implementation of the software in the customer's organization takes place during workshops and trainings with the users while Fortes' implementation consultants match the customer's management processes with the process governance in the Principal Toolbox. This means that the implementation consultant inventories together with the customer the customer's organizational processes and eventually the customer's processes are implemented in the Principal Toolbox.

Mostly the inventory of the customers' desires and a draft of how these desires will be met later by the customized service are done before the sales contract is signed. Hence it is a highly personalized approach with a considerable adoption of resources by the supplier, already before the sales contract is signed.

In contrast to this resource-intensive approach, the new MoP Toolbox will be marketed, sold and implemented via remote techniques to avoid considerable investment of the supplier's resources in interpersonal contact and worldwide local sales forces.

To do so, the author inventoried the main attention points for C-KIBS suppliers that want to go global via remote communication. The goal was to build a bridge between theory and practice by investigating practices (conform to the main attention points) for remote marketing, sales, and implementation of software solutions and applying these practices to a real life business case – the research sponsor Fortes Solutions BV.

3. Research Design & Method

The advantages of a narrative literature review are inter alia the thick description of study results and the theory development with qualitative categories. (Shadish, et al., 2002, pp. 423-424) As method of the literature review Grounded Theory is used (Glaser & Strauss, 1967) that is to date mostly applied to observational and interview data (Wolfswinkel, et al., 2011, p. 2). This method enhances the solid, rigorous, and theoretical review of literature (Wolfswinkel, et al., 2011, p. 1) to develop alternatives (de Jong, 2010, p. 749) and getting the most out of already researched data from the best of science before starting to collect new data. Thereby a 'reinventing the wheel' story can be avoided and already Glaser and Strauss implied that "(…) it is more desirable and usually necessary, to start the formal theory from a substantive one." (1967, p. 79)

Basic activities of Grounded Theory are theoretical sampling (Suddaby, 2006, p. 634) and the simultaneously performed data collection and comparison (analysis) (Wolfswinkel, et al., 2011, p. 2). These activities are performed in a framework of open, axial, and selective coding (Strauss & Corbin, 1990) that represents a logical guideline "(…) to grouping and representing the key concepts (…)" (Webster & Watson, 2002, p. 17). During these activities recognized occurrences that have importance for the research topic are coded and eventually these codes will be checked on relations (open coding). (Wolfswinkel, et al., 2011, p. 2) Similar codes are conceptualized and these 'concepts' are grouped in interrelated 'categories' (axial coding) (Wolfswinkel, et al., 2011, p. 2) which provided inter alia the basis for the main section headings in this paper. 'Theoretical sampling' assures that concepts are comparable and valid. (Wolfswinkel, et al., 2011, p. 2) As links between new developed categories are still ungrounded, these proposed links have to be hypothesized (Strauss & Corbin, 1990) to be testable against data and eventually form the theoretical framework (Wolfswinkel, et al., 2011, p. 3). Selective coding combines all categories to get one 'core category' that represents the topic under study. (Strauss & Corbin, 1990) As data collection and comparison takes place simultaneously and iterative "(…) great precision and consistency (…)"(Wolfswinkel, et al., 2011, p. 2) is critical and can be assured by a rigorous process for reviewing the literature.

A big advantage of the iterative and simultaneous process is that "(…) the subjective influence of the researcher in the creation of concepts (…)" (Wolfswinkel, et al., 2011, p. 4) is reduced as concepts emerge during the inquiry. Thereby the depth of analysis and its reliability is considerable high and derived ideas and theories are rigorously testable. (Wolfswinkel, et al., 2011, p. 4) However, one should note that a literature review will never be complete in the sense of covering all meaningful literature and concepts. Rather the goal of

the review is to derive a convincing and testable framework (Wolfswinkel, et al., 2011, p. 3) that advances knowledge (Webster & Watson, 2002).

The Grounded Theory literature-review method is performed in three phases consisting of 18 steps conform to the framework of Wolfswinkel et al. (2011, p. 4). In the first phase a relevant dataset of research papers is created. In the second phase qualitative research based on Grounded Theory is applied to the dataset of papers. Finally the third phase covers the written presentation of the review of the findings. The Grounded Theory literature-review method is displayed in Table 1.

Table 1: An 18-step Grounded-Theory Method for Producing a Rigorous Literature Review (Wolfswinkel, et al., 2011, p. 4)

Number	Task
1. SEARCH AND SELECT (sequential and partially iterative)	
1.1	Define scope (including criteria for inclusion)
1.2	Identify fields of research
1.3	Find corresponding databases/outlets
1.4	Define search terms
1.5	Search
1.6	Filter out doubles
1.7	Cut down sample based on title + abstract
1.8	Cut down sample based on full text
1.9	Forward and backward citations
1.10	Verify final dataset
2. READ AND THINK (intertwined)	
2.1	Open coding
2.2	Axial coding
2.3	Comparative analysis
2.4	Theory building
3. SHOW AND TELL (parallel)	
3.1	What is relevant?
3.2	Why is it relevant?
3.3	How to represent/structure it?
3.4	How to structure the article (layout etc.)?

The scope of the literature review was standardized marketing and selling of a knowledge-intensive business service remotely with a global focus. The main problem this thesis copes with is how to create trust between yourself as a KIBS supplier and the customer (trust in the service, the supplier, the industry etc.) under circumstances that are supposed to complicate the building of a trustworthy environment:

- geographical and cultural distance;
- knowledge asymmetry between customer and supplier;
- no face-to-face interaction between customer and supplier;
- standardized (little personalized) communication;
- customer's currently non-awareness of the supplier.

Following general research areas were initially tackled during the literature review:

1. Customer-supplier relationships in the KIBS industry
2. Importance of trust with business/corporate customers in KIBS relationships
3. Remote B2B sales and marketing strategies, techniques, and channels in general and in a global context
4. Digital B2B sales and marketing strategies, techniques, and channels in general and in a global context

The more narrowed focus on the medium internet was due to the fact that it is the most complex communication channel as it offers reams of possibilities for marketing and sales activities; for example network marketing (Samiee, 2008), relationship marketing (Schumann, Wangenheim, & Stringfellow, 2010), display advertising, video marketing, freemiums (Jagpal & Spiegel, 2010) etc.

As this thesis incorporates several topics a broad range of search terms was used for the inquiry in scientific and practical literature about B2B sales and marketing, international sales and marketing, and KIBS providers. This general literature fields were used to uncover specific appropriate disciplines (Wolfswinkel, et al., 2011, p. 5) that were eventually tackled with a new set of keywords.

The literature identification was initially done via the use of the following databases:

- Google Scholar
- ISI Web of Knowledge
- McKinsey Quarterly

The keywords in Table 2 were initially used, displayed per subject. Some keywords were only used on the website of McKinsey Quarterly because they were too broad as efficient search term for the databases Google Scholar and ISI Web of Knowledge. If this was the case behind the keyword “(McKinsey)” is displayed.

Table 2: List of keywords used for literature search

Subject	Keywords
B2B sales and marketing internationally	• b2b (McKinsey) • b2b marketing international • global b2b marketing • cross cultural marketing • cross cultural marketing business to business • cross cultural marketing B2B • intercultural marketing • intercultural marketing B2B • intercultural marketing business to business • intercultural advertising • intercultural advertising business to business • intercultural advertising B2B • cross cultural advertising • cross cultural advertising business to business • cross cultural advertising B2B • International advertising • international advertising B2B • International advertising business to business • international business to business marketing • international business to business advertising
Digital marketing	• internet marketing (McKinsey) • global digital marketing • digital marketing • b2b websites • b2b internet marketing • business to business websites • business to business internet marketing
Remote B2B sales and marketing	• remote b2b marketing • remote b2b sales • remote business to business marketing • remote business to business sales
KIBS	• kibs • knowledge intensive business services • marketing of KIBS • marketing of knowledge intensive business services • sales knowledge intensive business services • sales KIBS

Due to the limited options for tailoring the search in Google Scholar (during the writing of this paper there was no possibility to limit the search only on the title AND the abstract of particular research papers), broader search terms like ‘intercultural marketing’ were used in parallel with more narrow search terms like ‘intercultural marketing B2B’. With this procedure the probability that the established literature pool is reliable and valid in regard

to its completeness is increased without the necessity to look through search results consisting of hundreds of thousands of results.

For the subjects ‘B2B sales and marketing internationally’, ‘remote B2B sales and marketing’, and ‘KIBS’, publications of the 21st century were selected.

For the literature identified during the ‘digital marketing’ subject no research papers older than 2005 were selected. This is due to the very fast evolution of the internet in regard to its possibilities for marketing and selling online as well as the rising acceptance of the internet as serious channel for doing business. Certain standards of 2005 are outdated today. One might remember in this context the forecast of the success and growing impact of B2B e-marketplaces for B2B sales success in the 21st century. Today most of these marketplaces are lost.

However the list of literature also included some studies that were published before 2001, mostly in regard to definitions of some concepts. These studies were selected because they contain widely acknowledged and accepted[2] definitions (e.g. for the term ‘KIBS’) and/or are still regarded as state-of-the-art in their field. Most of these papers were identified through cross references in the selected studies.

In the first run papers were selected on basis of their titles and its year of publication. In a second run the relevance of the potential papers was further investigated on basis of their abstracts. This resulted in n=243 papers. In a third run the selection was further narrowed down on basis of the timeliness, the publisher’s acknowledgement by the academic field and the introduction and conclusion of each paper, resulting in n=178 papers. In a fourth run the list of literature was further cut down based on a rough overview of the full text, resulting in n=69 papers.

Due to the ‘emerging nature’ of the Grounded Theory method for literature review, several specific appropriate disciplines were identified and additional databases and search terms were used. Also forward and backward citations lead to an increased number of papers and an enriched quality of the literature sample. Forward and backward citations were used until no more relevant articles appeared (similar to constant comparison principle). (Wolfswinkel, et al., 2011, p. 5) These specific disciplines and the associated keywords are displayed in Table 3.

[2] ‘Widely acknowledged and accepted’ refers to the number of cross-references.

Table 3: Emerging disciplines and keywords

Disciplines	Keywords
References	• references b2b • references business to business • references buyer supplier • references customer supplier • references international relationships • references cross cultural • references intercultural • references global relationships
Referrals	• referrals b2b • referrals business to business • referrals buyer supplier • referrals customer supplier • referrals international relationships • referrals cross cultural • referrals intercultural • referrals global relationships
Reputation	• reputation b2b • reputation business to business • reputation buyer supplier • reputation customer supplier • reputation international relationships • reputation cross cultural • reputation intercultural • reputation global relationships
Freemium	• gift-giving b2b • gift-giving business to business • gift-giving buyer supplier • gift-giving customer supplier • gift-giving international relationships • gift-giving cross cultural • gift-giving intercultural • gift-giving global relationships • freemium
Design methodology	• Web-based research • Web-based experiment • Internet-based research • Internet-based experiment • Online experiment • Design methodology • Design methodology software development • Design theory • Design theory software development • Mock-up test • Mockup test • Mock-up experiment

Disciplines	**Keywords**
	• Mockup experiment • software mockup experiment • software mock-up experiment • web-based prototype testing • software prototype experiment
Service utilization	• Customer support software use • Customer support software utilization • Customer support service use • Customer support service utilization • support software use • support software utilization • support service use • support service utilization

For the instantiation development design additionally MIS journals (Info Sys Res and European J of IS) were used next to Google Scholar. Specifically research papers of Lynne Markus and Alan Hevner were selected upon the recommendation of a study advisor which is familiar with design methodologies.

Due to this emerging disciplines the dataset of papers grew on n=91 papers. After a cut down of the added papers conform the above described steps the final dataset consisted of n=80 papers and 8 scholarly books. Most of the used books picked up methodological issues in doing research as central theme. The only exception was the book of Chris Anderson (2009) about the freemium model.

As “It is important (…) to document every choice that was made; what and how many articles were found, the name of sources, and search terms used (…)” (Wolfswinkel, et al., 2011, p. 5) due to necessary iteration and refinement, an own database of articles was handled with following column titles:

- Paper title
- Abstract
- Usable for (reason for selection)
- Year
- Author
- Journal
- Search term

The listing was done concept-centric (Webster & Watson, 2002) whereat the usability was ranked on basis of the *degree of fit* with the research topic and the number of coevally incorporated disciplines in one paper. The use of papers that already linked certain disciplines

next to papers that focused primarily on one element was valuable to get a valid basis for further hypothesized links between different concepts and categories.

This overall conservative and structured search strategy is essential when dealing with vaguely or differently defined phenomena like ‘KIBS’ or ‘globalization’ to delineate the core idea and its boundaries by looking only for concepts that include closely related phenomena. (Salminen & Möller, 2006, p. 5)

In the second phase the literature dataset was analysed detailed to minimize biases in sampling, data collection and code saturation, resulting in more comprehensive data and more precise and rigorous data analysis in comparison to loosely or subjectively ways of reviewing the literature. (Wolfswinkel, et al., 2011, p. 6) The selective coding process had already taken place as the core category was defined by the research topic and the review scope. . (Wolfswinkel, et al., 2011, p. 6) Thus in this phase open and axial coding took place.

During open coding reviewed studies were decomposed (Wolfswinkel, et al., 2011, p. 6) and labels and concepts were developed and formed the subheadings of this paper, like e.g. intangibles in KIBS relationships, the necessary combination of standardization and customization, tight/loose cultures, trust in different entities, gift-giving etc. In a second step these concepts were categorized and formed the main sections of this theory/literature review: KIBS, knowledge asymmetries, the importance of trust generally and in a global context, trust-building mechanisms, and e-commerce. Open and axial coding was conducted in parallel as they are intertwined and on basis of constant comparative analysis. (Wolfswinkel, et al., 2011, p. 7) During this procedure gained new insights did not only lead to an enrichment of the database but also to the necessity of revisiting before read articles with a new focus.

In a third step conceptual interrelations were tested against the literature (e.g. the interrelation between the concepts high/low context countries and loose/tight cultures by the comparison of countries). The interrelations were displayed in two contingency models in the conclusion section of the theory/literature review and provided one part of the basis and guideline for the instantiation development process to answer the second research question.

Although the primary goal of this paper was not the creation of a new theory it questions at certain points existing theories, like e.g. the widely accepted inalienability of personal communication between customer and supplier in the context of marketing and selling KIBSs but also enriches for this reason certain research papers like the ones of Iyer et al. (2006) or Sichtmann and von Selasinsky (2010). Justification was inter alia gained by splitting the category of KIBS up in certain concepts (customization, complexity etc.) and transforming these concepts to other research fields.

In a fourth step discovered gaps in knowledge like new interrelations were hypothesized and set into a design framework, which was the second part of the basis for the instantiation development process. Furthermore, this design framework facilitated future research exploration.

4. Theory/Literature Review

4.1. B2B Suppliers of Knowledge-Intensive Business Services & the Market Challenges of the 21st Century

A main evolution that can be recognized during the last 10 years in the B2B environment and that speeded up especially in the last two/three years due to the recession is that customers demand more from products and services in regard to performance while they "(…) increasingly want simple, fast, and inexpensive transactions (…)" (Davie, et al., 2010, p. 2). Additionally B2B customers still desire personalized treatment by the suppliers. (Håkansson & Snehota, 2001, p. 40)

Hence B2B organizations face diverse challenges. They need to focus on the efficiency of their sales channels and/or should use new transaction channels. (Davie, et al., 2010, p. 2) Also due to the growing complexity of the services, B2B suppliers have to spend more energy to reduce service information on the aspect B2B customers are really interested in: how the service will improve the customers' businesses. (Boaz, Murnane, & Nuffer, 2010, p. 2)

The economic downturn makes it necessary to convey remote interactions, previously mainly used for efficient servicing of smaller customers, also to servicing larger accounts. (Davie, et al., 2010, p. 3) Fortunately customers' acceptance of remote and distant communication with suppliers is rising (Davie, et al., 2010, p. 3), opening up new opportunities for suppliers. On the one hand sales reps can invest more time in the active communication and long-term relationships with B2B customers in order to retain customers (Reed, Story, & Saker, 2004, p. 504) while on the other hand still being able to invest additional time in face-to-face communication where it is necessary.

Overall while the recession changed some B2B paradigms considerably, the economic upturn makes it possible to use the new paradigms as opportunity and shifting away "(…) from focusing on survival to identifying areas where they should invest time and energy to position themselves for long-term success." (Davie, et al., 2010, p. 4) Although B2B suppliers face new challenges, companies still have to prove themselves in regard to the traditional key

marketing activities (David Ford, 2002; Reed, et al., 2004, pp. 504-507) like e.g. identification of market segments, focus on competitors, managing the supply chain for customer value as "(…) customers actually want a demonstration of the supply chain in full working order eliminating waste (…)" (Reed, et al., 2004, p. 507), or supporting the brand by advertising, promotion, events and market communications.

B2B suppliers of KIBSs face additional challenges that revolve around the knowledge asymmetry between themselves and the customer as well as the need to create trust at the customer's side. After an introduction and delimitation of the KIBS concept these challenges will be investigated in detail.

Knowledge-intensive business services (KIBS) were first explored by Miles et al. (1995, p. 18).

In the literature different definitions of KIBS can be found. (Millar & Choi, 2011, p. 24) In this paper KIBS will be defined as "Private companies or organizations that rely heavily on professional knowledge, i.e. knowledge or expertise related to a specific (technical) discipline or (technical) functional domain to supply intermediate products and services that are knowledge based" (Den Hertog, 2000, p. 505).

Knowledge is crucial for innovation and KIBSs are "(…) simultaneously facilitators, carriers and sources of innovation." (Rajala, Westerlund, Rajala, & Leminen, 2008, p. 275) In general the knowledge intensity of a product or service differs but its characteristics are always solving specific and usually unique problems in an environment of close relationships with customers. (Muller and Zenker 2001) Knowledge-intensiveness refers to how knowledge is produced and delivered rather than the amount or extent of knowledge. (Rajala, et al., 2008, p. 275) The here investigated C-KIBS will fulfil a *provider* role (Muller & Zenker, 2001) meaning that not only by the purchase of the service the knowledge can be acquired by the customer but merely that the C-KIBS is an artefact (Su & Jin, 2007, p. 3243) whose output is of value to the customer. Eventually the knowledge-intensiveness of the service itself does not stay in the focus of this paper but its opportunity to enrich the specific customer's knowledge base after its implementation.

The definition of Den Hertog (2000) accentuates *intermediation* and *professional technical (IT and business) knowledge*. However, most definitions of KIBS accentuate indeed the provision of knowledge based products or services but the main differences between the definitions lies in the accentuation of customization and customer incorporation in the value creation process. For example, Miles (1995, p. 18), Toivonen (2006, p. 2) or Den Hertog (2000, p. 505) did not include customization and customer incorporation in their definitions

while Caniëls & Romijn (2005), Simmie and Strambach (2006), Kam and Singh (2004) as well as Bettencourt et al. (2002, pp. 100-101) stated that customers transfer knowledge to KIBS suppliers that enables suppliers to design a customized solution. These scholars highlighted that in KIBS relationships a bilateral exchange of knowledge in an in-depth interaction environment of mutual learning, co-production, (Bettencourt, et al., 2002) and consulting takes place. (Strambach, 2008) The Organisation for Economic Co-operation and Development (OECD) named this knowledge transfer 'knowledge-intensive service activities' (KISA). (Millar & Choi, 2011, p. 24) However this paper will not cope with KISAs as the marketing and sales of KIBS stays in the focus independent of the KIBS creation process. Scholars who stressed the importance of customer integration also stated that the interaction is one of the most distinctive features of customer-supplier relationships (Kuusisto, 2008) and spans the whole supply cycle (Scarso & Bolisani, 2011, p. 47). The definition of Hipp (1999) that KIBS suppliers are organizations "(…) which are characterised by the ability to receive information from outside the company and to transform this information together with firm-specific knowledge into useful services for their customers (…)" (p. 94) is a somewhat middle course.

One should note that it is not a necessary condition for KIBSs to be technology based (Muller & Zenker, 2001; Wong & He, 2005) but it is stressed here in regard to the focus of this paper on a specific kind of KIBS suppliers that will be outlined below.

In regard to the different definitions it is not a question of justification but these differences in definitions show that customers can be differently incorporated in the KIBS creation process. (Rajala, et al., 2008, p. 278) Kuusisto (2008) illustrated the incorporation of the customer in the value creation process by the description of four different participation roles a customer can take while this paper focuses on the role with the lowest involvement of the customer in the KIBS production – the customer as simple consumer. In this role the consumption of a KIBS "(…) does not involve the customer directly with the provider (…)". (Scarso & Bolisani, 2011, p. 48) By narrowing the scope on a pure consumer role the sales and marketing of a KIBS can be clearly distinguished from its creation and shifts the focus on the most important concepts in regard to marketing a KIBS. These are the *transfer of sensible and often tacit information and knowledge* between KIBS suppliers and customer (D. Ford, 2003) and the resulting *uncertainty*. This uncertainty is due to the professional and intangible nature of knowledge that leads to a knowledge asymmetry between customer and supplier. In this thesis, customer-supplier relationships with sender-advantage asymmetric information

structures stay in the focus. The concepts of knowledge asymmetry and trust will be investigated later in more detail.

According to Zhang and Zhu (2009, p. 677) KIBS has four main features. 1) It is knowledge-intensive as it participates in the customer's knowledge creation and integration and consists of a lot of tacit and professional knowledge. 2) It is high-technical but also creative as it provides and works out services with new technologies, e.g. portfolio management software on basis of cloud computing. 3) It depends on a high level of interaction with the customer in regard to absorption of customer knowledge to improve the service but also in regard to support the customer in understanding the service whereat the absorption of customer knowledge will not be further investigated due to its consumer role. 4) It is innovating constantly to promote customer's development and innovation.

This thesis will focus on a subsection of KIBS, namely C-KIBS (computer and software-related services). KIBS is usually distinguished in P-KIBS (pure professional KIBS) and T-KIBS (technology-based) (Muller & Doloreux, 2007) but several researchers (Martinez-Fernandez, Soosay, Bjorkli, & Tremayne, 2004; Thomi & Böhn, 2003) indicated additionally C-KIBS (computer and software-related services) which is a special form of T-KIBS. However in literature the distinction of P-, T-, and C-KIBS is until now mainly provided for clarification purposes. This paper argues that it is worth investigating the different forms of KIBS more separated as especially the computer and software-related services have considerable opportunities to overcome the knowledge asymmetry. To make a first step into this direction, in this thesis the term C-KIBS will be used increasingly, also indicating that additional research is needed to clarify if the presented concept might also work in T- or P-KIBS.

To investigate opportunities for remote marketing and selling a C-KIBS it is necessary to have a deeper look at the current environment of C-KIBS suppliers. This includes an understanding of the customer, his desires in regard to the service, the geographical evolution of target markets, and finally the impact of the current state-of-the-art in communication technology. All of these factors provide together the guiding framework in which a successful marketing strategy has to operate.

The economic future is inter alia shaped by the rising role of services and the consequences of the recent financial crisis on incentives and the availability of resources for innovation. (OECD, 2009, p. 7 cited according to Millar & Choi, 2011, p. 21) Supported by the growing ICT impact on individual organizations and value chains, KIBS suppliers have

become an important asset for organizations to gain or keep competitive advantage." (Millar & Choi, 2011, p. 25)

Itami and Roehl (1991) revealed that intangible assets are at least as important to the success of an organization as tangible assets. Millar (2004 cited according to Millar, Choi, & Millar, 2008) distinguished four groups of intangibles that are displayed in Figure 1.

Figure 1: The Millar Pillar: 'Intangibles' by company alienability (Millar, 2004 cited according to Millar, et al., 2008)

company inalienable	***examples***
intangible latent capabilities talent, creativity, education, innovation, tacit knowledge, CSR, as sources of <u>future</u> competitive advantage	• leadership, vision, corporate renewal, good governance • employees potential/capacity/capabilities • organizational capabilities and networks • market potential, potential reputation • innovation, R&D in progress, tacit knowledge
intangible competences codified, proprietary nonfinancial sources of current competitive advantage	• distinguishing competences, dear to imitate, e.g. brands • core competences – necessary for company to function • standard competences (necessary to stay in the game, but can be outsourced)
(in)tangible value carriers value carriers that can be bought, sold, stored, traded, and normally be protected	• intangible tradable assets; such as rights, licenses, databases, franchises, software • IPR: patents, copyrights, registered designs, business secrets, own technology
tangible goods/assets property is clear and legally enforcable	• physical assets, such as land, buildings, plant • financial assets, such as cash, receivables
company alienable	

This figure shows that the most critical assets of KIBS providers have the highest level of intangibility. This illustrates the rising impact of KIBS suppliers in nowadays – their assets are impossible to copy and customers cannot move backward into the role of the supplier (Porter, 2008a, p. 30). However in a relationship these assets have great impact on the customer's competitive advantage. (Millar, 2004 cited according to Millar, et al., 2008)

It is crucial for organizations to create and adapt new knowledge to stay competitive in business environments (Muller & Zenker, 2001) that is in nowadays shaped by "(…) lowering entry barriers to the market, growing competition and increasing risk, shortening life-long cycle of goods/service, and other factors (…)" (Bagdoniene & Jakstaite, 2008, p. 220) like the need of organizations for specialization in core competencies (Rajala, et al., 2008, p. 274). Eventually organizations have to acquire knowledge beyond their own specialization to be able to deliver competitive value propositions to their customers. (Mosakowski, 1993; Wernerfelt, 1997) Indeed Miozzo and Grimshaw (2005) revealed that external sourcing of KIBSs is beneficial for customers. This is why KIBS suppliers get an increasing economic significance in today's business environments as suppliers of knowledge, problem

identification and solving, as well as operational change projects and their implementation. (Bagdoniene & Jakstaite, 2008, p. 220; Rajala, et al., 2008, p. 274)

In the age of digitization and internet more and more organizations are utilizing especially the advantages of digitizing their business processes to stay competitive (Davenport, 1998; Sambamurthy, Bharadwaj, & Grover, 2003) and to reduce the costs for the own IT infrastructure (Kaplan, Löffler, & Roberts, 2005, p. 2). Rajala et al. (2008) provided evidence to suggest that "(…) the [by the customer] perceived importance of knowledge-intensive services that are related to business strategy is higher than the perceived importance of the services that are related to operative activities (…)" (p. 280), at least in the software industry. However the willingness and reason for outsourcing C-KIBSs was for the strategic and operational requirements of software developers the same: "The further away the [strategic and operational] activities are from the core [competences], the more appealing they become to be supported by KIS activities." (Rajala, et al., 2008, p. 283) [remark by the writer]

The impact and necessity of C-KIBS suppliers in a knowledge-driven society leads to an increasing number of KIBS suppliers and eventually more competition among them. (Bagdoniene & Jakstaite, 2008, p. 220; Chellappa, Sambamurthy, & Saraf, 2010, p. 615; C. Zhang & Zhu, 2009, p. 676) This makes it necessary for C-KIBS suppliers to have a good reputation (Viitamo, 2003), to identify customer needs and responding to them adequately (Bagdoniene & Jakstaite, 2008, p. 220), to deliver high quality (Bhatnagar & Sohal, 2005), and to be specialized in knowledge, innovation, and creativity (Haataja & Okkonen, 2005). Furthermore C-KIBS suppliers face the challenge of "(…) variations in [the customers'] architecture and technology (…)" (Kaplan, et al., 2005, p. 7) with which the C-KIBS must comply. (Marwaha, Patil, & Tinaikar, 2006, p. 14) Due to this need of a multi-compatibility of their systems, C-KIBS suppliers face strong competition on diverse markets. (Chellappa, et al., 2010, p. 615) Therefore it is also necessary for C-KIBS suppliers to be flexible to cope with the diverse technological innovations and upgrades in customer organizations and to rate the monitoring of competitors and the nature of competition more important in the 21st century (Reed, et al., 2004, p. 505). Competing on diverse markets also highlights the necessity of focusing more on planning of the marketing and selling activities than it was done in the past. (Reed, et al., 2004, p. 506) But C-KIBS supplier "(…) can also attempt to extract any externality benefits by entering other [industrial and national] markets." (Chellappa, et al., 2010, p. 628) [remark by the writer]

4.1.1. The Need to Combine Standardization & Customization

In recent years the standardization of software tools that support business delivered major savings and a reduction of the time to market (Kaplan, et al., 2005, p. 2) for software suppliers as well as software users (Marwaha, et al., 2006, p. 8). Standardization makes C-KIBS suppliers able to reuse the services (Marwaha, et al., 2006, pp. 11-12) for identical customer requirements that influences positively the production economies of scales (Banker & Kemerer, 1989). For customers reusable and consistent software implies sharable excess capacities for e.g. different business units (Kaplan, et al., 2005, p. 2; Marwaha, et al., 2006, p. 11), keeps costs low, and is beneficial for the customer's performance (Kaplan, et al., 2005, p. 8) as well as his application-management activities (Marwaha, et al., 2006, p. 12).

Kaplan et al. (2005) argue for the necessity to break up the formal distinction of software as a service and software as a product. They stated that IT services should be grounded more on a standardized (off-the-shelf) product-like basis but be also adapted to specific customer service requirements. (Kaplan, et al., 2005, p. 2) In this model not only the reusability is increased but also complexity is reduced (Marwaha, et al., 2006, p. 8) and redundant activities (functions) are eliminated which fosters the utilization of the software's capacities. (Kaplan, et al., 2005, p. 3) The complexity in terms of difficulties in understanding and using (Kwon & Zmud, 1987; G. C. Moore & Benbasat, 1991; Tornatzky & Klein, 1982) influence the service utilization (Kim, Pae, Han, & Srivastava, 2010, p. 480) as it might discourage employees from using the service (Davis, Bagozzi, & Warshaw, 1989).

An active support of the customer during the appliance of the C-KIBS is also decisive to foster the utilization of the service (Kim, et al., 2010) and leads to sustained relationship-based advantages for customers and C-KIBS suppliers (Kim, et al., 2010, p. 473) occurring from a mutual relationship (Chircu & Kauffman, 2000) and eventually a C-KIBS supplier's efforts on service utilization leads to his own benefit (Kim, et al., 2010, p. 481). The level of C-KIBS utilization refers to the degree to which the C-KIBS is organization-wide and frequently used (Kim & Pae, 2007; Zmud & Apple, 1992) and has become a standard organizational practice (Meyers, Sivakumar, & Nakata, 1999; Swanson & Ramiller, 1997). But as supporting the customer in the C-KIBS's utilization takes place mainly in later stages in the purchase decision process (when the knowledge asymmetry is not anymore the primary issue to cope with), like in the form of customer training (Leonard-Barton & Deschamps, 1988), customer-supplier communication for information sharing (Clark & Staunton, 1989) and after sales/maintenance service (Frambach, Barkema, Noteboom, & Wedel, 1998), this paper will not cope with these practices in depth. Furthermore, although there is a direct

correlation between the level of service utilization and relationship-based benefits for the customer that influences eventually the relationship-based benefits for the supplier, there is no direct correlation between the level of service utilization and relationship-based benefits for the supplier. (Kim, et al., 2010, p. 481) Eventually the post-purchase phase and the C-KIBS supplier play an important role in the customer's service utilization but the supplier has to focus on the customer benefits during its support of the service utilization to reap relationship-based benefits. (Kim, et al., 2010, p. 481) However it is worth noting that to fully realize the C-KIBS' potential it has to be utilized throughout the customer's organization (Kim, et al., 2010, p. 473) because a successful management of C-KIBS means obtaining strategic benefits from the purchased service rather than from its ownership (Chircu & Kauffman, 2000). The importance of C-KIBS utilization can also be seen at Microsoft that spends around 5% of its total revenue on supporting customer organizations in the utilization of new services. (Yoffie, 1994)

In this connection it is interesting to note that the utilization of the service does not only depend on the direct supplier's support of the customer but is also influenced by the customer organization's corporate culture, the perceived technology attributes, environmental turbulence, and the C-KIBS supplier's service orientation. (Kim, et al., 2010, p. 473) This makes it possible to segment customers also in a pre-relationship stage.

The customer's organizational culture (Gatignon & Xuereb, 1997; Kwon & Zmud, 1987) can be described by its trust-based working culture, (Park, Ribiere, & Schulte Jr, 2004) learning-/change-oriented culture (Bikson & Gutek, 1983), proactive business orientation (Wu, Zsidisin, & Ross, 2007) in terms of information sharing and orientation on cost/price advantage (Kitchell, 1995; McKee, Varadarajan, & Pride, 1989), as well as risk taking attitudes (Khan & Manopichetwattana, 1989; M. Zhang & Tansuhaj, 2007). Although a customer focused on lean business (minimizing waste and maximizing economic benefits) might be cautious in the purchase of a new service (Kim, et al., 2010, p. 475), once purchased he will be encouraged to obtain the full benefit of its investment by using the service maximal and invest additional efforts (Chircu & Kauffman, 2000). The prior experience of the customer organization with similar services leading to an increased understanding of the efficient operation and usefulness of the service (R. Agarwal & Prasad, 1999) as well as reduced resistance (Zaltman, Duncan, & Holbek, 1984) and enhanced learning motivation (R. Agarwal & Prasad, 1999; Igbaria, 1993) – thus a proactive organizational culture – showed to enhance the service utilization. (Kim, et al., 2010, p. 481) Also the innovativeness of the

customer organization impacts the service utilization – even though only sparse. (Kim, et al., 2010, p. 481)

Customers that operate under environmental uncertainty/dynamism (Kitchell, 1995) that requires "(…) prompt responses to market changes and operational efficiency (…)" (Kim, et al., 2010, p. 474) are more motivated to acquire and use new technologies (Chircu & Kauffman, 2000; Kim, et al., 2010, p. 480; Venkatesh & Davis, 2000) and thus are more willing to invest additional effort in the utilization (Kearns & Sabherwal, 2007). In unstable environments constantly improving services or products on basis of new technology incorporation is decisive to stay competitive (Miller, 1987; Teece, Pisano, & Shuen, 1997) and the C-KIBS' maximum utilization is important to save time and costs (Chircu & Kauffman, 2000; McGrath, 2001).Thus customer organizations that follow a prospector-like strategy (R. E. Miles, Snow, Meyer, & Coleman Jr, 1978) by proactively capitalizing on emerging market opportunities and maintaining "(…) extensive capabilities for responding to market change (…)" (McKee, et al., 1989 cited according to Kim, et al., 2010, p. 475) have the highest level of service utilization.

C-KIBS suppliers face the challenge to forecast customer demand and align it with their supply chain by taking a horizontal view across the whole customers' businesses to create the right services. (Kaplan, et al., 2005, p. 3) Eventually segmenting user demand is also critical for the C-KIBS suppliers to assure that the service meets as much as possible homogeneous and meaningful customer demands (Kaplan, et al., 2005, p. 5; Marwaha, et al., 2006, p. 9) while on the same time "(…) minimizing the waste of resources." (Kaplan, et al., 2005, p. 8) On basis of homogeneous demands a product-like reusable service can be developed to foster optimizing use of resources and minimizing (Kaplan, et al., 2005, p. 6) for the customers (Bughin, Chui, & Manyika, 2010, p. 10) but also for the suppliers. This standardized basis is also beneficial for the transparency of the service which eventually makes pricing easier to understand by the customer. In a second step the C-KIBS can and should (Hill, 1997, p. 17) be adapted to more unique customer requirements (Marwaha, et al., 2006, p. 12) by the customers themselves or the service suppliers. But suppliers have to assure that customization possibilities become not over-complex which might threaten the utilization of the service (Kim, et al., 2010) by the customer, the benefits of scale (Marwaha, et al., 2006, p. 8) and the reuse for suppliers and customers (Kaplan, et al., 2005, p. 7). The more the service is customized the higher the customer specific costs become (Marwaha, et al., 2006, p. 8) and the lower the benefits of scale are. C-KIBS suppliers have to find the optimal balance between customizability and standardization. Eventually the market segmentation has to be

strategic in the way that it narrows the focus enough to reveal homogeneous customer requirements while narrowing the focus not too strong which would lead to a too small number of prospects and eventually higher additional costs for customization. Therefore the author strongly advises C-KIBS suppliers to maximal customize their C-KIBSs "(…) for a number of different industry segments (…)" (Chellappa, et al., 2010, p. 620) while providing the customers with functionalities to *tailor* the C-KIBS further on its own. This paper differentiates between *customization* and *tailorization*, and understands tailorization as in the system built-in properties that allow end-users during runtime to "(…) modify specific aspects of its functionality in a persistent way." (Stevens, Quaisser, & Klann, 2006, p. 269) Customization goes beyond the border of initially built-in properties for change of the system and means to change a system from within it. (Bentley & Dourish, 1995) In regard to software, this distinction understands tailorization as e.g. changes in the user interface or showing/hiding certain functionalities (hence changes above the functionality of the system) while customization means also changing the source code (hence changes within the functionality of the system). Both concepts require different user expertise. Chellappa et al. (2010, p. 627) revealed that enlarging the C-KIBS supplier's portfolio with several software components (Matutes & Regibeau, 1988) to compete on several markets is not beneficial to the C-KIBS supplier. But a strategically choice of several specific markets and industries wherein one service can be positioned is desirable for C-KIBS suppliers. (Chellappa, et al., 2010, p. 628) The mix of standardization and tailorization to a certain extent (e.g. on industry level) of the services is advantageous for a multimarket approach which will be further investigated in the following subsection.

Grid computing, virtualization, (Kaplan, et al., 2005, p. 3), service-oriented architectures (Marwaha, et al., 2006, p. 12) and cloud-based systems "(accessing computer resources provided through networks rather than running software or storing data on a local computer)" (Bughin, et al., 2010, p. 10) are trend-setting technologies in the alignment of standardization and tailorization. "These IT advances help [C-KIBS suppliers] to codify business functionality in ready-to-use software building blocks much more easily and quickly, to scale up the kinds of functionality suitable for reuse in applications, and to ensure that such building blocks are employed more effectively across (…) organizations—and maintained [by the customers] in a more standard fashion after an application has been deployed." (Marwaha, et al., 2006, p. 12) [remark by the writer]

As the market demands services that align standardization and customization, also the marketing strategy should allow for individual addressing of customers while simultaneously being based on a standardized framework, which will be one pillar of the here developed marketing strategy.

4.1.2. The Need to Go Global

An increasing number of manufacturers go global, making it necessary for service suppliers to follow (Millar, et al., 2008, p. 26) As recent studies and reports (de Backer, Cervantes, & OECD, 2008; OECD, 2008) showed, knowledge is more and more sourced globally.

The driver for organizations to globalize are economically (Millar & Choi, 2011, p. 27) like economies of scale. Globalization's "(…) main driver (…) is the ability to compare value on a like-for-like basis using traditional economic measures and is irrespective of context or location (…)" (Millar & Choi, 2011, p. 22). The comparability of value depends on quantification, standardization and measurement of values which requires "(…) complete contractual transactions and complete information (…)" (Millar & Choi, 2011, p. 22). This is problematic in KIBS relationships as will be shown later. The recent scandals of Enron or Tyco and the more recent global financial crisis of 2008/2009 have shown, "When practices are insufficiently monitored or insufficiently understood, globalization creates the environment for things to go seriously wrong." (Millar & Choi, 2011, p. 27) Also Espeland and Stevens (1998) stressed the importance of measurement in the context of successful capitalist systems. Spender and Grant (1996) noted that knowledge, although it is one of the most crucial assets of an organization, is coevally the most difficult to measure. This effect is even enhanced for global KIBS relationships where norms, values and standards of transactions are closely linked to culture (J. E. Kelly, 2004; Santos & Laczniak, 2009). Following another party's market approach (Chellappa, et al., 2010, p. 619) might lead to a further dependence on individual geographical structures (Millar & Choi, 2011, p. 30) which would be at the expense of standardization. Hence own measurement for market analysis is crucial (North, 2009) but the costs for communication and coordination of the customer-supplier relationship are high with intangible services (Millar & Choi, 2011, p. 30). North (2009) stated that measurement costs are one of the fundamental problems of interaction and exchange in the market. Kohls and Christensen (2002) as well as Santos and Laczniak (2009) revealed that in extreme cases of highly intangible knowledge KIBSs are even identified with the social and community reputation of the supplier. The importance of reputation was also indicated on page 26 in regard to the growing competition among C-KIBS supplier (Viitamo,

2003). Especially in a global context the problems of cross-cultural interpretations, informational constraints, and communication distortions (Currall & Inkpen, 2002; Y. Zhang & Rajagopalan, 2002) are enhanced.

But not only suppliers face measurement costs also customers face the challenge of obscure values like market prices and economic value in KIBS transactions. (Millar & Choi, 2011, p. 31) Millar and Choi (2011, p. 31) accentuate the need for *commensuration* to cope with the uncertainty and costs. "Commensuration is the comparison of different entities or qualities according to a common metric (…) into the form of rankings, ratios, prices." (Espeland & Stevens, 1998, p. 23) Even if absolute measures cannot be derived in KIBS, with a common metric suppliers can rank the diverse interests of the stakeholders by their economic impact and stakeholders can at least value the service on a continuum ranging from better to worse. (Millar & Choi, 2011, p. 31) In regard to commensuration in C-KIBS environments one might think of the induction of common technical standards, best practices induction or, more specific in regard to the sponsor, the incorporation of certain in theory and practice proven portfolio management processes in a software product/service. Indices like that and their difference to other signals send by the KIBS supplier will be outlined later. Institutional cues and evaluation by other organizations or actors in the market can act as intermediaries (Millar & Choi, 2003) and "(…) serve as external cues of certification and measurement (…)" (Millar, et al., 2008, p. 99) of the supplier's quality. With commensuration qualities can be transformed into quantities on a standardized basis (Espeland & Stevens, 1998) and therewith help in decision-making (Stokey & Zeckhauser, 1978) and overcoming people's cognitive limitations (Thaler, 2000). The recent financial global crisis and its basing on standardized measures (Nixon, 2007; Weidenbaum, 2009) clearly calls for commensuration. (Millar & Choi, 2011, p. 31) The question emerges what service-related factors are valued by the customers to make them suitable as (in a marketing campaign) communicable measurement instrument for the customer.

But the principles of measurement and commensuration alone are insufficient for assessing inalienability (Bourdieu, 1993). In this connection Zelizer (1994) pointed out the importance of priceless services in today's global business environment, as symbolic values. Especially in uncertain KIBS environments it is necessary to enrich commensuration with actions from somewhat pre-modern or primitive systems, like for example gift-giving or more generally 'reciprocal/barter' exchanges. (Millar & Choi, 2011, pp. 32-33). The 'freemium' model is a recent cross-subsidization approach to this where "(…) a group of customers gets free services supported by those who pay a premium for special use." (Bughin, et al., 2010, p.

11) Gift-giving has the additional leveraging advantage that often valuable by-product data are generated, due to its viral potential. However, reciprocal exchanges are of special value in regard to the need for commensuration in global (Nixon, 2007; Sethi, 2003) and uncertain KIBS environments (Millar & Choi, 2011, p. 33) as they combine barter exchange systems and market exchange systems and focus on stakeholder values (Freeman & Phillips, 2002). Indeed also barter exchanges rely on some kind of measurement although it revolves more around "(…) informally enforced agreements (…)" (Millar & Choi, 2011, p. 32) between customer and supplier. Because of the meaning of gift-giving in KIBS relationships, this concept will be investigated more detailed in section 4.4.

Millar and Choi also identified the KIBS supplier's challenge "(…) that in the globalized world, innovations in knowledge-intensive services will be disseminated from where they first occur and taken up on a worldwide basis through a process of emulation." (Millar & Choi, 2011, p. 27) Hence the global introduction of a C-KIBS increases the awareness of competitors which might result in emulation that is harmful to the KIBS supplier. Furthermore as standardization of a service favours globalization (Millar & Choi, 2011, p. 29) it also threatens the competitive lead because it makes services more vulnerable to copies (Hipp & Grupp, 2005). Although C-KIBSs rely heavily on intangible assets like technical or business competence, due to its standardized realization the intangibility alone is no protection for copies. This fact is enhanced because intangible assets are nearly impossible to protect formally.

The borders between customers and suppliers are fading and the recent global financial crisis revealed the threats of this global interconnectedness "(…) but also might open new spaces for a new approach with different agents and different rules for services in both the public and private sector." (Millar & Choi, 2011, p. 22) The destruction of accumulated capacities for innovation (OECD, 2009) could turn into a costly cumulative loss for firms and countries (Millar & Choi, 2011, p. 22) but might also create chances for suppliers being specialized in innovation.

In the following section the author will investigate the interconnectedness of customers and suppliers more deeply and shed light on the challenges of knowledge asymmetries and trust building.

4.2. Customer-Supplier Relationships in Knowledge-Intensive Business Service Environments

Zhang and Zhu (2009), Gouthier and Schmid (2003) as well as Bagdoniene and Jakstaite (2008, p. 220) argue that improvement of customer relationship management and risk control to strengthen customer loyalty and satisfaction is critical to obtain competitive advantages (C. Zhang & Zhu, 2009, p. 676) and are especially in a KIBS environment "(…) more important than ever." (Bagdoniene & Jakstaite, 2008, p. 222)

C-KIBS customers can be a valuable asset to the service supplier for idea creation, solutions and technologies when the customers are motivated to share their requirements, strategic insights, information and knowledge. (Bagdoniene & Jakstaite, 2008, p. 222) Eventually the advantage of "(…) KIBS providers' ability to build or to sustain relations with clients (…)" (Bagdoniene & Jakstaite, 2008, p. 220) is that it is impossible to copy (Bagdoniene & Jakstaite, 2008, p. 220) and therefore it is a source of sustaining competitive advantage for the KIBS provider (Porter, 2008b, p. 11). The relationship is beneficial for both parties and of a long-term direction when the service provider has "(…) an understanding of the dynamics of relationship, how they evolve and what factors are likely to affect their development." (Bagdoniene & Jakstaite, 2008, p. 223) A long-term relationship can be beneficial to the supplier through generating referrals or building exit barriers for customers (Halinen, 1997) and eventually long-term relationships are critical to assure customer loyalty (Bagdoniene & Jakstaite, 2008, p. 223). However one should note that only a minority of customers is indeed interested and motivated to go into deep relationships with service providers because they fear loss of control or are uncertain because of unpredictable demand, potential preclusion from other emerging opportunities or fear the investment of extra resources. (Caniëls & Romijn, 2005)

The importance of relationship management in KIBS relationships is in this paper mainly stressed in regard to trust creation rather than in regard to a common learning process between providers and customers. (Andreas Koch & Stahlecker, 2004; A. Koch & Strotmann, 2004; Simmie & Strambach, 2006) This is due to the situation that this paper focuses on relationships with the customer as simple consumer in an environment where the customers' needs are already known to the supplier.

Overall, KIBS suppliers face the challenges to provide qualified knowledge timely sufficiently and appropriately in a way that the customer can receive, understand, apply and store it. (C. Zhang & Zhu, 2009, p. 676) Furthermore between suppliers and customers should

be mutual agreement about the forecasted result which would be a benefit to both parties. (Bagdoniene & Jakstaite, 2008, p. 221)

In general B2B relationships can be described on a continuum, ranging from discrete/transactional/remote relationships to commitment-based relationships (Klanac, 2005, p. 5) wherein mutual understanding and creation of value with the customer is developed (Schurr, 2007). Commitment is "(…) an implicit or explicit pledge of relational continuity between the exchange parties (…)" (Dwyer, Schurr, & Oh, 1987, p. 19).

In discrete relationships communication is very limited with narrow content. (Dwyer, et al., 1987) The focus lies on price instead of developing a strong relationship. (Boyd & Spekman, 2001) The resulting certain distance between customer and suppliers might be also advantageous for the supplier when the quality or performance of the service is uncertain. (Bagdoniene & Jakstaite, 2008, p. 223) However, Boyd and Spekman (2001) stated that due to the lack of commitment parties easily switch to other relationships. Thus, other techniques than commitment are necessary in discrete relationships to keep customers. Porter (2008a, pp. 29-30) described several circumstances under which customers can be kept in a relationship like high switching costs for customers, a high impact of the delivered service on the customer's strategy (cost vs. differentiation), the service is highly differentiated (there are less substitutes), the supplier's independence of certain supplied industries, or the strength of the distribution channel. Apple Inc. is famous for its vendor lock-in (Büschken, 2004) techniques like via iTunes bought music that could not be played on non-Apple music players or the necessity of special hardware to connect Apple products to standard devices like printers.

In commitment-based relationships the focus lies on social exchange (Dwyer, et al., 1987) as well as understanding, trust, collaboration, commitment and adaptation (Kasper, Van Helsdingen, & Gabbott, 2006, p. 149) with a long-term perspective (David Ford, 1993).

In general, the nature and length of the relationship is influenced by the customers' participation roles and the type of the relationship (I. Miles, 2003). This paper will focus only on *sales relationships* wherein the service is standardized and developed before the transaction (Bagdoniene & Jakstaite, 2008, p. 223).

B2B relationships are in the beginning always discrete but can evolve to some form of commitment-based relationships over time. (Klanac, 2005, p. 5) During the evolvement a relationship runs through several stages, namely pre-relationship stage, early/exploratory stage, developing stage, stable stage, and relationship end stage. (P. H. Andersen, 2001; Bagdoniene & Jakstaite, 2009; David Ford, 1993; Heffernan, 2004) The stages will be briefly presented according to Scarso and Bolisani (2011, p. 48) but only the pre-relationship and

early stages will be investigated more deeply in this paper as the focus lies on inducing transactions when customer and supplier are unknown to each other. The incorporation of the early stage is due to the fact that there is no clear distinction between the different relationship stages because of a lack of "(…) universally defined criteria for their classification (…)" (Klanac, 2005, p. 6).

In the *pre-relationship stage* the customer searches for a provider of a helpful solution, hence evaluation and choice tools for potential service providers are useful for the customer. The KIBS supplier focuses in this stage on market segmentation. (Bagdoniene & Jakstaite, 2008, p. 224) In the *exploratory stage* the first contact is established but mutual experience and knowledge is still missing. In the *developing stage* the reciprocal knowledge is increasing. The provider expects from the customer to continue the relationship and to recommend the service to other prospects, the customer expects 'improvement' of the service. In the *stable stage*, reciprocal knowledge and mutual understanding is completely developed and becomes less critical (Scarso & Bolisani, 2011, p. 49). The last stage, the relationship end stage (Heffernan, 2004) will not be discussed in this paper.

Value-based pricing influences the relationship as it represents an opportunity for differentiation, suitable to attract new customers. (Kotler, 2004) Finally branding increases customers' loyalty, decreases their sensitivity for a service price, is a market entry barrier for competitors, and facilitates market segmentation. (Urbanskiene & Vaitkiene, 2006 cited according to Bagdoniene & Jakstaite, 2008, p. 224)

Throughout the literature there is strong agreement on the impact of references in the age of outsourcing, globalization, and electronic commerce (Salminen & Möller, 2006, p. 30) and showed to be critical "(…) in such strategic actions as launching new products and entering new markets, as well as in enhancing a company's competitive position in the industry (…)" (Salminen & Möller, 2006, p. 2) – hence, in global marketing activities with often unknown competitors and its capabilities (Salminen & Möller, 2006, p. 30). Due to the shortening of technological life cycles (G. A. Moore, 1995), systematic quality of the offerings and production systems (Salminen & Möller, 2006, p. 49), intensified technological complexity and high knowledge intensity (Christensen & Raynor, 2003; Vargo & Lusch, 2004) technological and market uncertainty is increasing. Suppliers operating in a global context have to convince customers from regions where the supplier has not yet an established reputation about the supplier's competence (Cova, Ghauri, & Salle, 2002, p. 212; Fisher, 1986) in terms of the reliability of the offerings, the delivery, and the continuous performance (Wolf, 2004). The goal of referencing is to reduce the perceived risk a customer faces while

choosing a new supplier or service (Hutt & Speh, 1992, p. 117; Mitchell, 1998) by illustrating the supplier's credibility (Bly, 1998, p. 117; Usunier & Lee, 2005) and hence "(…) to overcome the liability of anonymity in new overseas markets (…)" (Salminen & Möller, 2006, p. 1) and to create a positive impression at the customer's side (Salminen & Möller, 2006, p. 2). Thereby the supplier is able to pursue new customers (Bradley, 2005; Bruhn, 2003, p. 254; Hanan, 2011, p. 175), sell more or new services to existing customers (Christopher, Payne, Ballantyne, & Marketing, 1993, p. 22; Maister, 1998, p. 258), and to focus offers in promising markets (Cova, et al., 2002, p. 168; Stewart & Stewart, 1984, p. 217). Eventually domestic customers that are highly esteemed in the target country with a network to potential foreign customers should be cultivated by the supplier to facilitate market entry. (Salminen & Möller, 2006, pp. 27-28) The lower the market share and position of the supplier the more credible existing customers that are going to be committed with a new technology should be presented to potential customers. (Jackson, 1985, p. 84) Although references are therefore important in a diversification strategy because the situational and contextual factors create the biggest uncertainty compared to market penetration strategy, market development strategy or product development strategy (Salminen & Möller, 2006, p. 39) the utilization of references is more difficult in a diversification strategy than in the other strategies. This is due to the fact that a strong reference that matches the potential customer's industry, market and application all together with a match between the customer's purchasing situation as well as the supplier's growth strategy, its reputational position and market conditions (Salminen & Möller, 2006, p. 40) does not yet exist when starting a diversification strategy. Although the possibility to use organizations as references that tested the prototype already to speed up the diffusion process of the new service (Salminen & Möller, 2006, p. 29) is an inadequate solution as this requires also beforehand established customer-supplier relationships. Thus, an active utilization of reference marketing cannot be done when directly launching a product on an international scale and resists, as described above, on customer-supplier relationships that are already in a developing stage. Consequently this paper focusses on remote marketing and selling strategies than can be applied without the necessity of an already established customer base although the author argues strongly for the appliance of a strategy-driven reference behaviour after the first customers in the target markets are created to develop a base of reference customers for later utilization.

It was shown that in dependence of the stage of the relationship lifecycle commitment and trust (Heffernan, 2004; Morgan & Hunt, 1994), customer orientation/empathy, experience/satisfaction and communication increases (Conway & Swift, 2000) and

uncertainty is reduced as well as social, geographical, cultural, technical, and time distance (David Ford, 1993). Galbreath (2002) classified the best relationship as the one where all parties are relying on and trust each other. Hence, KIBS relationships are influenced by following factors:

- knowledge asymmetry between customer and supplier due to technical distance;
- uncertainty (trust);
- and geographical and cultural distance.

These factors play in regard to the paper's focus a critical role, as the uncertainty and the knowledge asymmetry is a critical factor in KIBS and cultural distance can be high in international marketing. Thus these factors will be deeply investigated in the following subsections.

4.2.1. Knowledge-Intensive Business Service Suppliers' Knowledge to Create Value & Trust and Customer's Knowledge to perceive Value & Trust

KIBS providers are operating today in a knowledge-driven society (Millar, et al., 2008) wherein knowledge asymmetries are a general rule. In this subsection the type of knowledge in KIBS-relationships will be described and eventually the different kinds of knowledge asymmetries.

As KIBS depends highly on customer's knowledge, supplier's knowledge, and knowledge of mutual cooperation (C. Zhang & Zhu, 2009, p. 677) it is necessary to take a deeper look into the different kinds of knowledge. Zhang and Zhu (2009, pp. 677-678) as well as Su and Jin (Su & Jin, 2007) described four different knowledge constructs:

- KIBS suppliers' knowledge to create value
- Knowledge that customers use to perceive service value
- KIBS suppliers knowledge to win trust
- Customers' knowledge to perceive trust

KIBS suppliers increase the total customer value or reduce the customer total costs by applying technological knowledge but also by applying specific knowledge about problem solving. Examples for customer total costs are time, energy, labour or money, necessary to purchase, implement, and use the service. (C. Zhang & Zhu, 2009, p. 677)

Su and Jin (2007) further distinguished this kind of knowledge in the C-KIBS supplier as "(…) know-how regarding the management of business services or knowledge about the service (…)", know-what "(…) regarding the contents of a service or knowledge that is

generated during or within a business service (…)" and know-why regarding "(…) insights gained from a completed service or knowledge derived from a service (…)" (p. 3243)

Although a fully customized service to the individual customer's specific needs will increase the service use value for the customer, it is also beneficial to supply a standardized service but making the customer able to personalize the product or service himself by providing the customer with a certain set of tools for tailorization. Although this is new to the scholarly literature of KIBS, it is status quo for the practitioner. Indeed in the economy and especially in the software industry most services are not customized (e.g. SAP, Oracle software packages, Content Management Systems, or Customer Relationship Management software) but provide functionalities and guidelines for the customers to tailor the systems themselves. The reason for this is that the more a service is customized the more expensive it becomes for the customer and the harder it becomes to define a common metric to compare different services. But to make customers able to tailor the service themselves they rely on adequately documented know-how, know-what, and know-why (Kaplan, et al., 2005, p. 7; Windrum & Tomlinson, 1999), for example in the form of a service manual. Adequacy refers to the information quality and the intensity of the supplier's support of the customer's appliance of the service.

Al-Hakim (2007, p. 301) defined several criteria for the information quality in a KIBS which can be easily related also to the information quality for using and tailoring the service. The framework Su and Jin (2007, p. 3245) developed on basis of Al-Hakim (2007, p. 301) was slightly adapted by the author and is displayed in Table 4.

Table 4: Information quality criteria and their descriptions (Su & Jin, 2007, p. 3245)

Criterion	Description
Conformability	Is the data free of contradictions or convention breaks?
Integrity	Is the scope of information adequate to the service?
Timeliness	Is the information processed and delivered rapidly without delays?
Complete/Comprehensive	Is the scope of information adequate?
Concise	Is the information to the point, void of unnecessary elements?
Accuracy	Is the information precise enough and close enough to reality?
Currency	Is the information up-to-date and not obsolete?
Applicability	Can the information be directly applied? Is it useful?
Clarity/Transparency	Is the information understandable or comprehensible to the target group?
Value	Is the information valuable to its purpose?
Interactivity	Can the information process be adapted by the information consumer?
Accessibility	Is there a continuous and unobstructed way to get to the information?
Security	Is the information protected against loss or unauthorized access?

Criterion	Description
Maintainability	Can all of the information be organized and updated on an on-going basis?
Speed	Can the infrastructure match the user's working pace?

Information quality assurance is an ongoing process (Su & Jin, 2007, p. 3245) as new data are continuously added parallel to the further development of the service.

Due to the technical complexity (Chellappa, et al., 2010, p. 618) and even more the intangibility of C-KIBSs the suppliers have to provide customers the "(…) knowledge about the quality performance of professional services (…)" (C. Zhang & Zhu, 2009, p. 678) and many customers indeed ask for verification of the service's performance (Toivonen, 2004). Otherwise customers' experience about a service might be inconsistent with reality and might lead to refusal of a service. (Ojasalo, 2001) "KIBS suppliers' knowledge to create value and knowledge that customer used to perceive service value both affect customer's perceived value." (C. Zhang & Zhu, 2009, p. 678) Thereby the customer transfer value stays unchanged and C-KIBS suppliers can increase the customer perceived value effectively. Managing customer expectations by transforming them into definite, explicit, and realistic ones (Ojasalo, 2001) is important to sustain long-term relationships (Bagdoniene & Jakstaite, 2008, p. 222).

Trust is one of the main issues in KIBS and hence this paper will cope with it in more detail later. C-KIBS suppliers have to "(…) promote their image in order to win customer's trust (…)" (C. Zhang & Zhu, 2009, p. 678) while sending signals that are conform to their service. "(…) signals demonstrate to others the actor's intentions or abilities or some other characteristic about which the actor has private, unverifiable information." (P. R. Milgrom & Roberts, 1992) On basis of these signals an information receiver (here: the customer) chooses a knowledgeable information sender. (Lin, Geng, & Whinston, 2005, p. 212) According to signalling theory if a low-quality service provider wants to send the same signals as a high-quality service provider the signals will consume more resource and eventually lead to loss of customers and defect the KIBS supplier's image. Nevertheless, to send the right signals C-KIBS suppliers cannot only rely on the service quality but have to understand the desires of the customers and how the supplier's actions are perceived by customers.

For example, a C-KIBS supplier could actively position himself in a crowded market to signal customers a high importance and compatibility of his software components. (Chellappa, et al., 2010, p. 619) However Chellappa et al. (2010, p. 627) revealed that the intensive competitive rivalry mostly outweighs the benefits signalling. Only when C-KIBS suppliers face the same competitors over several service or geographical markets (multimarket contact) they can "(…) significantly benefit from participation in crowded markets (…)" (Chellappa, et al., 2010, p. 627) due to their "(…) ability to present a credible

retaliatory threat (…)" (Chellappa, et al., 2010, p. 617) to their competitors. However this lies beyond the scope of this paper as multimarket contact is limited to a certain type of C-KIBS markets.

Next to the more obvious signals, C-KIBS suppliers should also care about sending indices. (Millar, et al., 2008, p. 101) Customers know about the malleability of signals and will eventually look for truthful indices like the supplier's history to get "(…) knowledge about the intangible facets that will be part of goods or services supplied by the firm." (Millar, et al., 2008, p. 101) Already Kreps and Spence (1984 cited according to Millar, et al., 2008) highlighted the importance of an organization's history in competitive markets especially "(…) in a world where consumers often experience a proliferation of firms' signals and where it is difficult to distinguish between truths and bluffs." (Millar, et al., 2008, p. 101)

C-KIBS suppliers do not only have to send the right signals and provide the right indices they also have to assure that customers understand the signals. This is critical in C-KIBS relationship as the benefits of a C-KIBS are hard to evaluate by the customer in advance. Eventually C-KIBS suppliers should aid customers in the evaluation of benefits and risks of C-KIBS, in the choice of the supplier, and in the trustworthiness of a supplier. "KIBS suppliers' knowledge to win trust and customers' knowledge to perceive trust both affect the customer's trust towards KIBS providers." (C. Zhang & Zhu, 2009, p. 678)

Trust-building mechanisms that rely on sending and receiving signals and indices will be investigated in subsection 4.2.3.

4.2.2. Knowledge Asymmetry between Knowledge-Intensive Business Service Suppliers & Customers

It is crucial to overcome knowledge asymmetries otherwise the C-KIBS quality will deviate greatly from the customer's expectations. As the previous section showed, supplier and customer have to earn each other's trust and loyalty, and they have to become familiar with each other's way of thinking and behaving (Caniëls & Romijn, 2005). In the following the knowledge asymmetries will be expressed according to Zhang and Zhu (2009, pp. 678-680) and De Bandt (1995 cited according to I. Miles, 2003). Practices and techniques to cope with these asymmetries will be investigated in the subsections 4.2.5, 4.2.6, 4.2.7 and in the section 4.3.

1. The highly specific and complex nature of a C-KIBS can make it hard to reach an agreement on the specific services to be rendered, or on the criteria for assessing their quality. This is due to the fact that the customers' limited capabilities lead to an

inconsistency between their expressed demand and their real demands and eventually to "Deviation between KIBS' cognition of customers' needs and customers' real demands." (C. Zhang & Zhu, 2009, p. 679)

2. It can be hard to establish the C-KIBS supplier's competence and experience in dealing with relevant problems due to the inaccurate expressed customer demand.
3. The impact and effectiveness of a C-KIBS may be affected by many factors, some due to customers, some due to unpredictable external circumstances, and consequently it is hard to determine the C-KIBS suppliers' responsibility in case of arising problems.
4. The real effect of the service might differ from the customer perceived effect due to the limited cognitive abilities of the customer or an over-complex service.
5. In the same way, the trust degree felt by the customer might differ from the trust degree the supplier intends to establish because of limited cognitive abilities of the customer to perceive the signals.
6. The customer may not be able to accurately assess the kind or level of skills required to deal with specific problems it faces, nor to match these to the C-KIBS supplier's offerings because it might be difficult for the supplier to demonstrate his ability to meet the customer's needs. Understanding of the customer's process of evaluating risks and benefits is critical here.
7. Estimation of the effort required by the C-KIBS supplier in supplying the service can be difficult.

A critical aspect to mention is that a failure in coping with these asymmetries does not only affect one stage in the customer-supplier relationship life cycle but also following stages. (C. Zhang & Zhu, 2009, p. 680) Hence this knowledge asymmetries make not only the output quality hard to predict by the customer in advance (A. Agarwal & Shankar, 2003) but also after the service is implemented. (Millar, 2004; Scarso & Bolisani, 2011, p. 49)

Concluding, to value the risks and benefits of the service the customer depends strongly on the supplier's characterization of the service. Furthermore geographical and cultural distances establish additional barriers to overcome these gaps and eventually some cannot be overcome at all. Overall it seems critical for C-KIBS suppliers to engage actively in the enrichment of its customers' knowledge base. But this demands indeed customer's trust in the information of the C-KIBS supplier. Hence, trust is a critical issue which will be investigated deeply in the following sub-/sections.

4.2.3. The Importance of Trust & Mechanisms for Creation

Trust between the KIBS suppliers and customers is important and a prerequisite. (Hawes, Mast, & Swan, 1989; Millar, et al., 2008) Trust between customers and suppliers showed to be useful to limit opportunism (Rindfleisch & Moorman, 2003), to increase customer loyalty (Agustin & Singh, 2005) and satisfaction (Selnes & Sallis, 2003), to enhance service usage (Maltz & Kohli, 1996), purchase decisions (Chaudhuri & Holbrook, 2001), and commitment (Jap & Ganesan, 2000), and to enhance more collaborative, cooperative, and interactive exchange relationships (Cannon & Perreault Jr, 1999; Hibbard, Kumar, & Stern, 2001; Jap & Anderson, 2003). In general trust in the C-KIBS supplier influences a customer's future interaction with the supplier (Doney & Cannon, 1997) and is critical for the continuity of the relationship (Sharma & Patterson, 1999).

The development of such trust depends on the parties' toleration of a certain level of uncertainty. (Millar, et al., 2008) One has to acknowledge that although there are several trust-building mechanisms (as will be resumed later) there will always remain a certain level of uncertainty due to the fact that C-KIBSs start delivering real customer value after customer-side implementation and a certain time of running at the customer's organization. The question emerges when the border is reached where the customer accepts the remaining uncertainty and his current level of knowledge and starts believing in the C-KIBS supplier's information. Although there is no universally valid answer to this question one can come closer to the answer by inventorying the factors that influence trust generation between a C-KIBS supplier and a customer and prioritizing the different factors by their impact on the trust creation. This will be done in this subsection.

C-KIBS firms supply customers with technical and applicative knowledge along the entire supply cycle. (I. Miles, 2005) Because sensible and often tacit information and knowledge are transferred (D. Ford, 2003) customer-supplier reciprocal trust is a key element in their relationships (Bagdoniene & Jakstaite, 2009; Scarso & Bolisani, 2011, p. 47). The need for trust is also enhanced by the uncertainty and accelerating rate of change because of new technologies and globalization. (González, 2003; Sethi, 2003) Trust in C-KIBS is not only essential because of its intangibility but also because of "(…) difficulties in arriving at a market valuation or price (…)" (Millar & Choi, 2011, p. 32) Hence, the demand for a trustworthy environment is even bigger when supplier and customer are located in different countries with different regulations, rules and cultures (Furnell & Karweni, 1999), and in the online world because of the impersonal nature of the online environment (Millar & Choi, 2011, p. 28) that increases the uncertainty (A. Agarwal & Shankar, 2003).

In literature trust is defined and conceptualized differently depending on the scientific area of the researcher (Iyer, et al., 2006, p. 612) and “Different dimensions or morphs of trust have been also identified (…)” (Matopoulos, Vlachopoulou, & Manthou, 2006, p. 406) This multidimensionality consists of many subjective components such as: “(…) dependability/reliability (confidence, loyalty, respect), honesty, competence, mutual orientation (altruism, congruence, motivation), and friendliness (acceptance, benevolence and liking).” (Scarso & Bolisani, 2011, p. 49) As these components suggest, trust is mainly investigated as a personality construct, based on the interaction with people (Alvesson, 2000) and eventually depending on attributes of salespersons but its impact on the overall trust establishment is rather modest. (Swan, Bowers, & Richardson, 1999) Indeed it is not stipulated in literature that the in interpersonal relationships created trust does influence outcomes on an organizational level. Literature could not reveal the mechanisms by which individual actions affect organizational results. (Zaheer, McEvily, & Perrone, 1998, pp. 142-143) Subsection 4.2.4 will come back to the issue of trust creation via interpersonal relationships.

As there is no common definition of trust (Castaldo, Premazzi, & Zerbini, 2010; Iyer, et al., 2006), this paper will use the often cited definition of trust by Gambetta (2000) who defined trust “(…) as the subjective probability with which a player agent assesses that another agent or group of agents will perform a particular action (…)” (Scarso & Bolisani, 2011, p. 49) that is beneficial or at least not detrimental to the other party. Furthermore this definition will be enriched by several differentiations of trust. Anderson and Narus (1990) separated trust in an individual and trust in an organization, Plank et al. (1999) added trust in the product/service, and Nachira (2002) added trust in business activities in regard to standardized practices for specific sectors and local contexts and trust in knowledge by establishing symmetric access to information. The importance of information and its quality was already described in the preliminary subsection. Grayson et al. (2008) distinguished between narrow-scope trust which is trust in an individual and trust in the organization and eventually “(…) affects only the relationship in which it has developed (…)” and broad-scope trust which refers to a customer’s trust in the broader social context in which a relationship takes place and eventually “(…) affects a customer’s behaviors and perceptions regarding not a specific relationship but rather a whole class of existing and potential relationships.” (p. 242) Trust in all these dimensions revolves around the concept that suppliers and the services “(…) fulfil their obligations [or functions] as understood by the buyer.” (Plank, et al., 1999, p. 62) [remark by the writer]

Trust can be encouraged by communication with customers (E. Anderson & Weitz, 1989; J. C. Anderson & Narus, 1990; Doney & Cannon, 1997), customer satisfaction (Ganesan, 1994), experience (Bart, Shankar, Sultan, & Urban, 2005; Moorman, Deshpande, & Zaltman, 1993), customer support in appliance of the service (Kim, et al., 2010), and interdependent relationships between customer and supplier (Kumar, Scheer, & Steenkamp, 1995), whereas interpersonal communication with customers (trust as a personality construct) is mostly stressed in literature. (Plank, et al., 1999, p. 61) However next to interpersonal trust the selling organization and its fulfilment of its obligations as well as the service and its expected functions are considered by the customer. (Plank, et al., 1999, p. 65)

Thus, to create a trustworthy environment organizations can propose an individual mix of rational assessments and social-psychological perceptions that result in different trust-building mechanisms (D. Ford, 2003; Panteli & Sockalingam, 2005) which consist of signals and indices:

- Institution-based mechanisms, based on warranty, certification, safety nets, or other formal structures;
- Deterrence-based mechanisms, derived from the presence of costly sanctions for opportunistic behaviours;
- Calculus-based mechanisms, grounded on the rewards that come from pursuing and preserving a relationship, and fear of punishment for the violation of trust;
- Knowledge-based mechanisms, relying on the information about involved parties, which also develops thanks to repeated interactions. The assumption is that the more information is available about someone, the more easy is to predict his actions;
- Identification-based mechanisms, characterised by mutual understanding (i.e. empathy and a sharing of common values) among parties to the point that each can effectively act in favour of the others;
- Personality-based mechanisms, emerging from reciprocally sensitive, thoughtful and concerned relationships.

The different types and dimensions of trust are not mutually exclusive and hence trust can rely on several mechanisms but its suitability depends on the interaction and relationship types between the involved parties. (Scarso & Bolisani, 2011, p. 50) In this task companies face the multi-dimensional nature of trust, and have to cope with different forms of trust, the type of service and the customer participation in designing the service as well as the evolutionary stage of the relationship and the step of the service delivery process. (Scarso & Bolisani, 2011, p. 47) Hence, companies do not only face the challenge of implementing the

right trust-building mechanisms but also have to cope with the timing and the way how to implement them. (Scarso & Bolisani, 2011, p. 47) This makes it necessary for one organization to "(…) 'move first' and show, communicate, prove, endorse some type of action that builds trust." (Millar & Choi, 2011, p. 25) Especially in the initial stage of the customer-supplier relationship mutual understanding has to be created.

In the following subsection the author will shed light on the importance weightings of trust in an organization, its representative, the service and the environment and will indicate roughly which trust-building mechanisms come into play. The mechanisms and their activation via different techniques will be investigated more deeply in section 4.4.

4.2.4. Trust in an Organization, its Representative, the Service, & the Environment

The study of Plank et al. (1999) showed that trust in the organization was the strongest related to the overall trust and sales performance. Trust in the product, investigated through the use of product demonstrations, that showed to be positively related to trust in the product (Plank, et al., 1999, p. 66), was the fewest related to the overall trust and sales performance (Plank, et al., 1999, p. 68). One should note that although the different dimensions showed different relationship strengths they were all significantly related to performance. (Plank, et al., 1999, p. 66) Furthermore it is important to note that the measurement of trust in the organization was not as valid as the measurements for trust in a sales person and the service. This was due to the fact that the authors could not measure any behaviours that are specific for trust in an organization like e.g. questioning and listening related to trust in a sales person (Plank, et al., 1999, p. 66) or product demonstration as trust in the service. Eventually a grounded prioritization of the three trust dimensions is at least arguable. Thus, this thesis will investigate trust in an organization and trust in a service similarly. Trust in a sales person will not be further investigated due to the delimitation on remote communication and transaction. However its substitution by certain trust-building mechanisms will be investigated.

Several studies argued that customer trust is not only influenced by the organization and its representatives (narrow-scope trust) but also by the context of exchange (broad-scope trust) (Driscoll, 1978), like. e.g. a specific industry (Starkman, 2005) or the internet (Hulme, 2005). Grayson et al. (2008) affirmed across different national cultures "(…) that a trusted business context fosters customer trust in firms (…)" (p. 242) but also stated that it does not substitute trust in organizations and representatives and plays primarily an indirect role. However as it might be assumed that broad-scope trust has an influence on the applicability of distant communication in an international marketing approach of a C-KIBS supplier, this thesis takes a deeper look on the study of Grayson et al. (2008).

Due to the focus on global markets, a deeper look into the relation of trust and the customer/supplier environments is necessary.

Narrow-scope trust grows over time (Hardin, 2006; Jones & George, 1998) through a process of gathering first-hand information about a relationship partner (Zucker, 1986). However second-hand information about the partner (e.g., through referrals) can be advantageous. (Bouty, 2000; Kollock, 1994) Narrow-scope trust can develop in relation to either a human being (interpersonal trust) or an organization (firm-specific trust) (Doney & Cannon, 1997).[3] To develop trust in each form people use different types of information (Kramer, Brewer, & Hanna, 1995), sent via indices and/or signals.

Broad-scope trust is "(…) trust that a particular customer has in the business context in which a set of organizations and individuals operate." (Grayson, et al., 2008, p. 242) Broad-scope trust can be distinguished in system trust and generalized trust (Humphrey & Schmitz, 1996 cited according to Grayson, et al., 2008, p. 242). In system trust customers belief in institution-based mechanisms as structural constraints against breaking trust (S. P. Shapiro, 1987) like punishments for untrustworthy behaviour (Hardin, 1996) or knowledge-based mechanisms as publication of information about untrustworthy partners (P. R. Milgrom, North, & Weingast, 1990). Generalized trust is less context-specific but "(…) it is a tendency to trust all members of a particular social system, regardless of sector or context." (Grayson, et al., 2008, p. 243) It is influenced by psychological tendencies (Grayson, et al., 2008, p. 243), by cultural socialization (Sullivan, Peterson, Kameda, & Shimada, 1981), family upbringing (Hardin, 2006), and socioeconomic status (Fukuyama, 1996). Hence, generalized trust "(…) also reflects a person's beliefs about appropriate relationship norms which are learned through multiple interactions over time." (Grayson, et al., 2008, p. 243)

Narrow- as well as broad-scope trust help to reduce the complexity of all facets of a transaction and with it related uncertainty for customers. (Grayson, et al., 2008, p. 243) Grayson et al. (2008) revealed that the efficiency and complexity of an economic system is not related negatively to the level of narrow- and broad-scope trust (Grayson, et al., 2008, p. 243) but that this relationship is positive (Grayson, et al., 2008, p. 244). The background of this study was that scholars argued that complex societies always need social mechanisms that reduce uncertainty and eventually societies with high broad-scope trust would have less need in narrow-scope based trust. Eventually as "(…) broad-scope trust does not need to be built from scratch with each new relationship, it is a more efficient and cost-effective way of serving some of the uncertainty-reducing function that narrow-scope trust serves." (Grayson,

[3] As noted before trust in an organization and its service will be investigated similarly.

et al., 2008, p. 243) This would lead to replacement of some functions of narrow-scope trust by functions of broad-scope trust. (Grayson, et al., 2008, p. 244) However Grayson et al. (2008) showed that narrow-scope trust, which reduces complexity and uncertainty in economic life, "(…) is more (not less) likely to arise when it is legitimated by institutionalized trust, which can be formal (e.g., system trust) or informal (e.g., generalized trust)." (p. 244)

It was shown that broad-scope trust does not have any direct influence on customer attitudes or behaviours but rather it legitimates narrow-scope trust, which affects customers. Thus, broad-scope trust has an indirect influence on customer attitudes and behaviours whereat formal and informal institutions legitimize the behaviours of organizations and individuals. (Grayson, et al., 2008, p. 252)

Although legitimate actions might be effective in a certain environment their efficiency is not necessarily assured across different environments. (R. R. Nelson & Sampat, 2001; North, 1990) Grayson et al. (2008) stated a helpful example of this in regard to international environments. Although Country A's standard operating practices are more efficient than Country B's, Country A's practices might not be more effective in Country B, because what Country B's employees and customers regard as legitimized differs from what Country A's employees and customers regard as legitimized. This shows that different national cultures demand different actions and when a national or industry context legitimates trust, trust building will be seen by all involved parties as the standard approach for developing exchange relationships. (Grayson, et al., 2008, p. 244)

Indeed broad scope trust has a higher impact in Asian cultures although it does not directly influence narrow-scope trust. (Grayson, et al., 2008, p. 252) This effect will be explained in subsection 4.2.7 in more detail but shortly stated reasons are inter alia the higher uncertainty avoidance, the higher valued institutions and norms that guarantee trust, the greater power distance that increases the influence of institutions (Doney, Cannon, & Mullen, 1998), and the greater collectivism in Asian cultures that increases the influence of norms (Atuahene-Gima & Li, 2002).

Grayson et al. (2008) advise organizations to proactively influence trust in the business context as low broad-scope trust might have a negative influence on narrow-scope trust. (Grayson, et al., 2008, p. 252) It is worth noting that there is a trade-off between investing in the business context and not doing so. Not supporting government agencies and professional associations may result in less regulation, but it may also reduce broad-scope trust, which in turn can dampen narrow-scope trust. (Grayson, et al., 2008, p. 252) However this thesis will not cope with possibilities to influence broad-scope trust as the national

distance, especially in regard to an impersonal market approach, can be assumed to be a considerable barrier. It is also arguable if a foreign supplier can influence a national industry with the same efficiency and effectiveness as a national supplier can do. The threat that the effort outweighs the gains is reasonable.

Concluding, "(…) firms are never freed from the necessity of developing individual trusting relationships with their customers, regardless of the level of broad-scope trust (…)" (Grayson, et al., 2008, p. 252) but the cultural context influences the attractiveness of countries with a high level of broad-scope trust for foreign C-KIBS suppliers. In countries with a high impact level of broad-scope trust customers see trust building as a standard approach for relationship development. Although one might assume that this is advantageous for a C-KIBS supplier indeed countries with a high impact level of broad-scope trust are less attractive for a C-KIBS supplier. One reason is that these countries rely heavily on institutionalized trust factors but these factors differ per country. Thus, if one country's habitants regard governmental organizations as institutionalized trust mechanisms the other country's habitants regard traditions as institutionalized mechanisms. Thus it is a contradiction of system trust and generalized trust. Another reason is that the reliance on generalized trust that stems from cultural neighbourhood (e.g. relationship norms) is a very hard to overcome obstacle for foreign C-KIBS suppliers, because it cannot be influenced. Finally country habitants that rely strongly on broad-scope trust showed to have a lower level of toleration for uncertainty. But as was stated in section 4.2.3, although C-KIBS suppliers have several institution-based and knowledge-based mechanisms to overcome customer uncertainty, there will always remain a certain portion of uncertainty before the purchase because the C-KIBS starts delivering real value to the customer after implementation. In subsection 4.2.7 the unsuitability of countries with a high impact of broad-scope trust for a remote marketing and sales approach will be further validated and enriched with the concepts of high/low context and tight/loose cultures. This further validation is also necessary as the study of Grayson et al. (2008) is not free of shortcomings. 1) They focused on contexts with high broad-scope trust but did not deal with contexts with low broad-scope trust and its consequences and 2) they restricted their research on the influence of broad-scope trust by formal institutions. (p. 253) Eventually the influence of broad-scope trust might be higher with strong informal mechanisms, like strong personal linkages between people in a network that regulate the trustworthiness (Granovetter, 1985b) – personality-based mechanisms. 3) Grayson et al. (2008) could not explore the differences of firm-specific and interpersonal trust empirically. (p. 253) This is similar to the previously mentioned lack of empirical evidence

for the correlation between interpersonal trust and organizational performance in literature. 4) Grayson et al. (2008) did not explore factors that influence broad-scope trust (p. 253) although the author advises strongly for international operating companies to leave the change of broad-scope trust to national organizations.

4.2.5. Trust via a Consistent Process & Outcomes Strategy in Context of Industry & Exchange

In scholarly literature many researchers have stressed the importance of interpersonal relationships in global B2B marketing and sales to foster customer-supplier trust (Håkansson & Snehota, 1995; Håkansson & Snehota, 2001; Selnes, 1998) which eventually leads to more sales and higher profitability (E. W. Anderson, Fornell, & Lehmann, 1994; Reichheld, Teal, & Smith, 1996). But Plank et al. (1999) revealed that organizational trust is at least as (if not even more) important as trust in a C-KIBS supplier representative for the overall trust of a customer. Additionally no evidence could be provided scholarly for the influence of interpersonal trust on overall organizational performance. (Zaheer, et al., 1998, pp. 142-143) Grayson et al. (2008) revealed that system trust and especially generalized trust has considerable impact on the customers' trust in 'broad-scope trust' cultures. The author argues that such cultures are less attractive for a C-KIBS supplier willing to approach a national market with remote communication because broad-scope trust can hardly be controlled especially by foreign organizations. Eventually in subsections 4.2.5, 4.2.6, and 4.2.7, the author sheds light on the mechanisms by which interpersonal sales and marketing activities can be replaced and which countries the most attractive are.

Interpersonal relationships are considerable expensive as they rely on frequent and face-to-face communications (Iyer, et al., 2006, p. 611) which makes a local sales force indispensable. This high investment in individuals is in the today's dynamic economy with considerable employee mobility at least venturous (Iyer, et al., 2006, p. 612) also in regard to its differently valued impact by scholars. Furthermore studies revealed that interpersonal relationships are not always successful (Coviello, Brodie, Danaher, & Johnston, 2002; Gopalakrishna Pillai & Sharma, 2003) and organizations like Dell Computers or Marriott are successful in trust development "(…) by delivering high quality and consistent processes, products, services or outcomes rather than emphasizing interpersonal relationships." (Iyer, et al., 2006, p. 611)

However one should acknowledge that the abdication of interpersonal contact will probably lead to a loss of a critical advantage of interpersonal contact – the identification of

future client needs (Markham, 2004) and any impending changes in the customer's business (Kaplan, et al., 2005, p. 9) – that makes it difficult for C-KIBS suppliers to plan ahead (Marwaha, et al., 2006, p. 9). In regard to the fact that "(…) communication represents the primary strategic advantage inherent in the use of personal selling (…)" (Plank, et al., 1999, p. 63) it is at least arguable whether distance communication can be as effective as direct communication.

The feasibility of the abdication of interpersonal sales approaches in B2B relationships is strongly correlated to the rapid evolvement of distance communication technologies, like the internet. Hence, in the following subsections the circumstances in which distance communication technologies make it possible to abdicate interpersonal relationships will be set in the context of C-KIBS relationships. The emphasis will be on the creation of trust through different sources of trust, namely trust in the delivery process, based on consistent expectations and reliability of outcomes (knowledge-based trust) and institution-based trust. However, the two strategies of consistent process and outcomes and interpersonal relationships are not mutually exclusive. (Iyer, et al., 2006, p. 614)

The delivery of consistent processes and outcomes requires a high level of initial investment by the C-KIBS supplier but the costs for maintaining are much lower in comparison to a local sales force, leading to higher long-term profitability. (Iyer, et al., 2006, p. 612). Furthermore the implementation, monitoring, and evaluation of process and outcomes consistency is less expensive than for interpersonal relationships (Iyer, et al., 2006, p. 613) and eventually benefits the need for measurement in a global context and also benefits the customers' demand for simple, fast, and inexpensive transactions. The suitability of process and outcome consistency depends on the industry and exchange context, the market structure (infrastructure, cultural dimensions, institutional dimensions), and the country context. (Iyer, et al., 2006, p. 612)

For a consistent process and outcomes strategy specific and discrete transactions with stable task requirements that can be identified in advance are necessary. (Iyer, et al., 2006, p. 613) This is the case in customer-supplier relationships where the customer only fulfils the role of a consumer.

Customers prefer consistent process and outcomes buying strategies when performance evaluation can be based on outcomes which are easy to observe and to measure. (Iyer, et al., 2006, p. 615) This is problematic at least in a pre-relationship stage, where due to the knowledge asymmetry and the complexity of the C-KIBS performance measurement is complex and customers do not have specific expectations of the service. Furthermore, in the

here investigated C-KIBS environment not the delivery of the service is the expected outcome for the customer but the performance improvements for the customer by using the service – the C-KIBS itself only fulfils the role of an artefact (Su & Jin, 2007, p. 3243). To overcome this gap and foster trust the provision of knowledge-based mechanism for trust formation are important. As the outcomes are also influenced by the customer's circumstances (Iyer, et al., 2006, p. 615) he will only be able to get the right insights into the performance by the provision of additional information e.g. in the form C-KIBS related information he can directly apply to his specific case, and the assurance of the information quality by the KIBS supplier.

To perform a consistent process and outcomes buying strategy task-level commitments should be possible to make, like promises and guarantees for clear performance standards (institution-based mechanisms). These standards can be a delivery time but also more service specific aspects, like a service developed on basis of 'proven best-practices' or a maximum exploitation of the customer's capabilities by using the C-KIBS. However it is advantageous if these promises are under full control by the C-KIBS supplier.

Furthermore to perform a consistent process and outcomes buying strategy pricing should be based on comparison of competitive products or services. The lower the level of customization the easier it is to base pricing on comparison. (Iyer, et al., 2006, p. 615) However even standardized C-KIBSs cannot be compared easily due to their complexity and role as an artefact. This makes it necessary to appoint prices primarily on basis of the value of the service (Abele, Elliot, O'Hara, & Roegner, 2002) for the customer. Thus, a marketing presentation for a C-KIBS should offer prospects the possibility to relate own circumstances to the C-KIBS functionality – thus, fostering bilateral communication directions (e.g. marketing presentations with interactive functions).

As trust development is enabled more with known entities than with strangers (Granovetter, 1985a) it is crucial for C-KIBS suppliers in a global context to compensate this lack of social bonds with knowledge-based mechanisms like "(…) professionalism, prior performance reputations, competence, and other readily observable factors." (Iyer, et al., 2006, p. 615) Yoon et al. (1993) revealed that a "(…) a buyer's response to a service is consistent with his/her attitude toward the vendor's reputation, (…) and the effectiveness of a specific communications program can be enhanced by utilizing the company's reputation." (Yoon, et al., 1993, p. 215)

Company reputation is critical in successfully marketing a service (Thomas, 1978 cited according to Yoon, et al., 1993, p. 215) and interacts with information about an offering

and other elements of the marketing mix (Hagerty, 1978; Shimp & Bearden, 1982). Reputation reflects the history of an organization's past actions (D. M. Kreps & Wilson, 1980; Rosenthal & Landau, 1979) and affects the customer's expectations about the offerings' unobservable attributes, like e.g. quality (Margulies, 1977; C. Shapiro, 1982). The perceived reputation and the available information of the service offering determine the customer's expectations (Yoon, et al., 1993, p. 216) which itself determines the customer's purchase intention. (Crosby & Stephens, 1987; Lynch Jr, 1985)

A good reputation can enhance the customer's expectations about the offering (Schmalensee, 1978; C. Shapiro, 1983) and can dilute customer uncertainties about the offering's performance (Yoon, et al., 1993, p. 216) and thus a good reputation enhances rapid market penetration (Robertson & Gatignon, 1986). A positive reputation can serve as an entry deterrent for competitors (P. Milgrom & Roberts, 1982), helps to build a certain image and a loyalty relationship with the customers (Porter, 1998), and provides a strong market share position (Raj, 1985 cited according to Yoon, et al., 1993, p. 216). Thus, a certain reputation in regard to high-quality products enables companies "(…) to be more competitive in their marketing-mix implementation." (Yoon, et al., 1993, p. 216)

A suppliers reputation can also be used to build source credibility and thus enhance communication effectiveness (McGinnies, 1973; Sternthal, Dholakia, & Leavitt, 1978); "(…) for example, pricing and advertising serve as a communicator of product quality." (Yoon, et al., 1993, p. 217)

Reputation is of most importance for companies with services that have to be experienced by the customer because their quality is hard to observe or to verify by the customer. (P. Nelson, 1970) This is the case for C-KIBSs or more generally in cases of imperfect information (C. Shapiro, 1983), like e.g. with new-to-the-world products or simply incredible or dissuasive information. (Yoon, et al., 1993, p. 225). Then the reputation can be a means for forming a quality expectation. (Yoon, et al., 1993, p. 218) When information increases on basis of experience and word-of-mouth, the marginal value of reputation is expected to decline. (Yoon, et al., 1993, p. 218) Indeed, a supplier's reputation has significant influence on the customer's response to advertising as Tellis and Fornell (1988) showed that the customer's association between advertising and offering quality was stronger during later stages of the product life-cycle. In later product life-cycle stages "(…) advertising typically becomes transformational rather than informational (…)" (Yoon, et al., 1993, pp. 216-217) because in the later stages advertising aims at enhancing the customer's attitude towards the offering. Finally the value of reputation is high in situations of varying service quality under

one brand (C. Shapiro, 1982) or varying user-benefits across several brands of different suppliers due to competitive market (Allen, 1984).

It is important to note here that "(…) a customer's experience with any single offering will influence his/her expectations of all other offerings by the same marketer (…)" (Yoon, et al., 1993, p. 218) and thus consistency in terms of service attributes (e.g. quality or pricing) over the whole service/product line is advised (C. Shapiro, 1983; Wolinsky, 1987). For products/services that cannot be experienced in advance institution-based mechanisms like guarantees or warranties can act as liabilities for the service performance that reduce the customer's purchase risk and enhance satisfaction expectation. (Heal, 1977) As the performance and functioning of complex services like C-KIBSs depend not only on the supplier but for a big part also on the customer's utilization of the service, a full guarantee is hard to justify operationally and economically. (Yoon, et al., 1993, p. 218) However responding satisfactory to consumer complaints is always critical to enhance supplier reputation and maintain customer loyalty which fosters subsequent repurchases. (Bearden & Teel, 1983; Day, 1984) Thus, next to offer high quality products/services, an effective information flow management enhances reputation. (Yoon, et al., 1993, p. 216).

The second pillar of reputation is information about the supplier's identity, strategy, positioning, and market performance (Allison & Uhl, 1964; Porter, 1998; Raj, 1985; Winters, 1986) that can be diffused via direct communication between customer and supplier or by word-of-mouth between customers. (Yoon, et al., 1993, p. 218) Corporate advertising highlighting the supplier's extensive market coverage, market share, innovativeness (Porter, 1998) or brand popularity (Raj, 1985) is helpful in image creation (Winters, 1986). (Yoon, et al., 1993, p. 218) In general the higher the service/product quality the more beneficial advertising spending is for the supplier (Shugan, 1984) and the higher the advertising spending the higher the perceived service/product quality and its relative market prices (Kijewski, 1985 cited according to Yoon, et al., 1993, p. 219). Especially when customers experience ambiguous evidence about a service's/product's quality, brand advertising can have a significant effect on the supplier's marketing image (Jacoby, Olson, & Haddock, 1971; Winters, 1986) like quality perception (Hoch & Ha, 1986). In general, experience goods like C-KIBSs need higher expenditures for advertising and transmit information primarily indirect. (P. Nelson, 1970) Overall management of the corporate and brand identity is crucial to maintain company reputation and differentiation (Margulies, 1977 cited according to Yoon, et al., 1993, p. 219) as it leads to increased brand ratings (Allison & Uhl, 1964).

Table 5 summarizes and arranges the reputation attributes around three supplier attributes.

Table 5: Suppliers' reputation attributes (Yoon, et al., 1993, p. 222)

Innovativeness	**Customer-orientation**	**Market segmentation & coverage**
• Is an innovative company • Is a leader in designing new products and services	• Offers customized packaging of services • Provides help in solving customer's problems • Provides consistently high-quality service • Provides personalized services	• Is particularly oriented toward business customers • Has worldwide capabilities and resources • Is a leader in its field • Offers a broad array of products and services

Yoon et al. showed that the supplier's reputation (e.g. as being customer oriented) directly impacts a customer's buying intention as well as indirectly through the customer's expectations. (Yoon, et al., 1993, p. 223) Furthermore the supplier's reputation is as important as service information for customer expectations (Yoon, et al., 1993, p. 224) and a supplier's reputation can even enhance the credibility of a given message. Finally, as already described before, consistency between a positive supplier reputation and product/service information leads to "(…) greater market responsiveness to advertising programs (…)" (Yoon, et al., 1993, p. 226).

Not surprising, "A good company reputation helps to generate, but does not guarantee, a positive expectation on the company's offering, while bad company reputation typically stimulates a negative expectation on the offering." (Yoon, et al., 1993, p. 221)

In summary by performing a consistent process and outcomes strategy the overt investments for creating interpersonal trust and social bonds are avoided by emphasizing "(…) task performance, service levels, product and service quality, and task- and performance-related guarantees and assurances." (Iyer, et al., 2006, p. 616)

4.2.6. Trust via a Consistent Process & Outcomes Strategy in Light of Sales Frequency & Profit

The suitability of a consistent process and outcomes strategy also depends on the sales frequency and profit per transaction of the C-KIBS. (Iyer, et al., 2006, p. 616)

When the frequency and profitability of sales is high, vertical channels are used in which control of the distribution channel is attractive due to the profitability. In these markets interpersonal relationships are on a medium level as the customer-supplier communication is fostered by several individuals. For example, customer services and customer acquisition are separated departments.

When the sales frequency is low but the profitability is high, primarily direct selling approaches are used to tackle the customer's specific needs. The profit outweighs the higher selling costs and the development of a relationship with the customer is in the focus. Hence in these markets interpersonal relationships are required.

When the sales frequency is high and the profitability is low the propagation of products and services at minimum costs is performed.

Finally, when frequency and profitability is low, distance communication tools like the internet and telecommunication systems are used. (Iyer, et al., 2006, p. 616)

In these last two markets interpersonal relationships have the least significance. Interestingly organizations try to balance the low level of interpersonal interactions with an emphasis on consistent high quality even in markets with lower profitability while it is paradox that indeed organizations that perform interpersonal relationships are better able to provide a high quality due to their direct customer contact. (Iyer, et al., 2006, p. 617) However the accentuation of quality especially in regard to the abdication of interpersonal relationships is critical in today's economy where customers demand more for less.

It cannot be said that C-KIBSs fall into a special category but it can be stated that C-KIBSs are mostly characterized by a low sales frequency due to their complexity and to some extent customization. Even when the C-KIBS has a standardized basis the sales frequency will be at the start of a market launch quite low because its performance is hard to communicate via i.e. a promotion campaign due to the knowledge asymmetry between customer and supplier. Overcoming of this knowledge asymmetry should be the focus at the start of any marketing campaign, followed by campaigns that promote the C-KIBS itself. In regard to a new market launch the profitability will be also low in the beginning due to the cost-intensive development or production.

Hence one might state that C-KIBSs are characterized by lower sales frequency while the profitability ranges from low too high in dependence of the stage in the product life cycle and the pricing. This is similar to the KIBS literature that stresses primarily the appliance of personal selling.

However the *need* to rely on consistent processes and outcomes in markets with low profitability and the renunciation of personal selling in C-KIBS markets offers a competitive advantage in regard to the costs. A C-KIBS supplier that is able to shift the focus more on the consistent processes and outcomes can gain a competitive edge over competitors that rely on cost-intensive interpersonal relationships. (Iyer, et al., 2006, p. 617)

4.2.7. Trust via a Consistent Process & Outcomes Strategy in the Context of National Culture

The adaptability of a consistent process and outcomes strategy is finally shaped by cultural, infrastructural, institutional and other national factors. (Iyer, et al., 2006, p. 617)

As the recent global crisis has shown, distance between suppliers and customer operating on a global scale is not only geographically. This subsection will show that international operating organizations face primarily the challenge to overcome the cultural distance (Rosenbloom & Larsen, 2003, p. 309). Culture is of considerable importance because it has an impact on virtually all human behaviour. (Ferraro, 2002)

In this subsection the widely accepted concept of low context (LC) and high context (HC) cultures as well as the more recent distinction between tight and loose cultures will be used to reveal barriers in certain countries for a remote marketing and sales approach. Eventually certain countries will be distinguished by their acceptability of distance communication in the marketing and sales process. B2B relationships are primarily about communication and Hall & Hall (1990) also declared “culture is communication”. Hence there is a strong link between culture, business, and communication.

Communication in B2B sales and marketing revolves around getting, using, and giving information, (Plank, et al., 1999, p. 63) which is challenging across different cultures because the communicating parties screen and interpret messages differently due to their socialization by their own external cultural environment. (Rosenbloom & Larsen, 2003, p. 310) The less the external cultural environments match each other the more complicated the communication will be. (Triandis & Albert, 1987) Hall & Hall (1990) distinguished the cultures in LC and HC cultures. In LC cultures the communicating parties interpret messages solely on basis of the content and eventually “(…) the message needs to be explicit and detailed (…)” (Rosenbloom & Larsen, 2003, p. 310). In HC cultures the communicating parties interpret messages more in light of the context of the communication process and eventually messages do not need to be very explicit and detailed. (Rosenbloom & Larsen, 2003, p. 310) Thus, personal relationships play a crucial role in HC cultures which influences the suitability of certain communication channels as well as the frequency of communication and form of the message. (Rosenbloom & Larsen, 2003, p. 310)

In Table 6 examples of LC and HC countries are displayed.

Table 6: Countries categorized as low context and high context (Copeland & Griggs, 1985; Rosenbloom & Larsen, 2003, p. 310)

Low-context countries	**High-context countries**
Australia	Arabia
Austria	Argentina
Belgium	Brazil
Britain	China
Canada (English)	Canada (French)
Germany	Finland
Ireland	Greek
New Zealand	Hungary
Scandinavia	India
	Israel
	Italy
	Japan
	Korea
	Latin America
	Mexico
	Philippines
	Russia
	Spain
	Thailand
	Turkey

Rosenbloom and Larsen (2003) and Copeland and Griggs (1985) contradicted each other about the classification of France. Eventually France will be classified by another classification model later in this subsection.

If the parties' cultures match there will be less communication problems than in communication processes wherein parties from different cultural contexts are involved. In customer-supplier relationships with parties from HC and LC cultures much more frequent communication is needed to reach the same effect as in a communication process between parties from identical cultures. (Rosenbloom & Larsen, 2003, p. 311) Rosenbloom and Larsen (2003) studied the frequency of communication between exporters from a LC culture and their foreign distributors in LC and HC cultures. The study showed that the frequency of telephone and fax communication is positively related to the cultural distance between the two parties. Interestingly for e-mail communication it was the other way around. Rosenbloom and Larsen (2003) explained this with the "(…) very terse and abbreviated style typical of e-mail communication [that] allows little room for explanation or nuance." (p. 314) Hence, in a communication process with a bigger cultural distance e-mails are not the proper marketing tool. As the communication participants in the study were already in a relationship one might advise to avoid e-mail contact in a pre-relationship stage completely where trust is a crucial issue. The study showed that the choice of the appropriate marketing channel, which is crucial

in every marketing strategy, needs additional attention in a cross-cultural context. In international B2B sales and marketing different cultures prefer different channels. (Rosenbloom & Larsen, 2003, p. 309) For communication with participants from HC cultures 'old fashioned' channels are more appropriate than electronic media. Even if the parties from different cultures are in some way electronically linked their desire for the old fashioned channels will not suddenly fade away. (Rosenbloom & Larsen, 2003, p. 314) [remark by the writer]

In regard to an international C-KIBS marketing and sales campaign that spans several countries it is reasonable to focus on countries that have the same cultural context as the supplier. By this the efficiency of the market penetration can be raised, the way is paved for a more standardized successful approach, and less human involvement is needed (Rosenbloom & Larsen, 2003, p. 315). Furthermore as HC cultures indeed value the personal contact very high (Rosenbloom & Larsen, 2003, pp. 310-311), desire an "(…) already established (…) person-to-person relationship whereby the relevant executives from each firm have met each other on a face-to-face basis (…)" (Rosenbloom & Larsen, 2003, p. 310), and honesty and integrity of individuals (personality based mechanisms) matter more than guarantees offered by institutions (institution-based mechanisms), like in China or Japan (Kiong & Kee, 1998), a consistent process and outcomes strategy is not suitable. In these cultures cultural institutions provide the basis for trust due to their tradition but also due to a "(…) relative absence or influence of political and legal institutions necessary for contract enforcement (…)" (Iyer, et al., 2006, p. 618). This is identical to the contradiction of system trust and generalized trust, described in subsection 4.2.4.

Therefore LC cultures where legal and political institutions are the basis for trust building (most Western countries) are the best to approach via a consistent process and outcomes strategy. (Iyer, et al., 2006, p. 617) Even if in developing countries with a traditional society a form of institutional trust emerges "(…) its origins are more cultural rather than political–economic (…)" and for that reason interpersonal factors are determining, like losing its face or reputation. (Iyer, et al., 2006, p. 617)

A more recent approach to the distinction of cultures is the concept of *tight* and *loose cultures*. (Gelfand et al., 2011) Tight cultures "(…) have [social] strong norms and a low tolerance of deviant behavior (…)" and loose cultures "(…) have weak [social] norms and a high tolerance of deviant behavior." (Gelfand, et al., 2011, p. 1100) While the model of HC/LC cultures is primarily based on the influence of institutional and historical/traditional factors, the tight-loose framework incorporates also "(…) ecological and human-made

societal threats (…)" as well as "(…) strong versus weak [everyday] situations (…)" (Gelfand, et al., 2011, p. 1101) and their psychological processes. Ecological and human made threats are high population density, resource scarcity, natural disasters, territorial threats, or spread of disease. Nations that face these challenges have an increased "(…) need for strong norms and punishment of deviant behaviour in the service of social coordination for survival (…)" (Gelfand, et al., 2011, p. 1100) – hence, deterrence-based mechanisms. In contrast, nations with few ecological and human-made threats are characterized by a loose culture and eventually "(…) have a much lower need for order and social coordination, affording weaker social norms and much more latitude." (Gelfand, et al., 2011, p. 1101) [remark by the writer]

In tight nations governing systems restrict and control media institutions (broadcast, paper, Internet) (Gelfand, et al., 2011, p. 1101) which leads to a more limited access to new communication technologies (Gelfand, et al., 2011, p. 1103). Eventually the suitability of new communication channels like the internet as transaction channel is at least threatened. Tight nations also "(…) have a much higher degree of situational constraint which restricts the range of behavior deemed appropriate across everyday situations (…)" while loose nations "(…) have a much weaker situational structure, affording a much wider range of permissible behavior across everyday situations." (Gelfand, et al., 2011, p. 1101) This distinction between strong and weak situation is mentionable as it is related to "(…) the chronic psychological processes of individuals within nations." (Gelfand, et al., 2011, p. 1101) Individuals in nations with strong situations "(…) experience that their behavioral options are limited, their actions are subject to evaluation, and there are potential punishments based on these evaluations (…)" (Gelfand, et al., 2011, p. 1101). In other words, trust is fostered via deterrence-based mechanisms. Eventually these individuals are prevention-focus and cautious to avoid mistakes (Gelfand, et al., 2011, p. 1101). Thus, it is unlikely that individuals from tight cultures will behave contrary to their environmental constraints and e.g. use new communication tools more frequently. This concept correlates with the before mentioned impact of the content and context in message interpretations.

In Table 7 the countries are distinguished on basis of their tightness and looseness.[4]

Table 7: Tight and loose cultures of 33 nations (Gelfand, et al., 2011, p. 1103)

Countries with loose cultures	Countries with tight cultures
Australia	Austria
Belgium	Germany (former East)
Brazil	India
Estonia	Italy
France	Japan
Germany (former West)	Malaysia
Greece	Mexico
Hong Kong	Norway
Hungary	Pakistan
Iceland	People's Republic of China
Israel	Portugal
Netherlands	Singapore
New Zealand	South Korea
Poland	Turkey
Spain	United Kingdom
Ukraine	
United States	
Venezuela	

Table 8 displays LC countries with loose cultures.

Table 8: Comparison of LC countries and countries with loose cultures

Countries with loose cultures	LC countries
Australia	Australia
Belgium	Austria
Brazil	Belgium
Estonia	Britain
France	Canada (English)
Germany (former West)	Germany
Greece	Ireland
Hong Kong	New Zealand
Hungary	Scandinavia
Iceland	
Israel	
Netherlands	
New Zealand	
Poland	
Spain	
Ukraine	
United States	
Venezuela	

[4] Gelfland et al. (2011) illustrated the countries on a continuum ranging from tight to loose and did not indicate a tightness score where a loose culture becomes a tight one. Eventually the author of this paper made the choice to take the mean of the tightness score as the border. Countries with the exact mean score are incorporated in the loose party. This is a subjective choice and calls for future exploration to be justified.

Although both models are fairly congruent some tight countries were indicated as LC countries and the other way around. These countries are Austria, Brazil, Great Britain, Hungary, Israel, and Spain. This could not be explained for all paradoxes by a tightness score that was very near to the mean score for every country. For these countries the tightness/looseness model is chosen to be decisive because of its actuality and its higher comprehensiveness.

Finally the infrastructure of a country determines the suitability of a consistent process and outcomes strategy. In countries with low infrastructure availability interpersonal relationships are based more locally and on identity. (Iyer, 1999) A consistent process and outcomes strategy based on institutional trust will not be successful in these countries. Indeed, the low level of infrastructure development will probably avoid an effective remote marketing and sales process.

One should note that more recent studies revealed that even in HC/tight cultures such as China interpersonal relationships become increasingly a disadvantage due to its costs and effort while branding, quality, and distribution channels become also in these cultures the critical factors for success. (Fan, 2002) The further a country develops economically the further the development of political and legal institutions and the more suitable a consistent process and outcomes strategy is (Iyer, et al., 2006, p. 618) although this will not lower the need and impact of narrow-scope trust formation. However if one looks at the fact that China opened its economical borders to Western countries already 20 years ago but business relationships between Western countries and China are still fairly reserved it is reasonable to state that it will take additional 20 years until process and outcome consistency will become an accepted transaction economy between Asian and Western countries. Eventually this thesis stresses that the distinction and impact of different cultures is still decisive and reasonable in the context of success of a remote marketing and sales strategy.

Although there is some overlap between HC/LC cultures and tight/loose cultures further research is necessary to investigate the relationship between these two concepts. However it is useful to take both concepts into consideration to identify potential regions that match with the C-KIBS supplier's culture and also with each other because as Herodotus (1998) remarked nearly 2500 years ago, "(…) if one were to order all mankind to choose the best set of rules in the world, each group would, after due consideration, choose its own customs; each group regards its own as being the best by far (…)" (p. 185). In this view unfitting cultures might lead to cultural conflicts (Gelfand, et al., 2011, p. 1104) at least in regard to a standardized approach. In a world of increasing global interdependence

understanding cultural differences on the most comprehensive level as possible can be seen as critical.

One should acknowledge that Gelfland et al. (2011) state themselves that there is a need to investigate the tight and loose cultural framework at different levels of analysis as e.g. an organizational level. However they assured a congruence between individual observations and the aggregation to a higher order construct (here nation) by calculating within-nation agreement of the observed individuals. (Gelfand, et al., 2011, p. 1102)

Summarized according to Iyer et al. (2006, p. 618) following factors determine the need for turning away from interpersonal relationships to unleash the advantages of a consistent process and outcomes strategy:

- Type of industry – firms that have lower levels of profitability will tend to move toward process and outcome consistency.
- Type of product – firms with industrial products whose customers can define their process and outcome needs will tend to move toward process and outcome consistency.
- Firms in countries that have traditional cultural contexts will be slower to adopt process and outcome consistency.
- Firms in countries that have developed institutions will be faster in developing process and outcome consistency.
- Firms in countries that have developed economies will be faster in developing process and outcome consistency.

Overall interpersonal relationships are under certain circumstances not as important as literature suggests. However one should be aware that countries differ on several aspects and hence "(…) a standardized global strategy may not be equally effective in multiple country settings." (Iyer, et al., 2006, p. 618) One must choose between a more unique marketing approach or narrow the scope on congruent countries. But interpersonal relationships still stay critical as long as outcomes and processes cannot be made certain to the customer and are necessary to deepen relationships with key suppliers and customers to defend against competitors that "(…) disrupt the market through an emphasis on process and outcome consistency (…)" (Iyer, et al., 2006, p. 619).

In the following section the potential of performing a consistent process and outcomes strategy via the internet as communication channel will be outlined.

4.3. The Internet as Trustworthy Transaction Channel

The importance of business relationships was already highlighted as well as the role of communication and its frequency and richness of information to foster trust which becomes even more challenging and crucial in regard to globalization and internationalization. (Borghini & Rinallo, 2003; Huhtinen & Virolainen, 2002) In this section the concepts of business relationships, communication, information, and trust formation will be related to the internet as communication and transaction channel. It will be shown that the internet is the best fitting channel in regard to the abdication of interpersonal contact, trust formation and knowledge creation. Therefore the author will start to investigate the area of online marketing and sales more broadly by the area of business-to-business international internet marketing (B2B IIM). Eventually the concepts of online business relationships and online trust will be investigated more deeply. These insights into online communication will be used in section 6.3 as input for a list of requirements to be fulfilled by the research sponsor's marketing instantiation and that might reveal, on basis of a periodically evaluation, which areas need attention and improvement.

The internet has considerable influence on the rapid pace of globalization. (Millar & Choi, 2011, p. 28) Web communities have evolved to an important business market (Bughin, Chui, & Miller, 2009) when organizations are able to gain the communities' trust (Bughin, et al., 2010, p. 3) and the internet offers extensive possibilities to manage a C-KIBS suppliers' branding efforts through word-of-mouth marketing. (Bughin, et al., 2010, p. 3) The internet and its enormous amount of data (e.g. from social communities or website visitors behaviours) offers C-KIBS suppliers also opportunities to experiment with and test innovations in customer experiences and to make decisions based on data mining – in some cases even in real time. (Bughin, et al., 2010, p. 7) Hence, the application of the internet in customer-supplier-relationships has the advantage of data collection, forming the opportunity of more efficient servicing customer desires and to increase the quality of predictive analytics. (Davie, et al., 2010, p. 4)

Although the internet enhances comparison of information and explicit knowledge via e.g. wikis, documents and blogs (Bughin, et al., 2010, p. 5) its ability to transmit tacit knowledge is at least unclear. (Millar & Choi, 2011, p. 28) However for trust-building knowledge is crucial and can hardly be compensated by information. Already Einstein stated: "knowledge is experience – everything else is just information". (Millar & Choi, 2011, p. 28) Thus, when using the internet as communication channel it is necessary to communicate not only information but more important experiences.

At this point the author challenges the view of Millar and Choi (2011) who argue that because of KIBSs' intangibility and heterogeneity it is nearly impossible "(…) to display and communicate the (experience of the) service on the internet (…)" and the status of the information asymmetry stays unchanged. (p. 28) This statement might be true for completely customized C-KIBSs that are developed on basis of individual customers' wishes but does not hold for software-related ready-to-market services that have a standardized basis. In this situation the C-KIBS supplier has at least the possibility to offer the customer first-hand experience by providing a trial. However one should note that the provision of a trial version enhances the threat of the before mentioned emulation and copies. Thus the C-KIBS supplier faces a trade-off between maximizing the customer's experience and to take the risk of fast moving market followers. This threat is most reasonable in a diversification or product development strategy (Ansoff, 1965) with new-to-the-world services (Trott, 2008, p. 399), like in case of the C-KIBS of the research sponsor. In this thesis the prototyping of an instantiation will be shown that indeed will be able display and communicate a C-KIBS advantage without the need to offer a trial version. Overall, the more knowledge-intensive a C-KIBS is and the more there is a need for customer integration in the simultaneous consumption and production process the less suitable the internet as transaction channel is. (Millar & Choi, 2011, p. 28)

4.3.1. Characteristics of Internet Communication

Today's economy revealed that the internet is not the all-in-one device suitable for every purpose as it was seen in the beginning of the 21st century. However scholars agree on the internet's potential to increase the overall communication in customer-supplier relationships (Lages, Lages, & Lages, 2005) and its potential to improve the quality of communication (Leek, Turnbull, & Naude, 2003; Osmonbekov, Bello, & Gilliland, 2002; Rao, Perry, & Frazer, 2003). As the quality of communication is positively related to the quality of the relationship it can be concluded that the internet as communication tool can enhance relationship quality which strengthens the relationship and improves efficiency.

Internet communication will be defined following Klanac (2005) "(…) as sharing of information between companies through the Internet as the medium. Main forms of Internet communication are e.g. email, websites, and extranets." (p. 3) Internet communication is characterized by four dimensions: frequency, direction, content and medium. (Mohr & Nevin, 1990)

The internet increases the amount of exchange information because customer and supplier can 1) interact independent of distance, 2) communicate in real time, (Geiger &

Martin, 1999) and 3) independent of time (Rowley, 2001). Eventually communication on the internet is time effective (Rao, et al., 2003) and efficient (Eng, 2004) and, due to its increasing frequency of contacts in a relationship (Rao, et al., 2003), improves the overall communication in a customer-supplier relationship(Boyle, 2001; Osmonbekov, et al., 2002).

In general communication can be unidirectional and bidirectional (Mohr & Nevin, 1990) but in the internet it can also be multidirectional as all parties can communicate with each other (Hoffman & Novak, 1996). Customers can initiate communication (Geiger & Martin, 1999) and companies also have the possibility to customize communication (Geller, 1998) as well as performing communication with customers on a one-to-one basis interactively (Rowley, 2001; Sinkovics & Penz, 2005). These broad possibilities for information sharing strengthen business relationships and organization integration. (Duncan & Moriarty, 1998)

Modality can be shaped by:

- information richness – refers to the ability of a medium to support verbal, symbolic and relational communication (Mohr & Nevin, 1990); e.g. videoconferencing support rich communication while email has a low till medium level of richness (Boyd & Spekman, 2001; Mohr & Nevin, 1990)
- commercial vs. non-commercial purpose and personal vs. impersonal – in the internet all four possible combinations can be found (Deeter-Schmelz & Kennedy, 2002)
- number of parties involved – "(…) one-to-one (e-mail, voice mail and talk program), one-to-few (email list), few-to-few (multiparty chat), and many-to-many (mailing lists, newsgroups, World Wide Web) (…)" (Hoffman & Novak, 1996 cited according to Klanac, 2005, p. 5)
- level of formality – e.g. e-mails and websites are more informal modes which eventually reduce formality in customer-supplier relationships (Eng, 2004; Osmonbekov, et al., 2002)

Finally studies revealed that information exchanged via internet are more detailed (Leek, et al., 2003), accurate (Osmonbekov, et al., 2002; Rao, et al., 2003), and transparent because all parties have access to the information (Eng, 2004; Osmonbekov, et al., 2002). The type can be distinguished by Gross' (1968) classification of physical inventory, promotional activities, product characteristics, pricing structures, and market conditions as well as additionally, problem solving, and order placing (Boyle, 2001).

Thus, the internet has considerable significance for the overall communication as it:

- increases frequency and improves overall communication in a business relationship,
- affords one-to-one customized interactive communication,
- enables customers to initiate communication,
- affords information sharing and thus provides for all involved actors access to information,
- decreases formality of communication while increasing its accuracy,
- and increases the amount and depth of the information exchanged. (Klanac, 2005)

As was shown, interpersonal face-to-face communication is not in every business setting as important as literature suggests (Iyer, et al., 2006) and internet-based channels are becoming more and more a basis for new relationships. (Leek, et al., 2003) However the internet cannot substitute face-to-face communication but is rather a compliment or prerequisite (M. J. Kelly, Schaan, & Joncas, 2002; Rao, et al., 2003) hence it is not effective applicable in settings where interpersonal relationships stay critical and it has to be combined with other approaches. However in settings where interpersonal relationships are of minor importance the internet can accentuate the valued assets like consistent processes and outcomes. Eventually the use of the internet does not offer the opportunity to approach e.g. HC cultures but can be an efficient remote communication tool for LC cultures.

But to unleash the potential of internet marketing (IM) as communication medium companies should be aware that it is not enough to be able to implement IMs critical success factors (CSFs) but first of all it is crucial to know how to identify these factors. (Eid & Trueman, 2004; Mattila, Karjaluoto, & Pento, 2003) In the area of IM "(…) critical success factors can be viewed as the activities and practices that must be addressed to ensure successful implementation." (Eid, Elbeltagi, & Zairi, 2006, p. 88) In the style of Eid, Elbeltagi et al. (2006) the CSFs for the implementation of B2B IIM will be illustrated by using three categories: marketing strategy factors, market factors, and website factors. (pp. 89-91)

4.3.2. Marketing Strategy Factors

First of all one should note that online marketing strategies should not be seen isolated from traditional channels but internet marketing should be integrated in the overall marketing strategy "(…) in ways that complement and support their traditional channels" (Eid, et al., 2006, p. 96). In an international marketing strategy there might not yet already traditional channels be established but traditional marketing techniques have still an importance in this case, like reputation management or the traditional gift-giving.

Collaborating with strategic partners (technology, distributors, and suppliers) to get closer to customers is important but in regard to internet marketing especially networked communities consisting of external and internal stakeholders are most important. However the importance and impact of such collaboration depends on the stakeholder's position in the company's value chain. (Eid, et al., 2006, p. 97) As this thesis focusses on customers in the role of a consumer, they are naturally placed at the end of the C-KIBS suppliers value chain and eventually real collaboration is not a necessity but rather a choice.

Deciding on the potential audience is a key activity in every marketing strategy and affects in the internet marketing aspects like the C-KIBS' website or the internet marketing techniques (Eid, et al., 2006, p. 97) in form of communication channels (e.g. social media marketing, search engine marketing, or e-mail marketing). By defining key-customers, companies can personalize their information flow to the customer and meet by this the customers' individual needs. (Eid, et al., 2006, p. 97)

Especially in regard to operating technically and economically effective and efficient a well-balanced blend of technological infrastructure in regard to availability and standardization to reach information integration (Eid, et al., 2006, p. 97; Eid & Trueman, 2004) and maintainability is important.

4.3.3. Market Factors

One of the most important factors in the use of the internet as transaction channel is customer acceptance of the internet marketing. Customer acceptance can be created by providing customer specific information, an individualized login area on the company's website, or easy to use upgrade purchase system for the service contract (Eid, et al., 2006, pp. 102-103). For services that heavily depend on the internet, the factor customer acceptance is not less important but does not need the same active investment by the supplier because customers feel more comfortable with the internet.

Strongly related to the customer acceptance is easy and affordable access to the Internet. But not all countries provide the same advance network infrastructure as the Western countries. (Eid, et al., 2006, p. 102) Companies willing to operate in a less networked market can choose to handle this issue proactively by establishing the necessary infrastructure (Phan, 2002) or to handle this issue reactively by focusing on countries with already well developed network infrastructure (Palumbo & Herbig, 1998).

Availability of international transaction channels, meaning that the company's website should not only market the services but should also offer the opportunity for purchasing or

should at least show where the service can be purchased, is also a critical success factor for B2B IIM. (Eid, et al., 2006, p. 102)

Finally, trust is an important factor in the internet environment (McCole, 2004) and especially in the C-KIBS industry. Internet trust covers trust in the internet and the website, trust in the website's content and trust in the delivery fulfilment and the service. (Urban, Sultan, & Qualls, 2000) This is strongly connected to the general two trust pillars in B2B trading: trust in the service and trust in the company/sales reps.

To build and to retain online inter-organizational relationships trust is crucial. (Pavlou, Yao-Hua, & Gefen, 2003) and can be established in online transactions by the concepts of reliability, predictability, and fairness (A. Agarwal & Shankar, 2003) during three different stages, "(…) namely calculus-based, information-based and transference-based." (Matopoulos, et al., 2006, p. 407) In these stages the on page 45 named trust-building mechanisms come into play, namely calculus-based and institution-based mechanisms in the calculus-based stage, identification-based, personality-based, and knowledge-based mechanisms in the information-based stage, and finally deterrence-based mechanisms in the transference-based stage. These stages are related to the relationship stages and stages in a purchase decision cycle. Eventually, deterrence-based mechanisms have minor impact in pre-relationship stages.

4.3.4. Website Factors

To make a website contributing to the B2B IIM success it should have several design characteristics that will be presented in this section. The focus lies in this subsection rather on generally admitted factors than on factors that are important for trust creation. Trust-building mechanisms in online-grounded business relationships will be outlined detailed in section 4.4.

Keeping things simple on a website is one of the most important factors because "(…) business decision makers want to absorb information on a Web page in as short a time as possible (…)" (Eid, et al., 2006, p. 103) This simplicity covers the amount of text and images on the website and the ease-of-use (usability) of the website which refers to a clear structure and navigation on the website. (Eid, et al., 2006, p. 103) Some of this usability principles are the adoption of a breadcrumb bar, a sitemap, the rule of a maximum of seven navigation points and the two-clicks rule.

Furthermore the on the website published information should be accurate because "(…) information that is viewed as biased will not be taken seriously and will have a negative effect on the company's image." (Eid, et al., 2006, p. 103) The information on the website should also take the different national cultures and their social and cultural environment (Eid,

et al., 2006, p. 104) into consideration because the culture significantly impacts internet users' online behaviour and their expectations from a website. (Krishnamurthy & Singh, 2005). Thus adapting websites to the target culture by taking "(…) cross-cultural aspects of interface design, navigation currency, time and state conventions, localization, and internationalization (…)" (Eid, et al., 2006, p. 91) or more simple multi-lingual capabilities (S. G. Wilson & Abel, 2002) into account enhances the usability, rises the number of purchases and creates a more favourable attitude among the visitors toward the website. (Singh, Furrer, & Ostinelli, 2004) Understanding the foreign cultures is a pre. (Eid, et al., 2006, p. 104)

The speed of a website is not only important in regard to the foreign network capabilities (Eid, et al., 2006, p. 103) but also in regard to search engine marketing (SEM). SEM, reciprocal cross-linkages to other sites, or publishing URL in all company correspondence (Eid, et al., 2006, p. 104) are useful marketing techniques to promote a website and eventually to increase the website visitors traffic.

Hence the website factors are moderated by the market factors because a website will only contribute to the international success of the B2B organization if it operates in an environment of security and trust within a culture that encourages the facilitation of the internet for trading purposes. (Eid, et al., 2006, p. 91)

Although all of these factors should be covered by organizations positioned in the B2B area the precise importance weighting depends on the industry and the product or service. (Eid, et al., 2006, p. 104)

4.4. Mechanisms for Building Customer Trust & Creation of Customer Knowledge in Online Business Relationships

In this section the before mentioned mechanisms to overcome the knowledge asymmetry between a customer and a C-KIBS supplier and to foster trust between a C-KIBS supplier and a customer will be set in the context of online marketing and sales and investigated in the light of the defined obstacles. It is framed by the thesis' focus on business 'relationships' where customer and supplier are unknown to each other.

"Business relationships are processes of continuous interaction and exchange between buyers and sellers in the setting of the industrial market." (Hakansson & Johanson, 1988 cited according to Klanac, 2005, p. 3).

Trust formation in business relationships depends on three dimensions that interact dynamically: the type of interaction, the stage of the relationship lifecycle and the type of transacting organizations." (Matopoulos, et al., 2006, p. 405)

The type of interaction can be divided into direct and indirect transactions whereat indirect transactions are important in early stages of the transaction relationship because intermediaries between customer and supplier can act as risk buffers and trust generators. (Matopoulos, et al., 2006, p. 409) Direct transactions were shown to be difficult in early stages of transaction relationships. (Pavlou, et al., 2003)

As described on page 35, scholars have identified different stages of customer-supplier relationships and these stages frame different forms of internet usage (Boyd & Spekman, 2001) and more general different marketing communication requirements (P. H. Andersen, 2001). Practices that can be applied in a pre-relationship stage and practices that have importance in the early stage are worth investigating. It will be shown how the internet communication facets *frequency, direction, mode* and *content* should be adapted to the specific relationship stage. (Klanac, 2005, p. 1) Furthermore every stage "(…) involves several cognitive interactions with the client, where trust can play a crucial role" (Scarso & Bolisani, 2011, p. 51) and hence every step needs different trust-building mechanisms that support the different forms of trust. The focus lies primarily on how "(…) more personal, individualized and interactive modes of the Internet communication should be employed." (Klanac, 2005, p. 1)

Two types of organizations can be distinguished very generally in business relationships: traditional companies that "(…) are totally independent to the use of electronic applications (…)" and that use electronic applications only for efficiency purposes and electronic companies that coordinate business activities primarily through electronic applications, "(…) rather than face-to-face communication." (Matopoulos, et al., 2006, p. 408)

Two trust scenarios with different trust requirements will be highlighted: interaction between traditional and electronic companies and interaction between electronic and electronic companies. The third scenario, interaction between traditional and traditional companies, lies beyond the scope if this thesis because the case deals with an electronic C-KIBS supplier. The focus lies on a sales relationship with the customer's role of a consumer.

As in the case of the sponsor as supplier of C-KIBSs, relationships between electronic companies are often project-oriented. Because of this eventual lack of a relationship history the focus lies at the early stages of the relationship lifecycle on initial trust rather than knowledge-based trust. (Saunders, Wu, Li, & Weisfeld, 2004) Eventually intermediaries or agents that are trusted by the transacting parties are useful (Kasper-Fuehrer & Ashkanasy, 2001).

Another case is that an electronic company supplies a traditional company. This relationship is more difficult because differences in the level of use, experience and adoption of electronic applications may generate lack of trust. This effect is enhanced because of the eventual information asymmetry. (Matopoulos, et al., 2006, p. 410) Trusted institutions (e.g. B2B marketplaces that act online as well as offline) can act as intermediaries to overcome this gap if they are able to cope with the different trust requirements of customer and supplier. "For example, the traditional company may face lack of trust in services and in technological solutions, while the electronic company may face lack of trust in business activities." (Matopoulos, et al., 2006, p. 410)

Thus, the main difference between traditional and electronic companies lies in the receptivity for trust signals/indices in regard to electronic communication/transaction channels as well as supplied electronic services. For a C-KIBS supplier this means additional necessary effort in trust creation for business relationships with traditional companies but not necessarily a need for completely different trust-building mechanisms (e.g. trust via intermediaries has impact on both customer types). Because of that and for the simplicity trust-building mechanisms that can be applied to both types of customer organizations will be shown together, rather than split up by customer type.

In customer-supplier relationships that are in a pre-relationship stage no contact between customer and supplier exists due to a great distance between the parties. (David Ford, 1993) However the internet offers the chance to overcome at least geographical distance (Geiger & Martin, 1999) and hence the parties will be prone to use the internet as communication tool, (Klanac, 2005, p. 7) at least in low context countries with loose cultures. The focus lies on creation of customer awareness (P. H. Andersen, 2001) and customers search for information about products and current suppliers (Deeter-Schmelz & Kennedy, 2002). Furthermore market segmentation has great importance (Bagdoniene & Jakstaite, 2008, p. 224) and strategic significance (Eriksson & Lindvall, 2002). In regard to the international market approach especially the geographical and cultural segmentation will be stressed as in the beginning of the relationship proximity of the C-KIBS supplier and the customer is crucial. (Muller & Zenker, 2001)

Communication is impersonal, inactive, and more mass-oriented. In general no response can be expected from customers. (Mohammed, Fisher, Jaworski, & Paddison, 2003)

Ornamental websites can fulfil the purpose of offering generic information. (Rowley, 2001) However, the first challenge is to lead prospects on the website. To create the awareness the potential customers have to be addressed at their location. In the internet these

can be social networks or search engines. In general two forms of addressing can be distinguished; push and pull. In push communication the customer is directly converged via advertisement (primarily the case on social networks) while in pull communication the advertisement is shown when the prospect takes the initiative by searching for a solution (primarily the case in search engine advertising).

"It is the easiest way to sell services when clients show initiative." (Bagdoniene & Jakstaite, 2008, p. 223) Eventually customers should be made aware of the service by the KIBS supplier by informing them about the service benefit, encouraging the use of the service, and after purchase reminding them of the benefit. (Bagdoniene & Jakstaite, 2008, p. 223) C-KIBS suppliers should further maintain their corporate image and distinguish themselves and their service from competitors. (Bagdoniene & Jakstaite, 2008, p. 223) Hence a combination of demand-oriented and image-oriented promotion is suitable. (Crane & Winston, 1993)

Although websites should in early stages primarily offer generic information it is also crucial to provide some form of interactivity. The interactivity aspect is critical to activate some form of bilateral communication (Dwyer, et al., 1987) by the provision and use of one-way and two way communication tools which reduces the distance (P. H. Andersen, 2001) and eventually enables the evolution of the relationship.(Ghose & Dou, 1998) The communication has not necessarily to be direct. A first step can be the provision of a free download of an information package or tool that is in some way related to the offered service. An example is the iTunes music player from Apple. It is downloadable for free without the necessity to register although the service Apple wants to sell here is its music store which can be accessed via iTunes.

It is important to acknowledge that not all customers want stronger relationship at least not directly at the beginning of their purchase decision cycle. (Mohammed, et al., 2003) As it is impossible to distinguish these customers from those that are willing to go directly in a two-way communication, one should provide interactivity also without any restrictions. Hence in this stage the interactivity should be free to every website visitor without the necessity for customers to register or provide own data.

Bilateral interaction can start with still low interdependence between the parties and does not require considerable investments. (Dwyer, et al., 1987) Uncertainty is high and personal contact is required to overcome uncertainty. (P. H. Andersen, 2001) Examples for remote communication channels for personal contact are e-mail, chat rooms, or interactive websites. (Deeter-Schmelz & Kennedy, 2002) Furthermore the supplier can gather valuable

information by tracking customer behaviour on the website. (Berthon, Lane, Pitt, & Watson, 1998) Information should be provided that reduce uncertainty (Duncan & Moriarty, 1998), such as service specifications and order policies (Deeter-Schmelz & Kennedy, 2002). Also a characterization of the target customer (here: organizations that follow a prospector-like strategy) can help prospects to appraise the suitability of the C-KIBS for their specific needs and thereby reduces uncertainty. Additionally, this characterization supports the C-KIBS supplier in getting primary customers that can best capitalize on the C-KIBS's capability and eventually will experience the C-KIBS the most positive. These customers can then later be utilized as reference customers. It is critical here that the offered information is comprehensive, accessible, timely, accurate and transparent. (Klanac, 2005, p. 8) The benefit of the internet is here that information can be easily enriched. (Klanac, 2005, p. 8) Furthermore the interactivity should be increased to foster the relationship and reduce uncertainty (Klanac, 2005, p. 8) with e.g. online chats and facilities that foster customer-to-customer communication – multidirectional communication. Eventually the internet can also unfold its strength in knowledge exchange and sharing (Eng, 2004) by viral mechanisms. Thereby the first contact between customer and supplier can be induced via the *knowledge-based mechanism* of word-of-mouth suggestions. (Scarso & Bolisani, 2011, p. 52).

Companies can also use the strength of the internet to reduce formality, if they want. (Eng, 2004; Osmonbekov, et al., 2002)

Furthermore *institution-based mechanisms* in the form of references and certifications can create trust (Scarso & Bolisani, 2011, p. 52) if the references and certifications are indeed trustworthy and/or known by the prospect and have also meaning to the prospect (e.g. due to a similar economic environment, in case of the presentation of reference customers). However, if a supplier starts directly marketing and selling a service globally, mostly these meaningful references will be missing. Eventually other triggers for the prospect to enter the website have to be identified and implemented into the marketing campaigns. One of these triggers is the already mentioned gift-giving.

Free services and products have a long history in transaction economy as mechanism to induce further sales of a related paid product or service (increasing customers' willingness-to-pay), like the free give away of Gillette razors and eventually selling of razor blades or Google's concept of offering the most advanced search technology for free but selling keyword-related ads for advertisers (C. Anderson, 2008a, p. 2). Gift-giving itself has even a longer history as it was an important mechanism in pre-modern societies to induce 'exchanges'. One might think here of the concept of dowry.

Jagpal and Spiegel (2010) revealed that independent of the market structure (oligopoly vs. monopoly) or behavioural modes (competition vs. cooperation) the quantity of output sold (and thereby the profit) is larger with the provision of free samples than without free samples (p. 218) and with an increased effectiveness of free samples "(…) it becomes more profitable for firms to increase their sold outputs." (p. 215) Furthermore the market demand and sold output increases parallel to an increased distribution of free samples (Jagpal & Spiegel, 2010, p. 217) also because the customer welfare increases with free samples (Jagpal & Spiegel, 2010, p. 218).

Only the market price is oppositional affected by the market structure. In oligopoly markets free samples lead to an increase in the market price as the increased demand is bigger than the sold output. In monopoly markets the market price is lowered to increase sold output to capitalize on the increasing demand. (Jagpal & Spiegel, 2010, p. 218)

The research sponsor operates in an oligopoly and heterogeneous market (the MoP standard is yet introduced but not yet established in the market). Although the research sponsor is currently the only supplier of portfolio management software conform to the MoP standard, there are some other suppliers of portfolio management software mainly sector specific (e.g. trading or IT) or suppliers of general ERP software packages that incorporate portfolio management more or less detailed.

In general "(…) each firm's profitability depends on its own free sample policy (…) as well as on the strategies (number of free samples) chosen by each of its competitors." (Jagpal & Spiegel, 2010, p. 215) However the effectiveness of free samples does not only depend on the free sample policy of the competitors but also on the customer's uncertainty about the product's/service's benefits. The demand-enhancing effect of free samples is higher with higher uncertainty. (Jagpal & Spiegel, 2010, p. 215) Thus free samples are naturally accurate for knowledge-intensive business services as long as their adaption can be measured and verified in terms of strengths and costs (Lin, et al., 2005, p. 213).

Once the prospect enters the website the supplier faces the challenge to support the prospect in matching the C-KIBS offering to his specific problem. The use of 'freemiums' as special form of gift-giving is advised.

The freemium theory resists on giving away of assets for free that costs are decreasing on 'near-zero marginal costs' so that these costs can be safely disregarded. Thus, the main difference between freemiums and elder gift-giving is that the given assets in the traditional gift-giving tactic indeed produce reasonable costs. That is the reason for giving away mainly tiny quantities. (C. Anderson, 2008a, p. 6; Jagpal & Spiegel, 2010, p. 214) However costs for

assets resisting on the digital world are near-zero and eventually can be given away for free in a much wider quantity and also quality due to their scalability. Thus, the freemium model has primarily meaning in the digital world as in the real world marginal costs seldom decrease on a near-zero level. (C. Anderson, 2009, p. 281) One of the newest freemiums are free-to-play browser videogames where players can pay for additional content or gaming advantages. (C. Anderson, 2008a, p. 2)

Additionally by recognizing e.g. generic information as ‘waste’ (not in negative meaning, but something that a supplier does not have to care about in regard to costs) the way is paved to think about higher-order functions that eventually will attract a broader audience. E.g. elderly software writers worried about scarce computational resources like memory and CPU performance, but as transistors are today at near-zero costs software writers can focus on graphical user interfaces. (C. Anderson, 2008a, p. 5)

For customers it makes indeed a psychological difference if an asset is free or costs one cent. (C. Anderson, 2008a, p. 5) The venture capitalist Josh Kopelman called this the ‘penny gap’ and it is probably the reason why micropayments failed. (C. Anderson, 2008a, p. 5)

One has to note that ’free’ has to be seen in relation to the outcomes. Of course, any distributable asset generates some costs for the supplier but can reach especially in the internet a gigantic number of receivers with an increasing tendency from year to year. Thereby it follows the rule that “(…) pricing should balance recovering the investment with encouraging greater use.” (Marwaha, et al., 2006, p. 15) Scalability is a closely related concept, here. Freemiums are the lowest cost way to reach the largest audience group of receivers and thus is a strong reputational method for getting attention and inducing referrals. Indeed it seems reasonable to induce an intangible asset like ‘reputation’ (which is at scarce) also by an intangible asset like a ‘freemium’ (as zero is naturally immeasurable as not observable). Plagiarism of Chinese companies is an extreme example of zero-cost marketing with bringing products to a largest possible audience.

However the challenge of using freemiums as accelerator of sales is that people typically associate free assets with low quality. But if the added value is unclear to the receiver he will first of all start with a free offer (and taking the risk of receiving something with a lower quality) instead of taking the high quality paid offer. Movie trailers on YouTube are an example here; although the video quality of YouTube videos is not comparable to the video quality of the cinematic movie, moviegoers first watch the trailer for free before paying for the whole movie.

Freemiums are also in many cases a necessity rather than a choice (C. Anderson, 2009, p. 281) because prices for some economical digital inputs are decreasing very fast, like bandwidth, computer processing power, online storage for e-mails, or generic information (think here about Wikipedia's crowding out of Microsoft Encarta). "Anything that touches digital networks quickly feels the effect of falling costs." (C. Anderson, 2008a, p. 4)

One rule in economics is "Every abundance creates a new scarcity." (C. Anderson, 2008b) E.g., today in the digital age people are overwhelmed with generic information but in the same time specific/applicable information becomes scarce. This is another pillar of the freemium model; by offering assets for free that become already abundant suppliers can accelerate this abundance process to create scarcity at assets where business can be generated. (C. Anderson, 2009, p. 283) This active influencing of the market by freemiums was also revealed by Jagpal and Spiegel (2010, p. 218) in regard to influencing of market prices.

Thus, the freemium model "(…) is based not on cross-subsidies — the shifting of costs from one product to another — but on the fact that the cost of products themselves is falling fast." (C. Anderson, 2008a, p. 2) In the same way digital advertising and the related provision of free content to "(…) build audiences with distinct interests and expressed needs that advertisers will pay to reach (…)" (C. Anderson, 2008a, p. 6) is different to the freemium model as well as giving something for free if a certain action is performed, or finally the gift economy (C. Anderson, 2008a, pp. 6-7). However in this case the author uses the economic and emotional (e.g. trust-building) value of gift-giving but creates it via freemiums.

There are four 'traditional' freemium models that are established by most suppliers of free organizational software; temporary software that has to be paid after a 'free trial' period, a split in free 'basic' and paid 'professional' versions, software is free below a certain amount of users, and compensation of software purchase on basis of the customer's ability to pay (e.g. start-ups get a free version). (C. Anderson, 2009, pp. 285-286)

However all four models showed to be inadequate for the sponsor of this thesis. Temporary software use has the disadvantage that many potential customers are deterred to invest time into software from which they know they have to pay for to compensate the effort already invested. (C. Anderson, 2009, p. 285) Furthermore temporary software has the disadvantage that users might not have enough time to understand the whole service and will eventually experience usability and technical hurdles that lead to an inability to capitalize on the service's performance. Thus the user might end the trial period with a wrong impression of the service.

Different software versions have the disadvantage that the supplier has to develop different variations in advance which is especially in regard to content and functions difficult for an innovative product as it is unknown what users desire in particular. Thus, there is the risk that the basic version is overpowered and the professional version becomes unattractive or the basic version has too less functions to show the advantages of the professional version. (C. Anderson, 2009, p. 286)

Compensation in regard to users can lead to economical cannibalism (C. Anderson, 2009, p. 286) and it is hard to determine the 'amount border' in advance for innovative services/products.

Payment on basis of the customer's financial ability is difficult to check by the supplier. (C. Anderson, 2009, p. 286)

Finally, all strategies consisting of free samples have the disadvantage that the threat of early plagiarism is raised as the cost hurdle for plagiarists is non-existent.

Thus the author chose to develop a new model aside of the traditional tactics. This model resists on the abundance of generic/abstract information in the internet and the scarcity of specific/ready-to-apply information for users. The model will capitalize on this need of specific information in regard to portfolio management to create customer sensibility for this topic as well as connecting and enriching the information with the C-KIBS' performance.

However, when applying a freemium strategy the C-KIBS supplier has to consider the stage of the customer-supplier relationship.

Table 9 shows the framework of the communication process in the stages of the relationship.

Table 9: Internet communication through the development of a business relationship (Klanac, 2005, p. 10)

		Business relationship	
		Pre-relationship stage	Early stage
Communication facet	Content	Generic info about company and products	Information related to a purchasing process
	Direction	One-way	Two-way Multi-way
	Mode	Low level of individualization and interactivity Mass e-mails Ornamental websites	More interactive and individualized Transactional websites

As an organization invests already heavily in interactivity and individualization but the relationship is still in the pre-relationship stage organizations' "(…) investments face to stay unexploited to its full capacity (…)" (Klanac, 2005, p. 10) because the customer has a primary need in generic information. In a contrary situation if the relationship is already matured but the supplier does not or only merely offer individualization and interactivity an organization

"(…) faces a risk that buyer might turn to a competitor to obtain a relevant, timely, and accurate information." (Klanac, 2005, p. 11) It is important that the needs for internet communication and the supplier's offering always match. However it is also not advised to raise interactivity and individualization solely reactively but proactively. (Klanac, 2005, p. 11) Suppliers face the challenge to stay one step ahead of the customer to help the relationship to develop without running too far ahead of the customer.

Especially online presentations can take advantage of the need for interactivity and simultaneously keeping investments low. Online presentations like websites function on standardized technical frameworks while at the same time allow website visitors to interact with the provided information which results in information that is tailored to the specific website visitor's needs.

The further the customer proceeds in its purchase decision the more the customer information requirements change and also the customer audience changes. In the beginning (calculus-based stage) the C-KIBS supplier appeals to the customers (CEOs) and the users (in the case of the research sponsor: project managers). Later (information-based stage) the buyers and users probably present the solution to the technical staff to assure compatibility with the systems in use. Hence *identification-based mechanisms* and excellent communication abilities become more important in this stage because the supplier must understand the different attitudes and behaviours of the customer's staff (Scarso & Bolisani, 2011, p. 52) and address them on its website (e.g. economical items like an optimized use of the customer's capability).

The supplier delves more into the challenge of supporting the prospect in matching the C-KIBS supplier's offering to his specific problems. (Scarso & Bolisani, 2011, p. 52) The basic functionality of the service will disappear from the foreground but the customer will start thinking about how the specific C-KIBS can suit best to his problem and/or desires. This can be problematic if the customer lacks minimal technical knowledge (Scarso & Bolisani, 2011, p. 52) or is less used to electronic project/portfolio management.

In general research revealed that soft forms of trust (e.g. mutual understanding or empathy) are more important than hard forms of trust (e.g. contracts or certifications). Only in case of interactions with new customers "(…) there is some room for hard trust-building mechanisms (…)" (Scarso & Bolisani, 2011, p. 54) Due to the dominance of soft mechanisms C-KIBS providers face always the risk that only one mistake can destroy the arduous established relationship with a customer and the word-of-mouth mechanism can turn from a helpful tool for the supplier into a disastrous wave. (Scarso & Bolisani, 2011, p. 54)

As in most if not all B2B transaction models also B2B organizations that focus on e-commerce have to care about broadening and deepening their relationships with customers, distributors and suppliers, offline as well as online, to rise the stakeholder retention rates. (Eid, et al., 2006, p. 101) Databases and CRM tools can help with this task and reinforce identification-based trust-building mechanisms (Scarso & Bolisani, 2011, p. 54) by storing sensible customer data. Continuous management of the customers' base is a substantial part of the business because it provides opportunities for acquiring new or upgrade orders (Scarso & Bolisani, 2011, p. 54) and is especially useful to 'stay in the customer's mind' that is helpful for word-of-mouth promotion. Identification-based mechanisms to manage the customers' base in internet marketing are newsletters or social media. But it is important to be aware that "Customers want to be contacted just enough, not bombarded." (Boaz, et al., 2010, p. 3) This balance can be achieved by questioning yourself as a supplier what the customers' needs are and what the profit potential is. For example, a customer that uses a basic software edition has less desire in gaining information about a new developed interface that is only provided to an advanced software version. In the same way it makes no sense for suppliers to invest into the broad promotion of a new feature that is only useful for a particular group of customers. Hence, the supplier should assure to motivate the customer to provide news about his own business to enhance mutual knowledge exchange (Scarso & Bolisani, 2011, p. 54) which will eventually lead to more meaningful contacts and lowers the interaction costs of the customers. (Boaz, et al., 2010, p. 3) However the detailed investigation of after sales service techniques lies beyond the scope of this thesis, as the focus lies on inducing sales with new customers.

5. Conclusion from the Theory/Literature Review

The goal of the literature review was to answer the question: *How can knowledge-intensive-business-service providers perform remote sales and marketing activities on a global scale?*

Also first steps in answering the second research questions were made: *What are possible marketing and sales practices and techniques available to KIBS providers that are aligned with the identified circumstances, opportunities, and obstacles which affect the applicability of remote communication between a C-KIBS supplier and a customer in a global context?*

The literature revealed the rising impact of C-KIBS suppliers on customer's competitive market positioning and the C-KIBS suppliers' necessity to go global as well as the opportunities and advantages of doing so efficiently via a remote marketing and sales

strategy. On basis of the literature the author developed two contingency models for the main attention points of an international marketing strategy for a C-KIBS supplier.

The models separate the concept of remote communication from the contingencies of marketing C-KIBSs to make the models also suitable as basis for diverse marketing approaches, not only remote marketing. However the two models overlap in certain aspects.

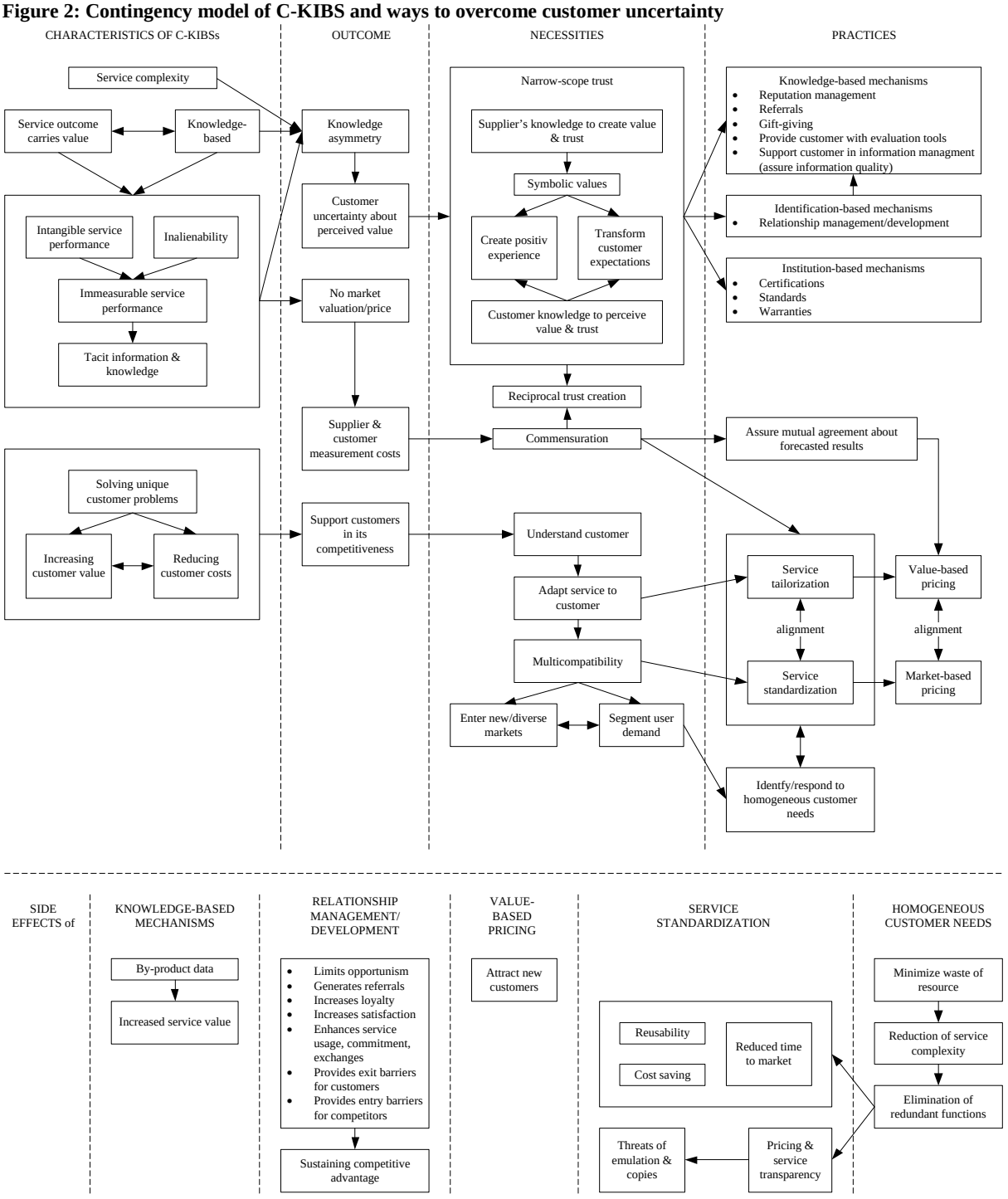
These models provide the basis for the instantiation development which carries theory into practice and thereby enriches them, in particular in regard to concrete marketing practices and techniques.

5.1. Contingency Model of Computer- & Software-Related Knowledge-Intensive Business Services & Customer Uncertainty

It is important to notice that in the task of trust-creation companies face the multi-dimensional nature of trust, and have to cope with different forms of trust, the type of service and the customer participation in designing the service as well as the evolutionary stage of the relationship and the step of the service delivery process. Accordant to the focus of this thesis, the model focusses on customer-supplier relationships that are in a pre-relationship and early stage and accordant only marketing techniques that are meaningful in these stages are displayed. Furthermore the model follows the principle of parsimony meaning that weak relationships as e.g. the indirect relationship between a trusted business context and customer trust in organizations is not displayed. Finally the model focusses on factors that can be controlled by the supplier.

The model consists of five parts; the characteristics of C-KIBS, its impacts, necessities for C-KIBS suppliers to cope with the impacts, practices to do so, and side-effects of the practices. ‘Side-effects’ displays effects for the market positioning of the C-KIBS supplier over the long term and effects which have a considerable impact on a long-tail marketing strategy.

Figure 2: Contingency model of C-KIBS and ways to overcome customer uncertainty



C-KIBSs are characterized by its complexity, its knowledge-based nature which is connected to the fact that the service is only a carrier of value but needs to be implemented to deliver value and the effect of intangibility and immeasurability. Furthermore the C-KIBS' function is naturally to solve fairly unique customer problems in the way that they increase customer value or reduce customer costs, although one should acknowledge that the concept of value enhancement and cost reduction are not mutually exclusive.

The C-KIBS' complexity, knowledge-based nature, and intangibility leads to a knowledge asymmetry between supplier and customer. Additionally the intangibility makes it

hard to measure the C-KIBS in terms of its market value and market price. But the intangible nature of C-KIBSs does not only constitute an obstacle for C-KIBS suppliers and customers, it is also beneficial for the competitive advantage of the C-KIBS supplier and the customer that is in a relation with the C-KIBS supplier as intangibles are hard to copy by competitors.

Thus C-KIBS suppliers face high measurement costs to determine and eventually communicate the C-KIBS value and customers face higher costs to understand and evaluate the C-KIBS value, although the exact value stays uncertain to the customer before the purchase, due to the service's complexity and intangibility. To cope with the measurement costs a common metric is needed.

But as the C-KIBS itself is of less value to the customer and as the customer cannot evaluate the C-KIBS' value completely before the purchase and implementation, commensuration alone cannot prove the C-KIBS performance before being implemented at the customer side. Eventually the supplier has to create narrow-scope trust at the customer side. The broad scope trust legitimizes the narrow scope trust in the C-KIBS supplier and its service but is not display in Figure 2 as it can be hardly controlled by the supplier. The author argued to focus on customers that value narrow-scope trust higher than broad-scope trust.

To create trust and define a common metric the C-KIBS supplier has to assure that the customer understands the C-KIBS' value and perceives the trust composition of the supplier. It is important for the C-KIBS supplier to cope with the knowledge asymmetries as early as possible in the customer-supplier relationship as uncovered and unsolved gaps affect the following stages in the relationship life cycle. To do so the supplier has to create a positive service and relationship experience for the customer and transform the customer's expectations into explicit, definite and realistic ones. But these tasks a supplier can start facing only after the first contact with the customer is established. To enhance this first contact and create customer awareness (in a phase where it is hard for the customer to recognize the connection between his unique problems and the value of the C-KIBS) especially symbolic values are helpful signals.

The supplier has different trust-building mechanisms, signals, and indices at its disposal while the model focuses primarily on institution-based and knowledge-based mechanisms in regard to the thesis' focus on remote communication in pre-relationship stages. Also identification-based mechanisms come into play but their impact rises through the early stages of a customer-supplier relationship. Institution-based mechanisms can be already applied in a pre-relationship stage and encompass service certifications (e.g. through

referrals), the service fulfilment of industry standards, or warranties provided by the C-KIBS supplier.

Knowledge-based mechanisms like the C-KIBS supplier's reputation are strongly valued by the customer because they can be hardly influenced by the supplier on an unjustified basis. Eventually branding is a critical strategy for a C-KIBS supplier and facilitates the market segmentation. Branding resulting in a strong reputation of the supplier also creates a strong market entry barrier for market followers.

Signals a C-KIBS supplier can send are evaluation and choice tools describing the impact of the C-KIBS for the customer, service brochures (Fisher, 1986, p. 163; Hutt & Speh, 1992, p. 348), or valuable information. In regard of any information sharing the C-KIBS supplier should support the customer in receiving, understanding, applying, and storing of information to assure an optimal customer experience. Eventually the supplier should also assure the information quality in regard to the know-how, know-what, and know-why that implies also to assure that the customer is not overwhelmed with information. The C-KIBS supplier should focus with its information on the C-KIBS' capability to improve the customer's business. Gift-giving is a strong signal as symbolic value and can be connected with the need for commensuration by providing simple and widely accepted information related to the C-KIBS under question and that can be easily utilized by the customer (and thereby respects the customer's specific situation). The before mentioned evaluation and choice tool can act as symbolic value if its trustworthiness and independency of the C-KIBS supplier can be communicated to the customer. Symbolic values might be also exchanged more reciprocally in the form that valuable information is provided for free by the C-KIBS supplier and the supplier uses the customer's experience with this information as input for refining the information presentation format. However, any signals or indices can be exchanged in a barter context or complete at no charge. Eventually barter exchanges are not connected to a specific value but provide an environment for exchange.

It is worth noting that signals and indices have to be accordant to the C-KIBS and the supplier otherwise the costs outweigh the benefits.

Next to branding, relationship management and development as identification-based mechanism is decisive for a C-KIBS supplier to stay competitive, and is important for trust formation and to overcome the knowledge asymmetry. But on the other hand customers demand faster and inexpensive transactions and only a minority of customers is willing to go into a relationship that demands resource investment and knowledge sharing already in a pre-relationship stage. C-KIBS suppliers have the opportunity to cope with that by making

customers able to tailor standardized services themselves. This reduces the demand for information provision by the customer and eventually reduces costs for customers. The reduction of customer input in the C-KIBS development process also paves the way for remote communication which reduces the marketing and sales costs of the C-KIBS supplier.

Trust creation via identification-based mechanisms is particular helpful for long-term relationships in a C-KIBS market environment by limiting opportunism, increasing customer loyalty, increasing customer and supplier satisfaction, and enhancing service usage, commitment as well as exchanges. Also switching costs, strength of the transaction channel, the C-KIBS impact on the customer's business and the C-KIBS differentiated nature can increase the customer commitment which is important in sales relationships where the customer primarily fulfils the role of a consumer and the customer-supplier relationship is eventually not of an interdependent nature. Eventually long-term relationships can help the C-KIBS supplier in gaining sustaining competitive advantage.

The C-KIBS' function will help to support the customer in its competitiveness but to do so the supplier has to understand the customer and use its own as well as the customer's knowledge to create value and trust. Customers that follow a prospector-like strategy showed to be the most promising, as they have the highest level of service utilization and eventually can capitalize best on the C-KIBS' capability. This results in the optimal C-KIBS experience by the customer. To deliver the most value to the customer the C-KIBS should be adapted to the customer unique needs, or should provide functionalities for tailorization. To use information as valuable 'gift' for prospects also these should be specified to the target customers' environments (e.g. instable markets). As C-KIBSs fulfil intermediary functions they have to be compatible to multiple different other IT services that are implemented at the customer side. Eventually the C-KIBS supplier enters automatically new markets. For example, the research sponsor delivers project portfolio management software and eventually has to cope with the market of enterprise systems software. The supplier also enters new geographical markets when he follows its customers' globalization approaches. Eventually the supplier competes on diverse markets, leading to an increase of its measurement costs and demands increased customer segmentation.

Thereby the C-KIBS supplier can identify and respond to homogeneous customer needs with a standardized basis of the service that favours an international marketing strategy. The author argued for the need to provide the service with tailorization functionalities to respond to the unique customer problems while at the same time beating down the price for the customer. Another advantage of leaving customization to the customer (providing

tailorization functionalities) is that less information and also investment is needed from the customer which favours a remote transaction strategy. However due to the already narrowed focus on superficial identical customer needs it might be sufficient that the tailorization functions evolve around activating and deactivating of certain functions and gateways or adaptation of the service's dashboard, comparable to the tailorization functionalities of a Smartphone. However the main advantage of the alignment of tailorization and standardization is its possibility to define a common metric whereby the C-KIBS' value for the customer can be described. This paves the way for determining the market price on basis of comparison with competing products and the expected value for the customer. One should note that the incorporation of the customer value needs mutual agreement of the supplier and customer about the forecasted results.

New technologies like software virtualization, grid computing, cloud computing, and service-oriented architectures support the alignment of service standardization and the provision of tailorization functionalities and offer opportunities for additional cost-savings for C-KIBS suppliers and customers.

Gift-giving is not only suitable to create customer awareness it can also enlarge the user base of the C-KIBS and eventually increases the amount of by-product data. With more users the supplier gets also diverse insights in the customer utilization of the marketing presentation and can use these data for improvement. The more meaningful knowledge a C-KIBS supplier can create at the customer's side the higher the quality of customer feedback becomes which can be used by the supplier to raise the total value of the marketing presentation and the C-KIBS for every customer.

Finally value-based pricing showed to be helpful to attract new customers as it represents an opportunity for differentiation which demands that customers as well suppliers can determine the C-KIBS' value for the customer. Furthermore a service with a standardized basis and the focus on superficial homogeneous customer needs enhances advantages of the lean concept like cost saving or reusability for the customer as well as for the C-KIBS supplier.

However one should be aware that the more standardized and simplified a C-KIBS becomes the more transparent a service and its market price becomes, which is beneficial for trust creation, also the more vulnerable the C-KIBS becomes to emulation and copies.

As the model shows, the marketing and selling of C-KIBS revolve around the concepts of customer uncertainty, commensuration, branding, symbolic values, and relationship management/development. Institution-, knowledge-, and identification-based trust-building

mechanisms play a decisive role in regard to these concepts when a C-KIBS supplier aims at going global. The setting of strategic goals and aligning them with the business and industry (Eid, et al., 2006, p. 96; Javalgi, Martin, & Todd, 2004) is crucial.

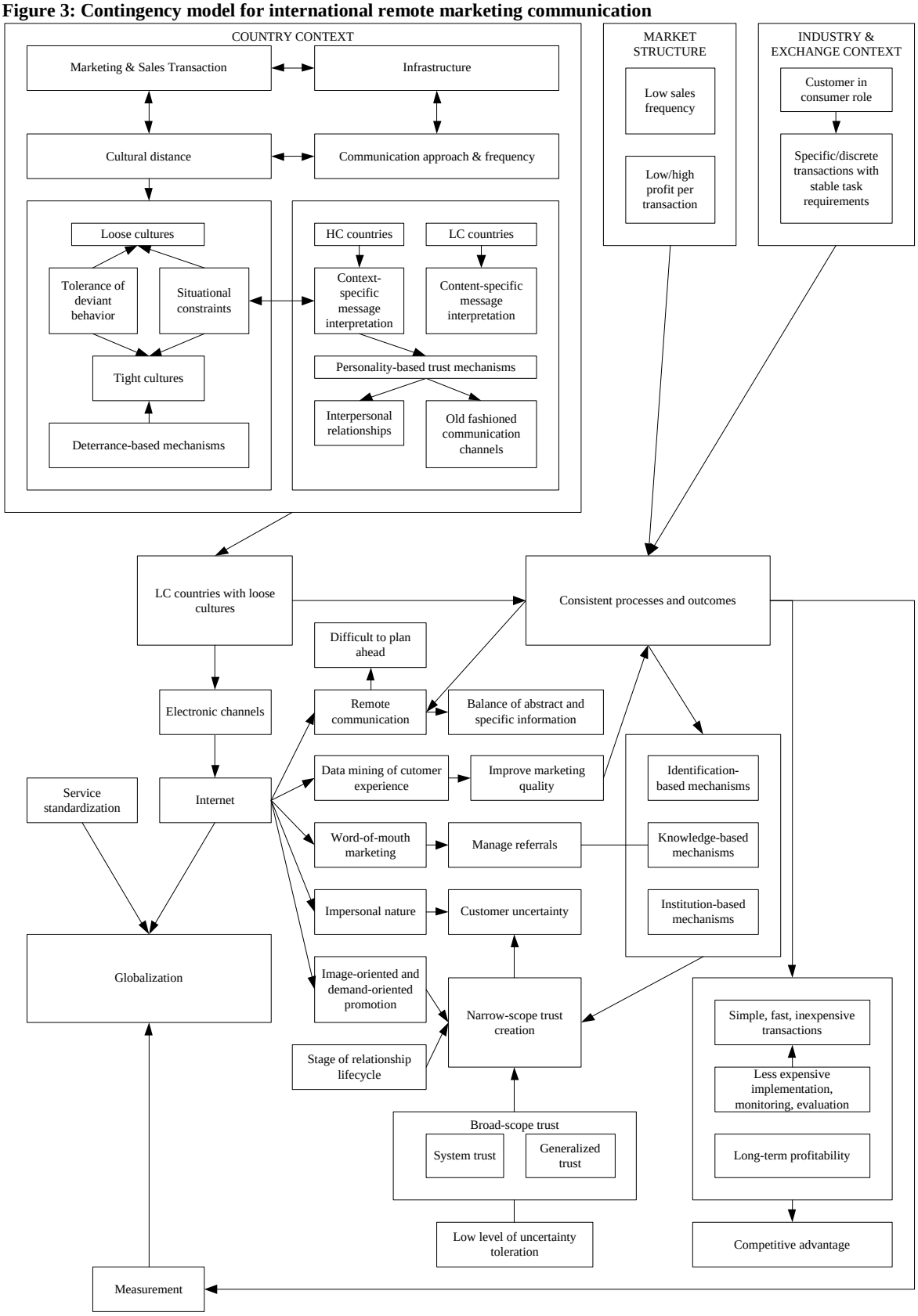
The following section focuses on the contingencies for a remote global marketing and sales strategy of a C-KIBS supplier.

5.2. Contingency Model of Marketing & Selling Computer- & Software-Related Knowledge-Intensive Business Services Internationally

The author inventoried circumstances, opportunities, and obstacles which affect the applicability of remote communication between a C-KIBS supplier and a customer in a global context.

As with the before illustrated figure the author followed with Figure 3 the principle of parsimony. For example, although one should acknowledge that the internet indeed offers new and advanced possibilities for customer integration in the product development process, in light of the focus of this paper on sales relationships the model does not cope with that.

Figure 3: Contingency model for international remote marketing communication



Although the past approach of C-KIBS suppliers to globalize was at least arguable the need to go global rises in the same way C-KIBS customers globalize and the opportunities to follow are rising for suppliers.

Drivers for globalization are standardization and the internet while globalization relies heavily on measurement. In recent years, service standardization as a driver for globalization purported to fulfil the need for a common metric but the recent crisis revealed several shortcomings of globally standardized C-KIBSs. Eventually the author argued that standardization of C-KIBSs is useful to make them by a certain amount comparable to competitors but that a more narrowed focus on identical customer requirements and congruent national markets is needed which can be fulfilled by a broadly customized and tailorable service – hence an international market approach rather than a global market approach is advised. The before highlighted need for adequate market segmentation is even greater in an international context to reveal highly congruent customers.

It stands to reason that the internet with its enormous amount of data, the interconnectedness of its users, and the provision of numerous own channels like web communities, wikis or weblogs plays a decisive role in marketing and selling activities of C-KIBS supplier. It offers opportunities to turn away from the cost intensive interpersonal communication with customers. However scholarly literature showed that the abdication of interpersonal communication depends on the applicability of a consistent process and outcomes strategy which is influenced by country context, the market structure, as well as the industry and exchange context.

A consistent process and outcomes strategy has the advantage that it reduces customer uncertainty and supports the need for measurability in a global context. Furthermore it is less expensive in regard to implementation, monitoring and evaluation and fulfils thereby the demand of customers for simple, fast, and inexpensive transactions. Transactional relationships "(…) are the route to the long-term relationship, and the relationship defines the nature and purpose of the transactions." (Styles & Ambler, 2003, p. 638) Eventually it can positively affect the long-term profitability leading to a competitive edge over competitors that rely on cost-intensive interpersonal relationships.

Such a strategy is applicable where the customer fulfils the role of a consumer and the transactions are specific and discrete within a stable task environment. Although a pure transaction-based relationship is hard to establish in a C-KIBS environment a partly standardized C-KIBS can help in this task. But it is worth noting that a main disadvantage of the abdication of interpersonal communication with the customer is that the supplier can hardly learn about the customer's plans for the future and eventually it is difficult for the C-KIBS supplier to plan ahead per individual customer.

The abdication of interpersonal transactions is of most value for services that indeed have a low sales frequency while the profit per transaction matters less. However with a low profit per transaction the abdication of interpersonal selling becomes a necessity rather than a matter of choice.

The country context showed to be the most influencing in performing a remote marketing and sales strategy as norms, values and standards of transactions showed to be linked closely to the cultural context. Although the demand for C-KIBSs is rising on a global scale and customers are becoming familiar with remote marketing and sales communication with suppliers the author showed that a focus on low context countries with loose cultures is most promising. The following list displays the potential countries.

- Australia
- Austria
- Belgium
- Brazil
- Canada (English)
- Estonia
- France
- Germany (former West)
- Great Britain
- Greece
- Ireland
- Hong Kong
- Hungary
- Iceland
- Israel
- Netherlands
- New Zealand
- Poland
- Scandinavia
- Spain
- Ukraine
- United States
- Venezuela

These countries interpret messages primarily on basis of its content rather than its context and value personality-based trust mechanisms, which are hard to use in remote communication, lower than high context countries with tight cultures. HC countries with tight cultures also showed to rely heavily on deterrence-based mechanisms, that are due to its dependence on certain market economies (e.g. liberal vs. coordinated) not suitable for a global marketing strategy. Furthermore HC countries with tight cultures favour old-fashioned communication channels while having a low toleration of deviant behaviour due to situational constraints. Thus, using distant communication in this type of countries is not advisable. Of course the national infrastructural environment also impacts the suitability of a country for remote marketing and sales activities.

In LC countries with loose cultures interpersonal relationships are of minor importance and the internet can accentuate the valued assets like consistent processes and outcomes. Eventually the use of the internet can be an efficient remote communication tool for LC cultures.

The internet is because of several characteristics advised as communication channel:

- It overcomes geographical and psychological distance between a customer and supplier due to its potential for interactive communication (not necessarily direct).
- It is able to fulfil the customer's need for generic as well as specific information.
- It affords the C-KIBS supplier to leverage on the abundance of generic information and the scarcity of specific information.
- It affords attracting customers with gifts with marginal costs for the C-KIBS supplier and eventually lowers the risk of unexploited investments and facilitates a positive supplier reputation.
- It affords information sharing between the C-KIBS supplier and the customer as well as between customer and prospect.
- It increases the amount and depth of the information exchanged and raises thereby the value of information when it is based on a common metric.
- It affords easy tracking of customer behaviour and using this data to enrich the communicated information.

Thus, the internet combines techniques to create customer awareness and initial trust via demand-oriented and simultaneously image-oriented promotion. For this purpose different institution-based and knowledge-based mechanisms are available. But to leverage the internet it is important to note that any promotion on the internet should be simple, focused, easy to use, credible, and explicit. Furthermore the customer acceptance of less face-to-face communication plays a decisive role in the successful establishment of the internet as a channel for generating new business for the C-KIBS supplier. Although the national culture impacts the suitability of remote communication, the impact of the transaction channel and the culture on trust formation showed to be only minor in comparison to the major impact of trust in the supplier, its sales reps, and the service.

However the internet and its impersonal nature enhances the customer uncertainty which can be overcome with the already identified institution-based, knowledge-based, and identification-based mechanisms in LC countries with loose cultures. A cultural neighbourhood between customer and supplier is advantageous in this task as it assures that generalized trust relies on the same mechanisms in the customer's and C-KIBS supplier's

countries. Institution-based mechanisms like task level commitments (e.g. promises) and knowledge-based mechanisms (e.g. service information) foster narrow-scope trust that is legitimized by broad-scope trust. Because of the low level of uncertainty toleration in countries that rely on broad-scope trust the author argued to turn away from these countries.

5.3. Keys to Success for Marketing & Selling Computer- & Software-Related Knowledge-Intensive Business Services Remotely

Based on the two contingency models several keys to success for marketing and selling a C-KIBS remotely can be recognized.

Most of these keys to success can be categorized under the umbrella of a **consistent process and outcomes strategy**. The challenge is thereby to make transactions specific and discrete within a stable task environment which is naturally converse to the character of the business environment in which C-KIBS are transacted. To apply anyhow this kind of strategy C-KIBS suppliers have to segment the market environment in lights of the country context, the market structure, as well as the industry and exchange context. It should be noted here once more, that the following keys to success were identified in regard to customer-supplier-relationships, wherein the customer only fulfils the role of a consumer. Thus, these keys to success are not necessarily qualified for business relationships in which the customer is a co-creator of the C-KIBS.

C-KIBS supplier's primary task in marketing and selling a C-KIBS has to be a focus on **overcoming the lack knowledge** at the customer side in regard to the C-KIBS and the interrelated **lack of customers' trust** in the supplier and the service. To create customer trust, three trust-building mechanisms were identified: **institution-, knowledge-, and identification-based trust-building mechanisms**. These mechanisms can be applied remotely and rely on aspects that can be controlled by the C-KIBS supplier. However the applicability of these mechanisms depends on the national and cultural contexts in which the customer organizations operate.

Thus, the first key to success is a regional **focus on low context countries with loose cultures**. These are the most promising markets when C-KIBS suppliers want to target new international markets as customers in these countries are willing to accept remote communication with suppliers that are unknown to them.

Secondly, a **focus on customers that follow a prospector-like strategy** was advised as they naturally utilize purchased services the most intense which leads swiftly to a satisfied

C-KIBS experience and eventually speeds up the process of the C-KIBS supplier's reputation diffusion.

The following points cover now the different trust- and knowledge-building mechanisms that are keys to success for applying a consistent process and outcomes strategy.

Thirdly, as customers are not willing to invest own resources prior to the application of a C-KIBS it is necessary to base the C-KIBS and the marketing instruments on a **combination of tailorization and standardization**.

Fourthly, a **focus on tangible assets of the C-KIBS** and/or a **transformation of intangible assets into tangible ones**, where possible, showed to be critical to arrive at a common metric that makes customers able to measure the C-KIBS capability to improve the customer's business and eventual create customer trust in the service.

Fifthly, C-KIBS suppliers should be able to **provide warranties** and/or **certifications by trustworthy third parties** that signal a consistent compliance of performance standards of the C-KIBS. Therefore it is necessary to focus on C-KIBS-related objects that can be controlled by the supplier.

Sixthly, the **symbolic value of gift-giving** showed to be a valuable tool to create customer trust in the C-KIBS supplier and the C-KIBS itself, when the gift is related to the specific service (that it should be to be valuable for the customer). In regard to the internet **customer-specific information that is 'ready to apply'** was identified as valuable gift.

Finally, **the internet** was identified as best fitting communication channel to overcome the knowledge asymmetry and eventually for trust-creation because it allows for a remote implementation of all before mentioned keys to success.

When a C-KIBS supplier implements these keys to success he will take advantage of a strong positive branding effect in regard to his reputation which can, especially in the internet, cause quite a stir easily.

However, it is important to recognize that there is no universally valid solution for trust-creation because trust as 'interpersonal feeling' is always also affected by the individual customer, its specific environment, and factors that lie outside rationality, like e.g. the factor 'gut instinct'. Eventually it is merely a question of how to overcome the customer uncertainty completely but rather to which point the customer certainty has to be enhanced and by which trust-building mechanisms until a level of narrow-scope trust is reached where the customer tolerates the extant uncertainty. This level of uncertainty toleration depends on the specific organization and service aspects the customer is uncertain about and also the maturity stage of the customer-supplier relationship. In chapter 6 the development of an instantiation is

described that illustrates how to cope with the most important uncertainty factors for C-KIBS customers in practice and eventually how to reach the ‘uncertainty toleration border’.

6. Online Instantiation Development

Although computer-mediated communication can relatively easy spread explicit knowledge in certain homogeneous countries, the transfer of tacit knowledge via these communication channels is still a difficult task. (Lin, et al., 2005, p. 213) In this chapter the identified marketing and sales keys to success will be transferred into practice, taking into account the identified circumstances, opportunities, and obstacles which affect the applicability of remote communication between the research sponsor and a customer in an international context. The goal is to transfer tacit knowledge by making it more explicit. Because if customers are (made) able to judge the process and outcomes quality properly they will choose the higher quality for lower expense instead of interpersonal relationships. (Iyer, et al., 2006, p. 619)

Thereby the answering of the second research question will be completed: *What are possible marketing and sales practices and techniques available to KIBS providers that are aligned with the identified circumstances, opportunities, and obstacles which affect the applicability of remote communication between a C-KIBS supplier and a customer in a global context?*

Two terms stay central in the following sections; *artefact* and *instantiation*. Artefacts are models that carry the solution engine but are not the solution itself as they are purely theoretical and do not yet incorporate any package and user gateways (interaction properties). Instead artefacts focus on the knowledge base and inference engine while instantiations include additionally interfaces and design features. Eventually, instantiations are “(…) those bundles of cultural properties packaged in some socially recognizable form such as hardware and software (…)" (Orlikowski, 2001, p. 121 cited according to Hevner, et al., 2004, p. 82).

6.1. Artefact Development Design

For the artefact development design the author was geared to the design science in information systems research as there are not yet any artefacts under the umbrella of enterprise management software for the remotely marketing and selling of C-KIBSs and more specifically in regard to remotely creating customer trust in a B2B context. Thus, this development design can be clearly distinguished from routine design.

Furthermore work that is supported by information technology is comparable to remote marketing and selling as:

- both concepts rely on processes;
- both concepts rely on users and their 'work' context;
- both concepts rely on users' information requirements. (Markus, et al., 2002, p. 182)

Processes in remote selling orientate on the customer purchase decision cycle (service delivery process) and the customer-supplier relationship stage. This process is best described as 'semi-structured'. (Keen & Morton, 1978)

However the definition of users' information requirements is challenging so far. Although it is clear that business user's ultimately need information about the possibilities for increasing revenue and decreasing costs by the use of portfolio management methodology and supporting software, the precise impact of tacit C-KIBS knowledge or trust on software purchase decisions are so far unknown. This has to do with the fact that the 'best practice'-based approach to portfolio management is fairly new (introduced in begin 2011) but requires a high level of expert and tacit (Weick, 1995) knowledge to detect its potential and expertise in applying the knowledge. In section 6.3 several requirements will be outlined, based on the in section 5.3 described keys to success that were gained from the B2B IIM, KIBS and global business literature. These requirements will provide the basis for the development of a web-based instantiation.

Furthermore this tacit C-KIBS knowledge is distributed across customer (local/contextual knowledge of own process management practices) and supplier (general/scientific knowledge of portfolio management). Thus, the already before mentioned knowledge sharing between customer and supplier comes into play. To foster knowledge sharing, when tacit knowledge can be made explicit it should be represented in an if-then format (Baligh, Burton, & Obel, 1996), in a case format (El Sawy & Bowles, 1997), or in text format (Markus, et al., 2002). Furthermore it might be necessary to translate this service-related knowledge of the C-KIBS supplier into terms the customer can understand. (Markus, 2001) These three formats were the guiding principle of the development design.

6.2. Design Theory

Design science combines the inseparable (Lee, 2000 cited according to Hevner, et al., 2004, p. 77) paradigms of behavioural science, leading to truth, and design science, leading to utility (Hevner, et al., 2004, p. 80). "(…) both design science and behavioral-science

paradigms are needed to ensure the relevance and effectiveness of IS research." (Hevner, et al., 2004, p. 98)

Behavioural science develops and verifies theories that "(…) explain or predict organizational and human behavior (…)" (Hevner, et al., 2004, p. 75) like the author did during the extensive literature review. Design science creates innovative artefacts that rely on the by behavioural science developed kernel theories (Markus, et al., 2002; Walls, Widmeyer, & El Sawy, 1992) to efficiently and effectively accomplish implementation and use of information systems (Denning, 1997; Tsichritzis, 1998) by selecting meta-requirements and meta-designs that may solve the problem in reality (Markus, et al., 2002). The requirements are framed by the problem and frame themselves the solution. "The resultant IT artifacts extend the boundaries of human problem solving and organizational capabilities by providing intellectual as well as computational tools." (Hevner, et al., 2004, p. 76)

The kernel theories enable "(…) formulation of empirically testable predictions relating the design theory to outcomes (…)" (Markus, et al., 2002, p. 181) like in this case the effective and remote overcoming of the knowledge asymmetry between a supplier and customer to create a trustworthy environment. Thus, design theory is based on theory and guides practitioners (Walls, et al., 1992), "(…) includes the selected means and systematic relations between these means to meet the requirements (…)" (Wijnhoven, 2010, p. 123), and ultimately sets the development scope and increases reliability of the design to eventually increase the likelihood of success. (Markus, et al., 2002, p. 181)

One important aspect in design theory to mention is that design theory is a normative theory, meaning that they have to proof themselves in practice rather than only explaining or predicting something. (Markus, et al., 2002, p. 181) Thus, it is critical to develop testable product-oriented design hypotheses that link meta-requirements to meta-designs (Wijnhoven, 2010, p. 123) because incorrect design propositions will lead to a biased design, based on incorrect views of reality, and eventually the resulting design may fail (Gregor, 2006). These hypotheses can be found in the following section and were derived from the Grounded Theory Method for literature/theory review.

However, in the development process the author also integrated positivist non-empirical formal logic to make the requirements more precise and formal (Wand & Weber, 2002) and to reduce the research effort. E.g. the author investigated criteria for information quality. Although these were mostly derived from research on print media the author applied these also to digital media without testing these criteria but indeed enriching them. But the author assumes that not all requirements can be known in advance (compare Singerian

prototyping and learning), which implies that inductive empirical analysis might be helpful for detecting further user requirements and information needs and to validate them (Wijnhoven, 2010, p. 64). An empirical analysis was not done but is left to follow-up researchers. In section 6.3 the requirements will be translated in hypotheses which were not only useful to provide an instantiation development framework but also to allow follow-up researchers an easy setup of empirical investigations in which the developed instantiation can be applied as measurement instrument. In chapter 9 a recommended empirical design will be presented. Instead of an empirical design, the instantiation was verified on basis of expert reviews which will be described in section 6.4.

The following sections will shed light on the product-oriented design theories that "(…) prescribe user requirements and generic solutions in specific contexts (…)" and process-oriented design theories that "(…) prescribe development practices, methods and techniques for certain requirements and enabling environments (…)". (Wijnhoven, 2010, p. 38) Design science theories consist of user requirements, system features/functional requirements (van Aken, Berends, & van der Bij, 2009, p. 24) or principles for selecting them, and principles that guide the development process effectively (Walls, et al., 1992) like boundary conditions that set the artefact in relation to its intended work environment and design restrictions that set the preferred solution space (van Aken, et al., 2009, p. 24). These requirements revolve around three main objects of every information system (and its processes): content (delivery), use value (facilitation), and revenue (collection). (Wijnhoven, 2010, p. 27) As revenue is primarily a requirement for the supplier the author understands *user requirements* also as *supplier requirements*. As information services "(…) enable value exchanges between (…) stakeholders (…)" an information service has business requirements that set "(…) what stakeholders have to deliver what in return for what (…)" (Wijnhoven, 2010, p. 33) and assures that at least sufficient means are generated to cover the information service's costs (Dodd, 1996). Thus, "A good stakeholder analysis and understanding of the business motives of stakeholders is important for understanding the feasibility and business requirements of an information service." (Wijnhoven, 2010, p. 61)

Furthermore these requirements can be classified in data-requirements (i.e. content aspect); domain level requirements – functional requirements on the business environment level (i.e., the use features aspect or boundary conditions); and critical quality requirements (i.e., covering content, use features and revenue design aspects) (Lauesen, 2002 cited according to Wijnhoven, 2010). Critical quality requirements are about usability, performance, reliability, accuracy and security of the information system, data requirements

"(…) describe what information the information service will supply and process (…)" (Wijnhoven, 2010, p. 141), and "(…) [domain-level] requirements describe in which way the users have to be supported by the information service (…)" (Wijnhoven, 2010, p. 140). [remark by the writer]

6.3. Design Requirements

Requirements have the function to provide a joint basis to judge the artefact, also in regard to related artefacts, thereby fostering communication between problem-owners, principals and other interested parties, and are a prelude to evaluation and justify its existence.

Requirements themselves should be comprehensive, non-redundant, non-interdependent, operational in the way that they are unambiguous and scalable to be easily adaptable based on user experiences.

From the literature review several requirements can be identified on basis of the keys to success. These requirements have to be provided proactively as suppliers always face the challenge to stay ahead of its competitors.

In general the functional requirements of any artefact are that the solution should solve the problem and its benefits should exceed its costs. User requirements are e.g. about assuring that stakeholders are able to use the solution and that the artefact is user-friendly. (van Aken, et al., 2009, p. 89) Boundary conditions are e.g. that the artefact complies with legal requirements. Design restrictions are e.g. that the artefact works in every web browser.

One of the main problems the requirements will have to focus on is their capability to overcome the knowledge asymmetry between customer and C-KIBS supplier and eventually their capability to induce customer trust. Several studies researched the possibilities to generate trust online. Internet trust covers trust in the internet, the website, its content, the delivery fulfilment – thus, trust in the supplier – and trust in the service. (Urban, et al., 2000)

In regard to inducing sales of a C-KIBS via remote communication, there are two main requirements: creation of customer awareness and creation of customer trust.

Traditionally trial versions of a software solution are used for trust generation, at best with application guidance by the supplier. However this approach is quiet cost intensive for the supplier and makes the C-KIBS vulnerable to copies and/or might result in an unsatisfied experience by the customer as it can hardly represent the full version experience. Eventually the author used other trust-generating mechanisms (primarily use of trusted online content to induce trust in the service) whose requirements will be presented in the following.

The creation of narrow-scope customer trust is essential in a C-KIBS environment and thus online functions to foster trust are in the focus. For customer-supplier relationships that

are in a *pre-relationship* stage, the author identified two mechanisms for trust creation as most valuable in a remote marketing and selling strategy; institution-based mechanisms and knowledge-based mechanisms. For interactions in pre-relationship stages soft forms of trust (e.g. mutual understanding or empathy) as well as hard forms of trust (e.g. contracts or certifications) are important. Also identification-based mechanisms were shown to have a certain impact, although not until the *early* relationship stage.

In this section all listed requirements are described more detailed and hypotheses are developed. As the from the literature review derived keys to success provide a main contribution to the list requirements and for this reason also to the hypotheses, the keys to success will be once more recapped in the following. The keys to success for international remote marketing and selling a C-KIBS were:

- a focus on low context countries with loose cultures
- a focus on customers that follow a prospector-like strategy
- a combination of tailorization and standardization
- a focus on tangible assets of the C-KIBS and/or a transformation of intangible assets into tangible ones
- a provision of warranties and/or certifications by trustworthy third parties
- a provision of gifts
- a provision of customer-specific information that is ‘ready to apply’
- an utilization of the internet as communication channel

The author followed with the requirements and hypotheses creation the principle of parsimony in the way that primarily ‘critical quality requirements’ and requirements that revolve around the artefact’s ‘core functionality’ are hypothesized rather than widely researched and accepted requirements as well as requirements which effect is predictable by formal logic. For example, the advantages of multilingual interfaces or a slim-code when marketing and selling online is not hypothesized. Furthermore, only requirements and hypotheses will be listed that are targeted on the knowledge transfer between a supplier of a knowledge-intensive business service and a customer with less or no service-related knowledge. The C-KIBS itself was not in the focus of the artefact but left to the e-commerce website wherein the instantiation would operate. This decision was made on basis of the conclusions from the first review cycle wherein a considerable information overload of the first mock-up was pointed out.

Table 10 illustrates all requirements including requirements for information quality and for reputation enhancement. Requirements that are critical for the presentation's quality are highlighted by a *.

Table 10: Design requirements for web-based sales of C-KIBs

	Content	Use Value	Revenue
User requirements	• Relevance* • Annotations of instantiation specifications	• Scalability/reusability • Accuracy* • Format* • Ease-of-use* • Timeliness* • Annotation of relevance* • Translation in prospect's capacity exploitation	• Offer digital information for free
Functional requirements			• Sharing functionality • Maintainability • Standardization • Track customer behaviour
Data requirements	• Abstract and qualitative information	• Slim code • Multi-lingual interfaces • Characterization of target user group	• Evaluation functionality
Boundary conditions		• Abstract information must be applicable by customer (increased information richness)	• Annotation of 'proven standard' basis • Consistent quality of service and presentation
Design restrictions	• Abstract information shown where desired	• Browser-independent functionality	

The requirements' characters differ strongly; some are related to the user or the technique, some are related to quantitative data or qualitative data, some are guided by the user's problem or broader contextual guidelines, some are implicit or explicit, and finally some fulfil rational or emotional desires.

"The core meta-requirement related to the content of an information service (…) is relevance of the information good (…)" (Wijnhoven, 2010, p. 125) as it reduces information overload. Relevance can be described by representation that "(…) describes the relation between the set of content that is actually wanted and what is actually supplied (…)" and conceptualization that "(…) defines what level of abstraction a user wants or is able to process cognitively (…)". (Wijnhoven, 2010, p. 125)

The core meta-requirements related to the perceived use value for the customer and supplier revolve around the concepts of

- accuracy (correctness, validity, reliability, conformability, completeness, integrity),
- format (natural language options and visualizations, clarity/transparency, simplicity),
- ease of use (accessibility, interactivity, temporality/currency, locality, use duration and use intensity, opportunities of using information in products and services of the information consumer (applicability), reducing information asymmetry (Doll & Torkzadeh, 1988), conciseness, speed),
- annotations of the context of the information's origin and relevance (Sowa, 2004),
- and timeliness in addition to content. (Al-Hakim, 2007, p. 301; Wijnhoven, 2010, p. 126)

The artefact itself is a knowledge-based mechanism for trust creation as it provides the customer information about portfolio management and its advantages and concrete information to value the impact of portfolio management. However it is a strong requirement for all presented information to display the *know-how*, *know-what*, and *know-why* in a qualitative manner to overcome the knowledge asymmetry and eventually induce trust in the content, assured by the core meta-requirements related to content and use value. As the advantages of active portfolio management were in the focus rather than the C-KIBS itself to support active portfolio management, know-how was described in regard to the effective application of portfolio management of organizations, know-what in regard to the transfer of portfolio management knowledge to the customer, and know-why in regard to the effects of active portfolio management.

In regard to the instantiation the goal was to reduce the level of information abstraction as much as economically possible and reasonable to gain a maximum match with the specific user and raising the level of the information's applicability, hence increasing the use value. The general guiding principle in the development of the different design requirements was a focus on users that are primarily reading 'to do' rather than reading 'to learn' (Spyridakis, Wei, Barrick, Cuddihy, & Maust, 2005, p. 249). Of course, the user has to get some generic information about portfolio management to understand the potential of the service under question but finally gaining the user's trust was of interest, here. Thus, the focus was primarily on the sufficient presentation of applicable information and a presentation of generic information only where necessary to make the instantiation users able to assess the potential of portfolio management in advance.

C-KIBSs solve fairly unique customer problems and thus the customer should be addressed individually as early as possible in its purchase decision process. Eventually an

artefact in the form of a web-based instantiation should offer visitors the chance to input own data that describe their situation best. Thereby the expectations of the customer and the potential of the instantiation and eventually the C-KIBS can be made realistic, explicit and definite, as mutual agreement of the supplier and customer about the forecasted results is automatically achieved. Interactivity is also valuable in regard to the supplier's brand image as it signals the customer that the C-KIBS supplier 'cares' about individual customers.

Furthermore web-based instantiations can send strong trust-related signals when they offer some evaluation functionality for the customer. This evaluation functionality can describe the impact of the specific C-KIBS under question in regard to the specific circumstances of each individual customer. Evaluation tools can have an additional advantage if they provide some form of interactivity because they reduce the distance between customer and supplier (P. H. Andersen, 2001) and enable proceeding in the evolution of the customer supplier relationship process (Ghose & Dou, 1998).

As C-KIBSs are fairly complex services it is critical to provide users with the right amount and depth of knowledge to make sure that the knowledge asymmetry between customer and suppliers is decreased onto a level where the customer at least understands the outcomes to rate the benefits. For that reason the author did not only reduce the amount of abstract information onto a minimum, only showing information that is of direct importance for the specific customer, but also translated the performance attributes of the C-KIBS into common metrics. Thus, an increase of the information richness in regard to the specific customer was desired. The author chose for an information reduction by translation of the content into terms of 'maturity stages' as this is a generally accepted language across all industrial sectors and it is independent of geographical areas. As the costs and benefits of the C-KIBS itself are hard to measure (even more in advance to customer-side installation) it is necessary to focus on functions that can be expressed in common metrics like maturity stages in regard to the efficient and effective customer management of his change portfolio. Thereby the complete intangible C-KIBS was split up in more tangible metrics although these metrics might not comprise every aspect (especially the intangible ones like e.g. quality, resource allocation, or benefits management) of the C-KIBS. The reliance on common metrics has the additional advantage that the C-KIBS' performance becomes comparable to competitive services (e.g. which portfolio management solution does make the optimum use of the current customer's capability without the necessity to invest additional efforts in capability incensement) and customers can match their organizational environment and desires to the C-KIBS's performance. Additionally cost reduction for project management and an optimum

use of the customer's organizational capabilities also provide a guideline for determining the market price and have the advantage of scalability. They can be applied to the whole prospect organization or can also be applied to certain departments solely. Thus the reusability aspect of the presentation for the customer is enhanced.

An incorporation of prospect-specific costs and benefits was also not done as the meaning of these metrics depends on the prospect's willingness to offer such organization-specific information. Especially if it is about financials and facing a supplier which is unknown to them, this willingness cannot be presumed. Thus the instantiation was able to offer prospect-specific and tangible information without the necessity of depending on financials.

Trust in the internet was already investigated by the concepts of low context countries with loose cultures. The focus on these countries will not be explicitly visible in the developed instantiation, as it is refers primary to the future regional promotion of the instantiation and the languages in which the instantiation will be provided. But for the sake of clarity only the English version will be presented. However, the country-related broad-scope trust also depends on the individual customer's cognitive and social ability to interpret trust signals. Visual design elements like *layout*, *navigation*, *style* and *graphics* (Stephens, 2004, p. 309) also have a trust-influencing effect but are differently interpreted by different countries. Most of these elements are recognized trustworthy as they are consistent to each other and provide maximum usability. The author will not go deeper into guidelines for visual design elements of e-commerce as they are fairly consistently shaped in literature (for web usability the work of Jakob Nielsen and the research paper of Stephens (2004) are advised) and this thesis focusses primarily on the website's content as trust influencer. However it is worth noting that a number of website design aspects like colour, icons, symbols, language use, and layout are influenced by the country (Fang & Rau, 2003; Rau, Choong, & Salvendy, 2004) and are related to its utilization by the cultural user groups with different perceptions and expectations (Feng, Ehrenhard, Hicks, & Hou, 2007, p. 404). The challenge of country-specific message interpretation was already discussed in subsection 4.2.7. Although English is in global B2B contexts an accepted language a translation of the instantiation's interface for at least the biggest geographical key markets might be desired by the research sponsor. Thereby the challenges rest on different meanings and implications of words in different cultures but also on technical aspects like the use of Cyrillic (e.g. Ukraine) or Latin (e.g. Germany) letters. Colours have even more diverse association in dependence of the users' cultures and these also differ between countries that were in this paper aggregated around low-context cultures

with loose cultures, like the meaning of different countries in France and Anglo-American countries (Canada and the United States). (Russo & Boor, 1993) Icons especially in the form of feet, hands (J. Nielsen, 2004), and animals (Feng, et al., 2007, p. 405) have very different meanings in different cultures. The symbol ‘x’ which is in Western countries used to highlight a selection is e.g. in Hong Kong used to indicate what is not desired. (Feng, et al., 2007, p. 405) Finally the layout is affected by the different languages and its reading direction (Feng, et al., 2007, p. 405) as well as pictorial information (Badre, 2001). As this is fairly consistent across the identified aggregation of target countries once more Hong Kong is an exception. (Feng, et al., 2007, p. 405) Further research is advised to test deeply if the classification of countries and cultures in tightness/looseness and high/low context in general holds for these design aspects and the related service utilization or further refinement is needed.

Strongly connected to an international approach but not limited to it is the need for a slim code to speed up the data processing that makes visitors with lower bandwidth able to experience the website as a visitor with a fast bandwidth.

The core meta-requirement related to revenue is the value for a seller that “(…) depends on the size of the demand it will face with it.” (Caillaud & Jullien, 2001, p. 798) Although prospects value interactive information that is tailored to their specific circumstances, there is also the risk that investments in customer-related individualization of content might not be completely exploited in a pre-relationship stage as customers also demand generic information in this stage. (Klanac, 2005, p. 10) Eventually a C-KIBS supplier faces a trade-off here between the requirements of individualized information and the information quality criteria of ‘maintainability’ (Al-Hakim, 2007, p. 301) and information standardization. Finally, the artefact aims at trust creation which can be hardly expressed in physical revenue. Hence, there are several reasons for the C-KIBS supplier to keep the costs for generating and maintaining the instantiation near zero. The freemium model can fulfil these demands. To take advantage of the freemium concept it is necessary that the by the C-KIBS supplier provided information are valuable beyond the C-KIBS under question and are generating ‘near-zero marginal costs’ for the supplier. One of the probably most valuable and prevalent things the internet can offer is information. The internet consists of a continuum of information that ranges from very abstract data to very specific information. On the one hand abstract information of portfolio management fulfils the demand for ‘near-zero marginal costs’ but its value is limited as the internet is overwhelmed with abstract information. Thus, the author advised to raise the value of information by applying it to the specific user and also making this information ‘ready-for-implementation’ for the customer.

With the aid of a web analytics tool an indirect barter exchange takes place in the form that the supplier gets valuable information of its customers while the customer gets valuable information about its organizational process efficiency. With a web analytics tool the visitor's behaviour can be tracked and eventually use problems defined and resolved. This form of barter exchanges are widely applied and accepted by internet users. This customer information also paves the way for future customer relationship management and can be used by the C-KIBS supplier to optimize his marketing and selling presentation.

Customer awareness is an important aspect here as the instantiation converges customers that were not yet in a relationship with the C-KIBS supplier and probably do not know the research sponsor at all. A combination of demand-oriented and image-oriented promotion was already indicated and requirements to do so will be described in the following.

Institution-based mechanisms are applied by the reference to the best practice-based approach developed of the OGC. As the OGC is a widely known institution a trust-fostering function of this reference at the customer side can be emanated. Thus, the OGC MoP standard works as a kind of certification. Indeed research showed that project management software that is based on a special method is more successful than generic or customer build software (van de Waal, 2008, p. 97) and works for most of the applicants even better than expected. Especially in comparison to generic or customer build software, best practice-based software scored better on 'Willingness of the respondents toward using the software', the 'Perceived Usefulness of the Functions/Features' and the 'Ease of Use' (van de Waal, 2008, p. 99). A supplier's promise to abide by the MoP standard will work as a task level commitment while on the same time avoiding the risk that this promise will depend on multiple contingency aspects of the customer (e.g. customer organization's corporate culture, the perceived technology attributes, environmental turbulence, business strategy, or experience with organization-wide software implementation) that are outside of the C-KIBS supplier's control.

Furthermore integrating a functionality to share the web-based instantiation's content to induce a viral marketing campaign, thus to take advantage of the network structure of the internet, is reasonable. The internet has shown that its users like to share unique information. If the content has indeed value to the customer he will be poised to share it with his network and can be support and/or reminded to do so via sharing functions (e.g. Twitter- or LinkedIn-Buttons). Thereby the presentation's scope can be raised and more by-product data can be gained by the supplier that can lead to a raised total value of the presentation (data mining) e.g. by using these data for content optimization.

Another requirement of an instantiation for marketing and selling a C-KIBS is a characterization of the target group (here: customers that follow a prospector-like strategy). As a C-KIBS is very complex and its performance hard to express prior to an installation, potential customers might be unsure about the necessity of a use. If a customer purchases the C-KIBS and recognizes during implementation that the service is too complex and more or less ‘breaking a butterfly on a wheel’ this might lead to negative reputation of the supplier. Thus it is a requirement to indeed support the customer in its purchase decision not to persuade him to buy.

At last as C-KIBSs’ utilization requires a strong support of the customer by the supplier it is helpful if the web-based presentation can also make a first step in this venture, e.g. in the form of a checklist that shows what actions of the customer are required to encourage the purchase of the service.

Concluding, it is important to be aware of the fact that customers draw fast conclusions from their experience with a certain presentation about the complete portfolio of supplier. Thus, it is necessary to make the presentation’s quality representative of the C-KIBS’ quality to foster a positive reputation. For this purpose the requirements were developed.

Based on these requirements several hypotheses can be identified that were used as guiding principles for the artefact development process and are useful for empirical testing in future research.

1. *Hypothesis: Annotations of the C-KIBS’s functionality (know-how), its content and benefits for the user (know-what), and the application of the gained insights to the customer’s business (know-why) improve customer trust in the C-KIBS.*
2. *Hypothesis: By providing customers with possibilities to apply generic information to their own 'real world' cases interactively and thereby decreasing their ‘measurement costs’ to understand the service’s impact, the customer use value and eventually his trust in the supplier and the service will increase.*
3. *Hypothesis: It is more valuable for the customer to focus and tell about tangible parts of the service and leaving out benefits that are hard to express, than presenting the whole intangible service and all its benefits.*
4. *Hypothesis: Annotations of best practice based methods enhance customer trust in the C-KIBS.*
5. *Hypothesis: Providing customers with a method-related but service-independent checklist supports customers to relate the C-KIBS to known business-related tasks.*

6.4. Choice of Instantiation Development Method & Execution

The in this study developed artefacts are so far models that aided problem understanding and solution and paved the way for the development and implementation of *instantiations* (Hevner, et al., 2004, pp. 77-78) that will be in the focus in this section. The modelled *user requirements* (Markus, et al., 2002, p. 180) guided the instantiation development and implementation and thus represent *design requirements* of the instantiation. The author addressed the what is known in design science under the term *wicked problems* (Brooks Jr, 1996; R. Buchanan, 1992) as the customer acceptance of the remote marketing and selling of a C-KIBS depends on the customer's cognitive and social ability (Hevner, et al., 2004, p. 81) to interpret the trust signals send by the C-KIBS supplier (see subsection 4.2.2).

The content, use value, and revenue potential of the instantiation was based on and evaluated against multiple verification/critical quality requirements for expert systems: completeness, consistency, correctness, testability, relevance, usability, reliability (Vermesan, 1997 cited according to Markus, et al., 2002, p. 187), and performance. The instantiation development process was guided by expert evaluations as these are helpful "(…) to find obvious usability problems with a site before conducting user testing." (Powell, 2002, p. 134) Furthermore experts were required to validate the content's credibility in terms of quality, accuracy, objectivity, currency, completeness, and coverage as these elements require domain expertise. (Lucassen & Schraagen, 2011, p. 1235)

The verification of the instantiation's content was based on the OGC MoP guide (Jenner & Kilford, 2011), the OGC publications 'P3M3 – Portfolio Model' (Commerce, 2010b) and 'P3M3 – Portfolio Management Self-Assessment' (Commerce, 2010a), and the expert reviews. The usability was assured by a review of web application usability guidelines, by a review of the before mentioned research papers, formal feedback of the expert reviews and informal dynamic feedback loops with at the sponsor company employed software designers and software engineers.

However the trust enhancing effect could not be completely validated by experts because "(…) the willingness to depend on the credibility of information (…)" (Lucassen & Schraagen, 2011, p. 1233) depends on the specific user (please refer to chapter 8 for more information on the limitation of this paper).

The instantiation was a wizard which had four main components: a knowledge base about portfolio management, an inference engine to show the capacity exploitation and

capability for the specific user company, an interface for data input and analysis/result display, and design features that foster knowledge sharing between customer and supplier.

Even if the presented wizard is probably for most of the readers only a practical example of how to use the keys to success for marketing and selling a C-KIBS remotely, it might be useful to explain the MoP methodology for portfolio management briefly, also because the contents of the wizard's screenshots might be hard to read. Portfolio management is the active management "(…) of an organization's investment (…) in the changes required to achieve its strategic objectives." (Jenner & Kilford, 2011, p. ix) The MoP methodology for portfolio management accentuates this activeness as it "(…) goes beyond passive monitoring of progress to actively managing the composition and delivery of the portfolio as a whole, as well as ensuring that teams are energized, benefits realization is optimized and that lessons are learned and applied going forward." (Jenner & Kilford, 2011, p. ix) Therefore the MoP methodology consists of twelve portfolio management practices arranged within two cycles – the portfolio definition cycle and portfolio delivery cycle. The definition cycle consists of five overarching practices (understand, categorize, prioritizes, balance, plan) that are applied to each of the 'practices' of the delivery cycle. The delivery cycle consists of seven practices/processes (perspectives) that are necessary for efficient and effective management of the organization's change budget (management control, benefits management, financial management, risk management, stakeholder engagement, organizational governance, resource management). The more effective the definition cycle is interwoven in each delivery process of an organization's portfolio management the higher the portfolio management maturity for each process is. The wizard was explicitly structured by the processes of the delivery cycle while the practices of the definition cycle were used implicitly to characterize different maturity levels for each process of the delivery cycle.

The focus on portfolio management maturity was chosen as organizational maturity can act as a measurement for an organization's effectiveness to reach its objectives. (E. S. Andersen & Jessen, 2003) Furthermore portfolio management maturity acts as a scale for determining an organization's efficiency in reaching the objectives as portfolio management maturity does not primarily resist on the adoption of tangible assets but resists on the degree to which the portfolio management processes are structured and implemented in the residual organizational processes. Related to this fact, portfolio management maturity is independent of the maturity stages of an organizational life cycle maturity stage. (Jenner & Kilford, 2011, p. 10) Thus, portfolio management maturity fulfils the function of a common and universally valid metric to determine an organization's portfolio management effectiveness and

efficiency. A reliance on a practically tested and proven standard – which the MoP standard is – is advantageous as determining an organization's maturity level is complex due to numerous factors. (Crawford, 2006)

Indeed research showed that higher levels of maturity are negatively related to process variability and positively related to process performance (Cooke-Davies, Schlichter, & Bredillet, 2001) and even organizational performance (Herbsleb, Zubrow, Goldenson, Hayes, & Paulk, 1997). Already assessing the organization's capability via a maturity framework can lead to a substantial return on investment. (Bourne & Tuffley, 2007)

El Sawy and Bowles (1997) also recognized the impact of such instantiations as support of a remote and global expansion strategy and accentuated the opportunity of such instantiations with a standardized customer interface (1997, p. 475) for customer knowledge creation.

Three experts reviewed the wizard formally. The CEO of the sponsor company with domain expertise in software engineering and portfolio management, the head of customer services of the sponsor company with the same domain expertise, and an external consultant with primary information skills in portfolio management who was always in direct contact with portfolio management (software) users. Information skills are "(…) the ability to recognize when information is needed and the ability to locate, evaluate, and use effectively the needed information (…)". (Information & Literacy, 1989) The head of customer services was not beforehand informed about the wizard's purpose and functionality to bring more objectivity in his feedback in comparison to the CEO and external consultant who were aware of the wizard's purpose in advance. The review of the head of customer services was primary meant to reveal misunderstandings, unexpected technical issues, and bugs (Spyridakis, et al., 2005, p. 251) that might be caused by improper use of the wizard. To gain valid insights it was necessary that the head of customer services was not informed about the wizard's purpose, function etc. beforehand. The external consultant was due to his close contact with customers able to rate the wizard more 'through the eyes of the customers'.

The usability was primary verified by the CEO and head of customer services and the verification of the content was done by the external consultant and the CEO. Three formal revision cycles were applied. The first review was done solely by the CEO on basis of a mock-up. In this development phase the focus was primarily on the functionality and the relevance and usability of the content. The surface was not yet in the focus. By using a mock-up, the reviewer could early imagine and see what the prototype would look like later. The main outcome of this review was a rigorous reduction of the amount of content, a change of

the customer input section and deletion of direct references to the C-KIBS. The effects of the review cycles will be described in more detail when the wizard will be presented.

Although all three experts were related to the sponsor company, no significant methodological biases could be expected that might harm this thesis' outcomes as the expert reviews did not influence the identification and application of the identified keys to success but were meant to validate the wizard's usability and its content's quality in regard to the correct reproduction of the MoP methodology.

During the design of the wizard the researcher oriented at the guidelines for design science in information systems research by Hevner et al. (2004, pp. 82-90) described in Table 11, including its application. This provides an overview of the development process.

Table 11: Design-Science Research Guidelines

Guideline	Description	Application
Design as an artefact	Creation of an innovative, purposeful artefact …	Creation of a web-based presentation format to create customer trust in the C-KIBS and its supplier.
Problem Relevance	… for a specified, important, and relevant problem domain	The problem domain was so far defined by the development and to some extent justification of theories (Hevner, et al., 2004, p. 84) that explained the relation between trust and C-KIBS. In this section the author describes the artefact construction aimed at trust and knowledge creation remotely.
Design Evaluation	Evaluation of the artefact to provide a "(…) basis upon which to accept the claims that it provides any contribution (…)" (Hevner, et al., 2004, p. 91)	The utility, quality, and efficacy of the artefact was evaluated in terms of satisfaction of "(…) the requirements and constraints of the problem it was meant to solve." (Hevner, et al., 2004, p. 85) The choice of the medium and its utility was based on information from the knowledge base while the instantiation was evaluated via the multiple reviews of software and portfolio management experts.
Research Contributions	Artefact is innovative as it solves verifiably an unsolved problem (more efficiently/effectively)	The essence of the instantiation is to integrate the existing knowledge about the importance of trust creation in a C-KIBS environment into the concept of remotely marketing and selling via the internet (see also Table 12).
Research Rigor	Artefact "(…) must be rigorously defined, formally represented, coherent, and internally consistent (…)"(Hevner, et al., 2004, p. 82)	In the first part the author conducted a literature review conform the standard of Wolfswinkel et al. (2011) while the answer of the second research question was done via expert reviews of the

Guideline	Description	Application
	to provide utility.	instantiations (starting with a mock-up and eventual further development toward a prototype).
Design as a Search Process	Construction of a problem space (including utilization of available means and notice of laws) and posing/enacting of a mechanism to find an effective solution	The author used a heuristic search strategy to determine design requirements as these strategies "(…) produce feasible, good designs that can be implemented in the business environment." (Hevner, et al., 2004, p. 88) On basis of these requirements hypothesized design principles were developed (Walls, et al., 1992) that guided the presentation developments. During the connection of the theoretical theory/literature review and the practical design development process the author made the utilized means (overcoming the knowledge asymmetry with an innovative service), desired ends (remote marketing and selling via the web), and laws in the environment (necessity to create customer trust) more realistic. Eventually "(…) the design artifact becomes more relevant and valuable." (Hevner, et al., 2004, p. 89) Due to the wicked character of the problem under research the author searched primarily for a *satisfactory* solution (Simon, 1996) instead of finding the *best* solution which would require a complete evaluation of all remote communication channels. This striving for satisfaction rather than completeness was already applied in the literature review (compare chapter 3).
Communication of Research	Effective communication of the results to the audiences	As this paper addresses a management-oriented audience and also scholars the author tried to provide sufficient detail for decision makers of C-KIBS suppliers to take advantage of the gained insights in regard to remote marketing and selling of knowledge-intensive business services and for researchers "(…) to build a cumulative knowledge base for further extension and evaluation." (Hevner, et al., 2004, p. 90)

In Table 12 the conceptualization of online business purchase decisions and the corresponding design theory are illustrated, according to Markus et al. (2002, pp. 189-190).

Table 12: Design Theory for Wizard

Requirements	**Design Theory**
Online sales of C-KIBS is subject to a semi-structured expert purchase decision process that rests on trust and knowledge creation	"The solution is an expert decision-supporting system, developed via an appropriate iterative development methodology" (p. 189)
Users and Their Purchase Context	
Portfolio/project managers hold identifiable job roles known in advance although their MoP knowledge is unknown as well as their motivation to purchase	System must support the purchase decision needs of a known customer community in a self-deploying way: 1. induce portfolio managers to try the wizard 2. provide immediate benefits 3. encourage users to run through the complete wizard
Users' Information Requirements	
MoP knowledge will be useful to portfolio managers and should be "(…) translated into a form they can use (…)" (p. 190) Portfolio managers must be induced to bring in own portfolio management process/maturity	System must represent C-KIBS supplier's knowledge of portfolio management and customer's knowledge of own portfolio management process/maturity as if-then rules with prescriptions for action in an understandable way
The Process	
Online customers follow a prescribed, semi-structured process and react to certain purchase triggers known in advance.	"System must incorporate the prescribed process (…)" (p. 189) and incorporate explicitly the appropriate triggers

The wizard consisted of four different kind of pages: an introductory page, the 'questionnaire', consisting of the seven process perspectives and a countermeasure questionnaire page, and finally the results page. All different page types and their incorporation of the hypothesized requirements will be described in the following.

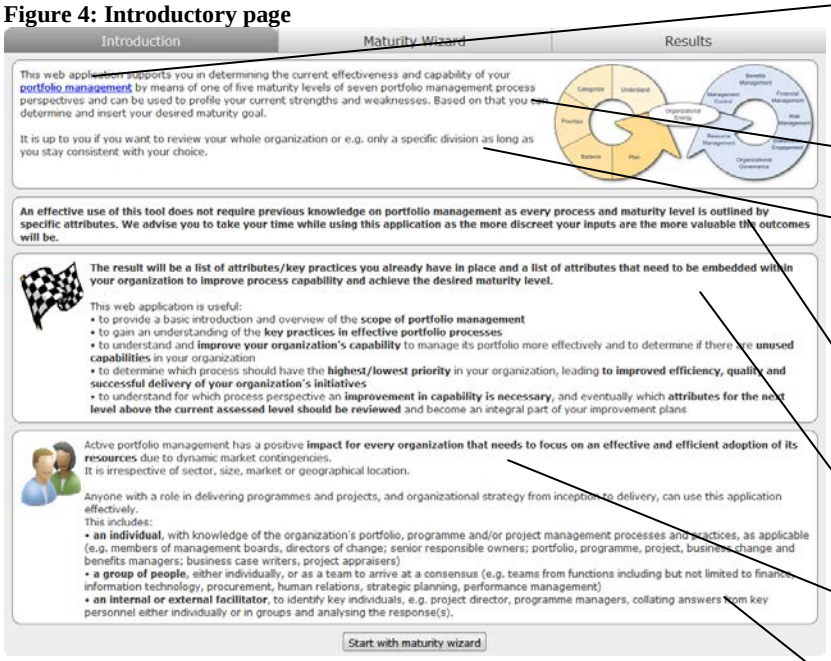
On the introductory page the wizard's capability to determine the user's current effectiveness/capacity of his portfolio management and capability to relate this to the user's desired portfolio management maturity goal was described. Furthermore the to be expected results in terms of a method-related list of attributes and keys to success as well as the creation of portfolio management-related knowledge was also described. The results section highlighted the goal of immediate benefits for the user after running through the wizard to motivate him to make a start (Markus, et al., 2002, p. 191). The user was also informed about this results page and its content beforehand to motivate him to use the wizard seriously (Gosling, Vazire, Srivastava, & John, 2004, p. 101) This was underlined by a statement that the more accurate the user inputs are the more valuable the outcomes would be.

The target users for this wizard were classified and companies that might benefit from active portfolio management (especially organizations operating in instable markets and that follow a prospector-like strategy) were characterized. Also the possibility to apply the wizard on different scales inter-organizationally (e.g. applying it only to one department or the whole organization) was pronounced.

In regard to the knowledge asymmetry it was highlighted that the wizard would be usable without the necessity of beforehand knowledge about portfolio management. Furthermore for users which were not familiar at all with the portfolio management concept a link was provided which opened up a pop-up with further generic information about portfolio management and its benefits. Especially the 'best practice'-based character of the portfolio management concept and its reference to the MoP methodology, developed by the OGC, was highlighted to fulfil the function of a certification. This information was not directly visible when visiting the introductory page to lower the risk of information overload, specifically in regard to more experienced users. However, the link was directly placed at the top of the page to prevent that novice users might miss it. Also, on all pages important keyword and key phrases were highlighted boldly.

Figure 4 and Figure 5 show the introductory page and the before described characteristics.

Figure 4: Introductory page



Link to portfolio management description (see Figure 5 for pop-up)

Wizard's capability

Wizard's scalability

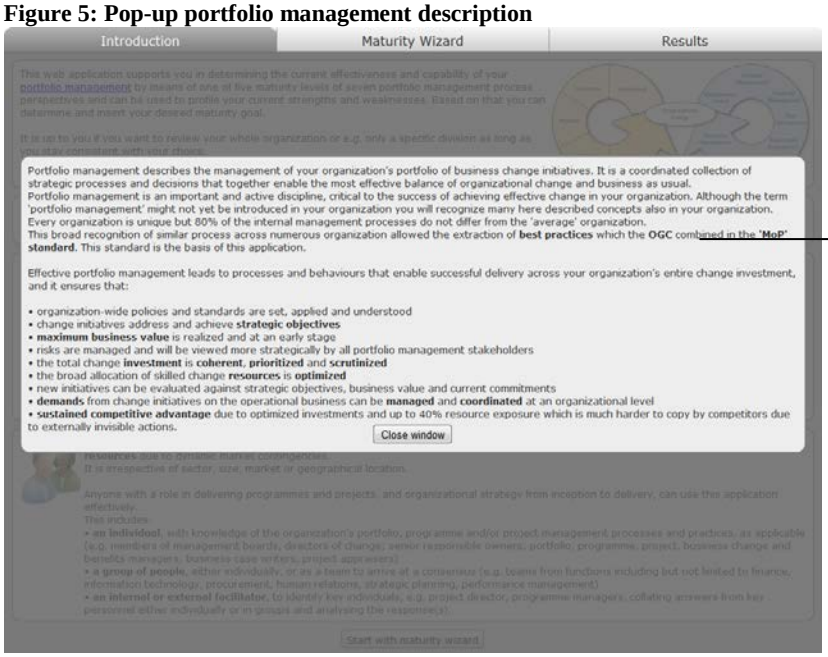
No previous knowledge required and benefits of accurate user inputs

Results

Target company classification

Target user classification

Figure 5: Pop-up portfolio management description



Display of MoP as based on 'proven best practices'

On the first page of the 'questionnaire' section of the wizard, users were urged to indicate their current overall organizational maturity level in regard to portfolio management. Users could not indicate an overall desired maturity level on this page because the validation in regard to feasibility and suitability of the desired level was done in another and more specific way which will be described later.

The customer input section was designed originally in a way to pick up also optional financial data (e.g. turnover based on the customer's change portfolio) and mandatory data in regard to the customer's management of his change portfolio. Furthermore a benchmarking functionality was considered, where users could compare their inputs with these of other users from the same industry/country etc. These customer inputs would have been used also for an automated importance weighting adjustments of the individual portfolio management processes, similar to an instantiation of Baligh et al. (1996) that was able to determine organizational design parameters inter alia on basis of the contingency theory factors organizational size, strategy, technology, environment, and managerial preferences. (p. 1649) Baligh et al. (1996) applied a 'certainty factor' that measured "(…) the degree of compulsion (…)" (p. 1651) one gives the if-then statement, e.g. "If size is large, then the formalization is high (…)"(p. 1649). In this wizard it would have worked in the way that when the user would have selected a certain industrial sector the wizard would have adapted the weightings and thus the capability analysis to a likely setup. Users would have been able to change these weightings manually also. However it was shown that firstly these inputs could only be done by users that already had domain expertise in portfolio management, secondly that these inputs were unnecessary to overcome the knowledge asymmetry, and thirdly that outcomes of

an automation would be minor reliable as portfolio management capability desires are always company specific and are only loosely related to an organization's sector, life cycle, or geographical location. Furthermore asking for 'customer sensible' data in a stage of the business relationship where trust is yet to be established seemed to be risky. Finally a restriction on the process perspectives was advantageous in regard to effort for completion. Thus, the input possibilities were reduced on user indications of their current and desired portfolio management state, split up on seven portfolio management processes plus an overall organizational management maturity indication.

However, this page had two purposes. Firstly, it was designed to familiarize the users with the maturity level approach and the characteristics which constitute best practice. Secondly, the inputs of this page were later used to validate the process perspective-specific inputs. The average input for the user's current process maturity level had to match the inputs of this page. Could no match be achieved, users were made aware of this and got the possibility to revise their inputs. The intention was to lower the risk of biased inputs due to users' optimism. This function will be outlined later in more detail when the results page is described. These purposes were shown to the users.

The page started with a description of this perspective (as did also all other process perspective pages) and every maturity level was characterized (as it was also the case for all other process perspectives). These descriptions were used to assure the adequacy of the user's knowledge in regard to the precise meaning of each portfolio management process.

All radio buttons to indicate the user's current/desired maturity level were deselected when visiting a page the first time to prevent users from proceeding while leaving the inputs as they would be by default. The deselected radio buttons indicated users also that the default organization has maximum room for portfolio management improvement.

In light of the usability every page had at least at the bottom a button for proceeding. However it was only possible to proceed when the necessary inputs were done. These inputs could be an indication of the current and desired maturity level OR the indication to skip this process, as not every process has meaning to every organization.[5] However, users could also navigate with using the navigation bar without losing their inputs. For this purpose, when visiting a process perspective-related page, a sub-navigation moved in which listed all process perspective related pages. This sub-navigation as well as the main-navigation showed with buttons in a 'selected style' where the user was currently located in the wizard. The constant visibility of all process perspective titles in the sub-navigation bar was also done to show

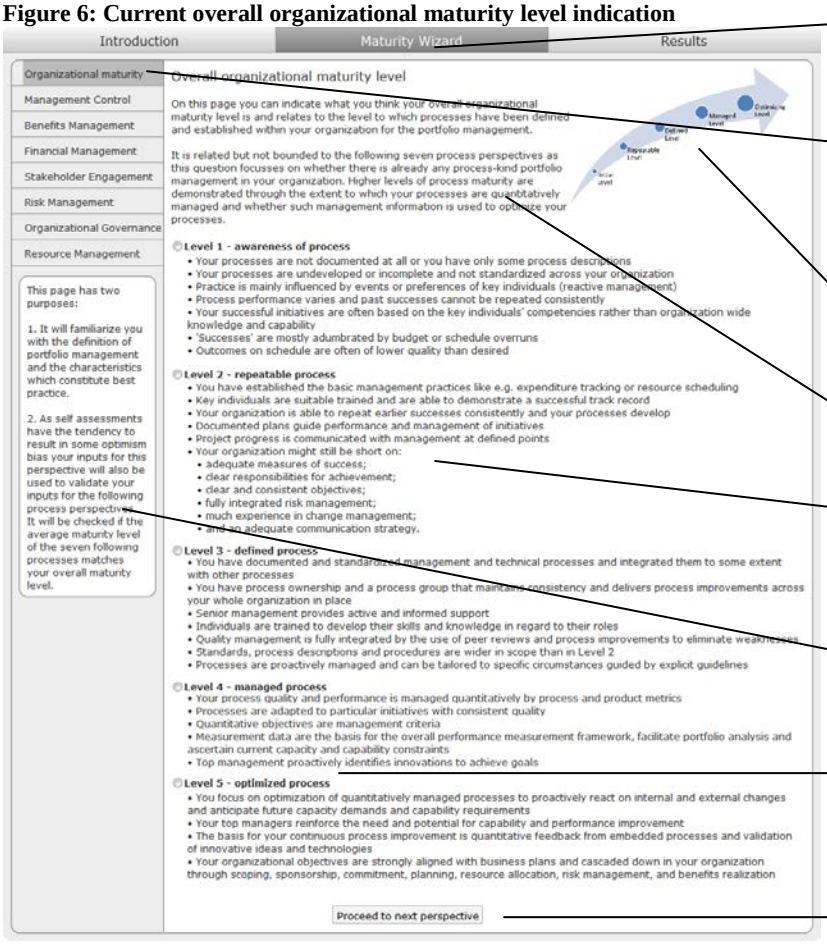
[5] Please note that the indication of a desired maturity level and the possibility to skip a process was not possible on the page for the overall maturity level.

novice users the entire array of complete portfolio management configurations, which the author hoped "(…) would stimulate their desire to learn about concepts unfamiliar to them." (Markus, et al., 2002, p. 192)

Finally all figures on the wizard's pages were clickable and showed up in a new window in a bigger size (no figure is shown here). This was done as web users are used to click on figures and expect eventually a bigger size. The figures were shown in a new window to avoid the need for back-navigation of the user.

Figure 6 shows the page for the overall organizational maturity level and the before described characteristics.

Figure 6: Current overall organizational maturity level indication



On the following seven pages the user was urged to indicate his current and desired maturity level for the seven portfolio management process perspectives. Although each of the seven portfolio management processes must be aligned with the industry or business strategy, not every process has the same importance for a specific user and/or the user wants to reach a higher maturity level in each process. Thus it was possible for users to select independently the current process maturity and whether they wanted to increase the maturity level or not. Additionally the user could indicate to be uninterested in this process. In the following only one of these pages will be described exemplarily for all of these pages.

Like on the before described page, each of the seven process perspective pages featured an overall process description, a description of each maturity level, deselected radio buttons, highlighted navigation buttons, and a clickable figure.

El Sawy and Bowles (1997) developed an instantiation in a case format that linked "(…) problems, symptoms, and solutions in a document database (…)" and fed the resolution back "(…) into the online knowledge base in the form of solution documents." (p. 466) The software was able to link variants of multiple symptoms with a master solution or solution-in-progress. The wizard offered a comparable function for users. They were able to determine their current and desired portfolio management maturity stage individually for each process perspectives to receive individual guidelines to reach the desired goal, conform to the MoP standard. Eventually users were able to "(…) specify their preferences with greater precision (…)" (Tingling, Parent, & Wade, 2003, p. 226) and the inputs were more realistic. To support the feasibility of inputs participants were warned and hindered in proceeding if they selected to want to take more than two maturity steps in parallel e.g. going directly from maturity level 1 to maturity level 4. This limitation was necessary as scholars argued that companies can even hardly advance more than one maturity level at a time. (Nieto-Rodriguez & Evrard, 2004) The wizard allowed two steps because the intervals between each maturity level are not always the same, e.g. as proceeding from level 1 to level 2 needs a collective transformation in corporate culture, proceeding from level 3 to 4 'only' needs a further evolution of the corporate culture. This warning and its purpose was described to the user and illustrated with a red traffic light.

Furthermore, when a user indicated to desire a maturity level of 5 an attention window popped up, reminding the user that level 5 is not the optimal level for each organization. This is due to the fact that users might be too optimistic without recognizing that business needs in terms of the optimal level of performance, the business case for any process improvement initiative and what the user's organization feels able to achieve and sustain needs to be

considered because increasing a maturity level always consumes resources. (Commerce, 2010a, p. 20) Eventually not for every organization the benefits of increasing the maturity level might outweigh the costs. However, users could discard this attention and keep their level 5 input.

Instead of the before mentioned description of the page's purpose, the seven process perspective pages showed a content block that included a guideline on how to behave (where to get further information) when a user was unsure about his exact process perspective maturity level. This content block was visible by default only on the first process perspective page. On the following pages instead only a link was displayed that made the content block visible again when clicked on (no figure is shown here). This design decision was made to prevent appearance of already known content and eventually to reduce the total amount of information per page.

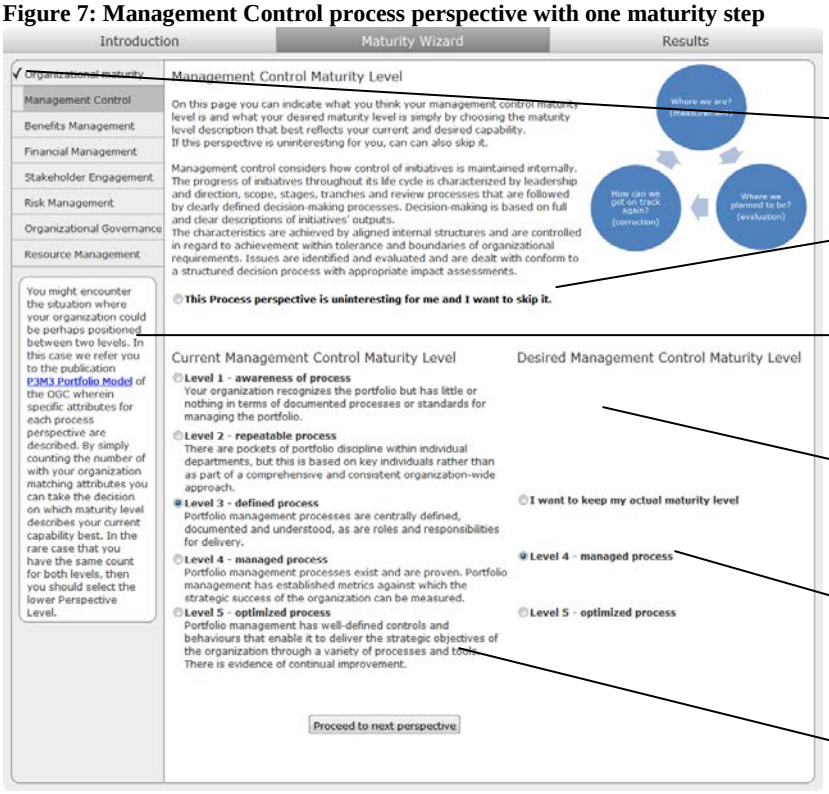
Another function to prevent the presentation of unnecessary information and also to prevent faulty insertions was that desired maturity levels were automatically hidden when the user's current maturity level was higher than the desired ones (e.g. when the user's current level was at 3, the desired maturity levels 1 and 2 were hidden).

When the user indicated his desire to skip this process, directly below this checkbox an additional button became visible that led to the following process. By doing that unnecessary scrolling to the bottom of the page and unnecessary 'scanning' of for the specific user uninteresting information (the maturity levels and its descriptions) was prevented.

Finally on each process page the before visited and accomplished process was marked with a ✓ to indicate the user's proceeding and eventually to motivate him to finish the wizard.

Figure 7 and Figure 8 show the page of the Management Control process perspective with different inputs, exemplarily for the other process perspective pages.

Figure 7: Management Control process perspective with one maturity step



Checkmark for accomplished processes

Skip radio button with hidden proceed button

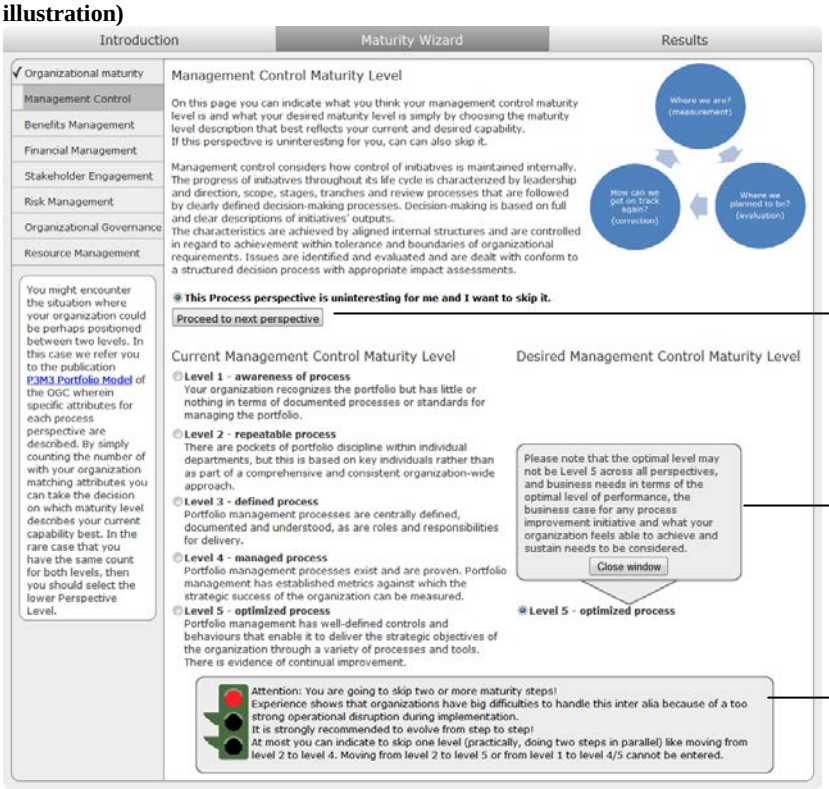
Content block with further guidance

Hidden radio buttons due to higher current level

Radio buttons for desired maturity level

Radio buttons for current maturity level

Figure 8: Management Control process perspective with choice of skip and attention pop-ups (arranged for illustration)



Skip radio button with visible proceed button

Attention window for desired level 5 selection

Attention window for too many maturity steps and no proceeding possibility

After running through each of the process perspectives the user reached the final page 'results' where the user-specific results were presented in a kind of trade-off matrices that showed the user's status quo and aligned it with his desired goal.

This page could have two states. When the overall organizational maturity level (step 1 of the 'questionnaire') matched the current overall organizational portfolio management

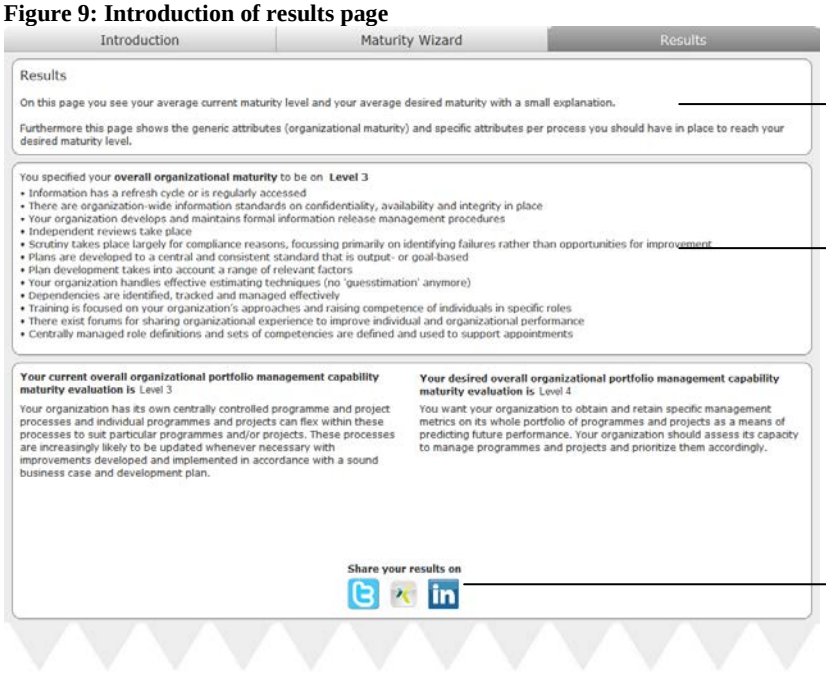
capability maturity evaluation (the average of the inputs of steps 2 – 8) the user had access to the complete information on the results page. When these inputs did not match the user got an additional pop-up window that overlaid the results page's content. At first the normal state is described.

The first thing a user saw was a note of his overall organizational maturity level with a detailed description of this level. This description was more detailed than in the 'questionnaire' because one could assume that the novice user made up more portfolio management knowledge during the use of this wizard than before its use. If the description of each level would have been detailed already in the beginning, the risk of information overload and misunderstandings might have biased the results. The more detailed description on the results page was necessary to support users in case of a mismatch between the before mentioned inputs. This will be described later.

Below this organizational maturity level the current and desired overall organizational portfolio management capability maturity levels were shown with a short description. The user had here the possibility to share his result on social networks like Twitter, LinkedIn, and Xing (a German social network for professionals) to induce customer-to-customer communication. A more detailed description was not necessary at this point as underneath the attributes and keys to success for each of the seven process perspectives were described in detail.

Figure 9 shows this first part of the results page and the so far described characteristics.

Figure 9: Introduction of results page



Originally the attributes and keys were not directly visible when a user visited the results page but had to be triggered with a button. This design decision was made to minimize the page load time for visitors. However, during a test with the head of customer services in the second review cycle it was indicated that the user expects that the results are directly shown when visiting the results page without the need to click a button additionally. Eventually this button was deleted and all results were generated during the page load.

Each description of the individual process perspective contained a risk factor, attributes the user should have in place to reach his specific desired maturity level, and keys to success to increase the maturity level in general. The last one was therefore independent of the specific desired maturity level. The keys to success were added after the third review cycle with the external consultant. The purpose of these keys was to show users useful behaviours beyond the ‘restriction’ of their specified goals and thereby sparkling indirectly the user’s interest to ‘go further’. As these keys were independent of the user-specific inputs and could be applied to any process maturity level increase desire more generally, they were also less affected by faulty user inputs. Later these keys could form the bridge between the wizard and the C-KIBS. However, with this practical guidance a realistic connection to the ‘offline world’ could be established, which was assumed to make the outputs more reliable for users.

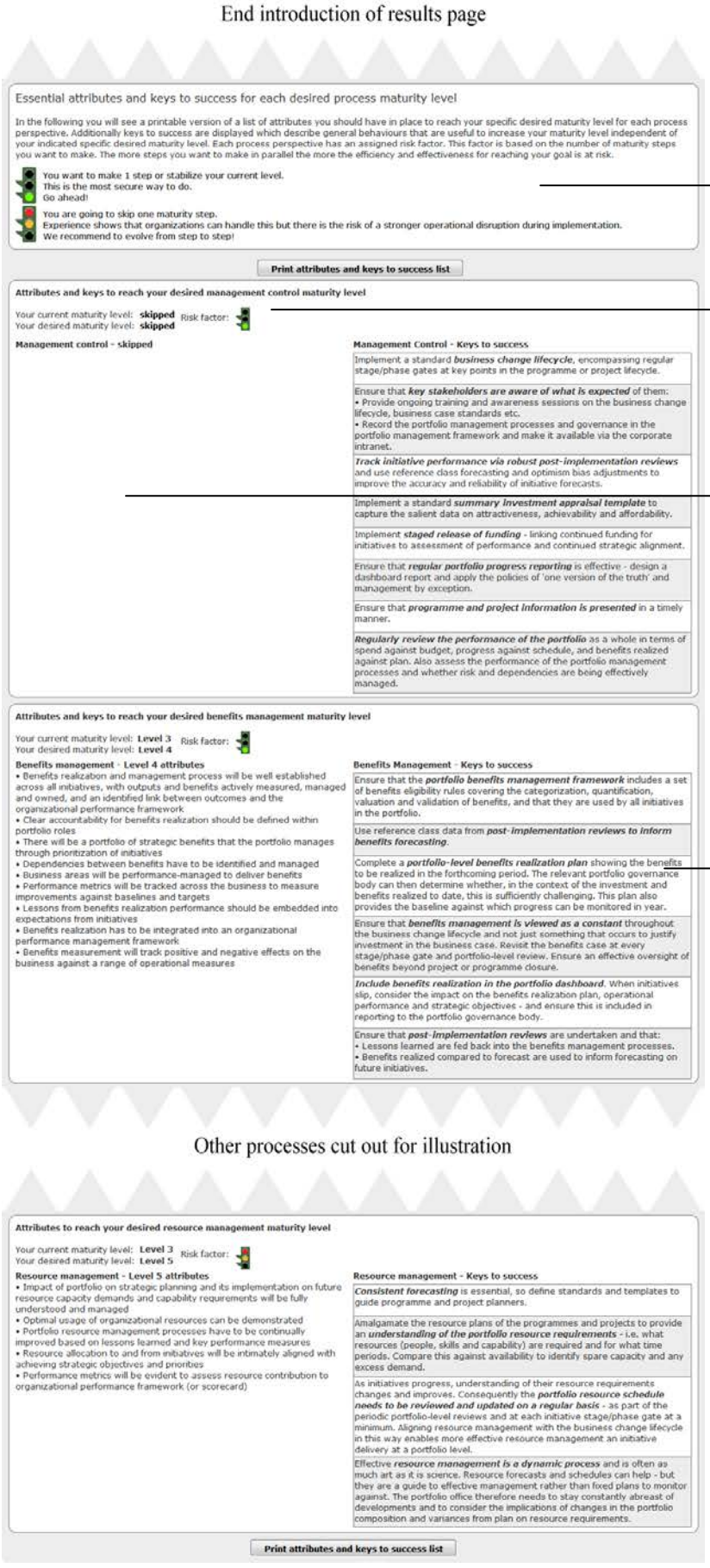
The risk factor was applied on basis of the to be taken maturity steps and was illustrated via signal lights in dependence of the necessary maturity steps (0/1 step = green; 2 steps = yellow; 3 steps or more = red, although ‘red’ was not shown on the results page but directly on the process-specific pages during the user’s inputs, as already described before). The purpose, effect, and underlying principles of this risk factor were described to the user above the list of attributes and keys.

Probably the attributes would be for users the primary interesting thing as they were a pragmatic to-do list of things the user should accomplish/have in place to reach exactly his desired goal. The attributes were presented in a way that every user could directly start working with/on them without the need to invest firstly in any tangible assets (e.g. additional software). This was not only implemented to provide users valuable ‘ready to apply’-information but also done to lower the starting hurdle and motivate users to at least make a start with effective portfolio management. The underlying idea was that users would thereby already create a ‘feeling’ of what portfolio management means in practice and maybe even reach the first stopovers. These users would later be more open to the marketing and sales activities of the research sponsor due to an extended knowledge base. Therefore the attributes list was designed in a way that several points could be managed more effectively with the C-KIBS.

Finally users were able to print this list of attributes and keys via a print-button, placed above and below the list. When clicked an additional window appeared that included the list in a text format to support the user in storing the information digitally or printed.

Figure 10 shows an excerpt of the lists of attributes and keys to success and the so far described characteristics.

Figure 10: Excerpt of attributes/keys section



Explanation of risk factor

Risk factor per process perspective

No list off attributes visible due to 'skipped' input

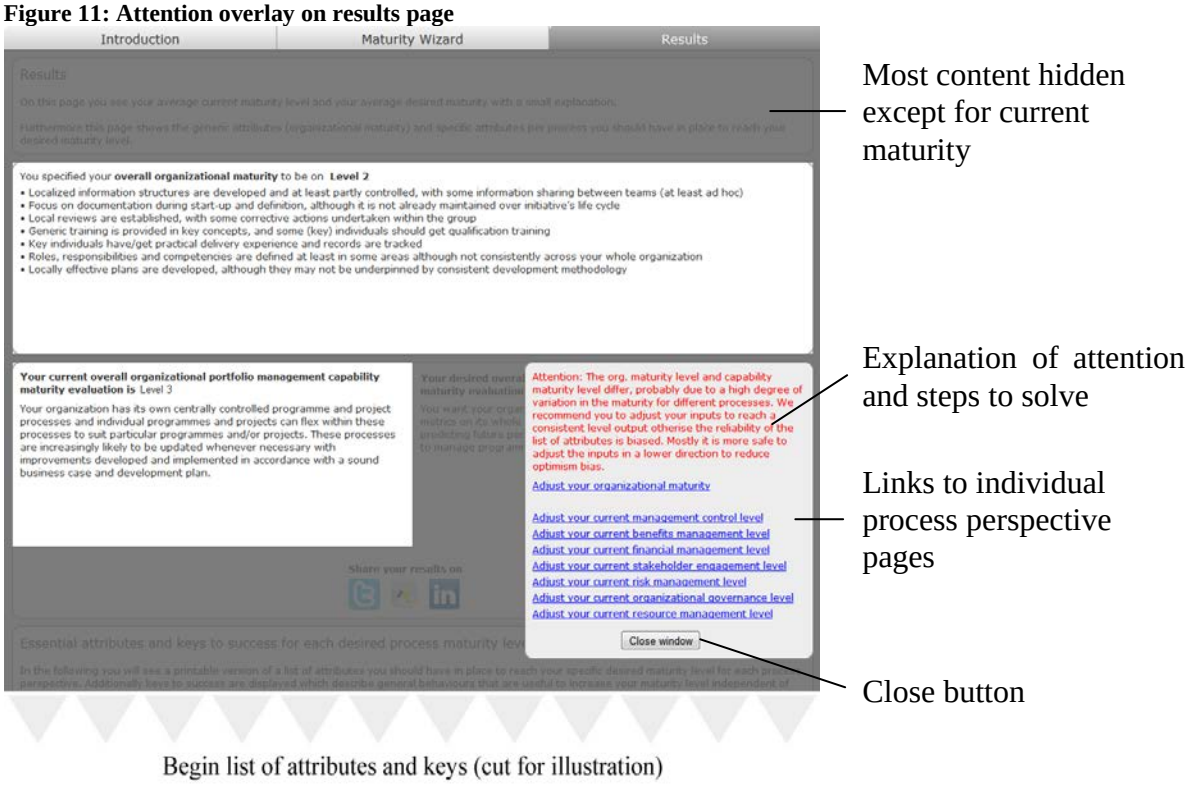
List of keys to success per process perspective

When the overall organizational maturity level did not match the current overall organizational portfolio management capability maturity evaluation the user saw on the results page an attention window that obscured most of the page's content and only left the overall organizational maturity and the current overall organizational portfolio management capability maturity, including their descriptions, visible. The user was made aware of the fact that a mismatch indicates an unclear starting point which affects the reliability of the list of attributes negatively. For example, if the current maturity of the user's portfolio management would be one level lower than indicated, the list of attributes would lack necessary attributes, because one level would have been skipped. Eventually in case of doubt it was recommended to lower the current maturity level. For this case of mismatch the more detailed description of the current overall organizational maturity level was implemented to support the user in recognizing possible faulty inputs. If the user came to the conclusion that he made a wrong decision in regard to his current overall organizational maturity level he could solve this problem very fast, as in this case only one input (step 1) had to be revised.

Originally users were advised to go back to the individual process pages via the main navigation bar and after changing their inputs to click once more on the 'results page' link in the main navigation bar. During the second review cycle wherein the CEO and the head of customer services participated, it was criticized that there was the risk that users might not understand that they could change individual inputs without the need to make all inputs anew. Thus, direct links to the individual process pages were provided directly in the content area of the results page. Navigating via the navigation bar was not necessary anymore. However, as the mismatch only biased the list of attributes but not the keys of success or the desired goal, users could also close the attention window to see the page's content.

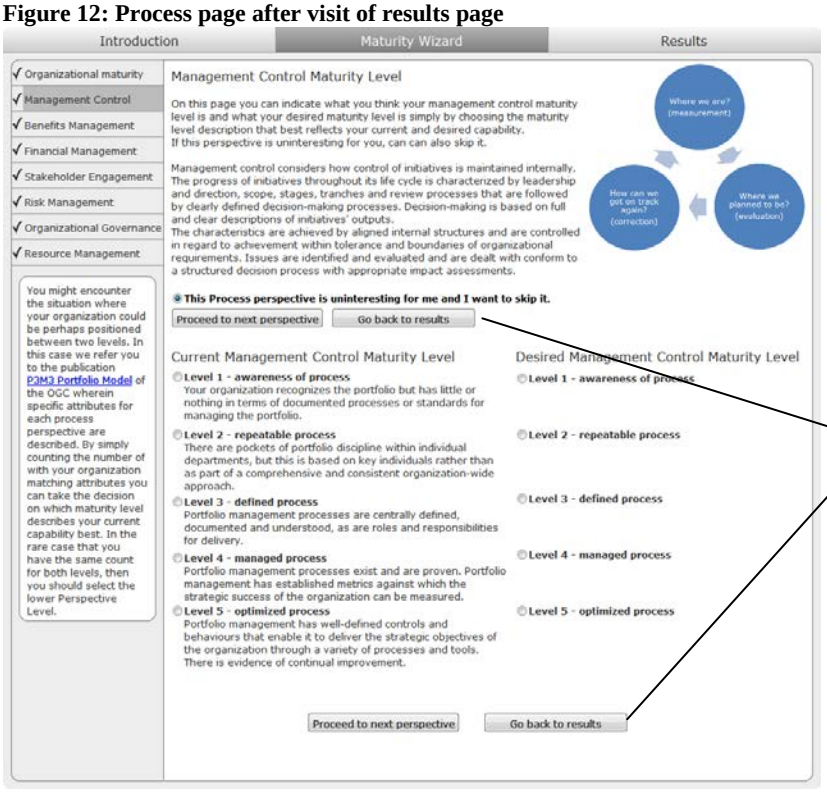
Figure 11 shows the attention window and the so far described characteristics.

Figure 11: Attention overlay on results page



Additionally a function was integrated that when a user visited an individual process page anew, coming from the results page, the wizard showed additional buttons for going directly back to the results page after a change of the inputs or proceeding to the next process for further changes. This is displayed in Figure 12.

Figure 12: Process page after visit of results page



El Sawy and Bowles (1997) highlighted the importance of keeping a record of the type of customer inquiries to use it later for the supplier's advantage, like in this case for refining the wizard or for specification of further marketing activities (p. 475). To "(…) learn quickly from customers (…) will not be a strategic choice: it will become a strategic necessity for success in the electronic economy." (El Sawy & Bowles, 1997, p. 481) Eventually the wizard was designed in a way that allowed easy implementation of any web analytics solution and reliable tracking results. E.g. all user inputs were not only temporarily stored with the use of JavaScript but also as dynamic parameters in the URL. This allows later an easy filtering to derive an oversight of what process perspectives are user-critic and eventually a very direct prospect targeting by the sponsor for e.g. showing where and how specific the C-KIBS can support the individual prospect.

6.5. General Applicability of the Instantiation

The presented instantiation is only an example of how the identified keys to success can be applied to create a higher level of customer trust without the necessity to make the C-KIBS itself so much transparent that it might become vulnerable to copies. Thus, this Wizard does not claim to be (and does not want to be) exploitable for every C-KIBS supplier but has the purpose of opening practitioners' minds for an innovative exposure to the identified keys to success. In the here presented form the Wizard might be only utilizable for organizations that also offer products/services that evolve around the concept of portfolio management in

regard to the MoP methodology. However, this Wizard provides a framework for every C-KIBS supplier that wants to offer remotely services/products that are based on processes which is for example the case for most suppliers of enterprise management software.

7. Conclusion

The purpose of this thesis was to develop a strategy for implementing marketing and sales practices remotely on a global scale. The focus was thereby on C-KIBSs and customers and suppliers that are not yet in a relationship with each other.

The main challenges C-KIBS suppliers face are firstly the lack of service-related knowledge and the lack of trust at the customer side in the service and the supplier. This was referred to as narrow-scope trust, which can be influenced by the C-KIBS supplier. Secondly, the environment in which the remote communication takes place influences the customer's trust, which was referred to as broad-scope trust. It was shown that broad-scope trust can be hardly influenced by the supplier. Without coping with this challenge no sales can be expected. Eventually this thesis focussed on trust and knowledge creation at the beginning of a purchase decision cycle rather than on the complete cycle.

Additionally the current market circumstances provide challenges for C-KIBS suppliers. Customers demand more from services for less and want transactions to be as simple as possible. In the same way customers are going international C-KIBS suppliers have to follow them.

Scholarly literature stressed so far the importance of interpersonal relationships between customer and suppliers and the provision of customized C-KIBSs. However, this approach does not suit the market demands of the 21st century of fast and inexpensive transactions, a common metric to support customer measurement, and a strong customer focus on lean and efficient solutions.

Eventually the author argued for C-KIBSs that have a standardized basis and provide customers possibilities to tailor the interfaces by themselves.

On basis of these circumstances, two research questions were developed and guided the thesis.

- *How can knowledge-intensive-business-service providers perform remote sales and marketing activities on a global scale?*
- *What are possible marketing and sales practices and techniques available to KIBS providers that are aligned with the identified circumstances, opportunities, and obstacles*

which affect the applicability of remote communication between a C-KIBS supplier and a customer in a global context?

In the same way C-KIBS should align standardization and customization, the marketing and sales techniques should aim at the customer group at large while simultaneously allow for addressing individual customers. The purpose of the marketing techniques in customer-supplier pre-relationships is to create knowledge and trust at the customer side. The provision of C-KIBS-related information to create knowledge at the customer side is necessary to create trust but showed to be not sufficient. The reason for this is that C-KIBS need to be implemented at the customer's organization before a complete understanding of its performance and operation can be expected from the customer. Eventually additional mechanisms for trust creation were investigated.

A segmentation of the customers and geographical markets showed to be crucial for the design of the trust-forming system and the marketing approach.

It was revealed that a global marketing approach is not possible on a remote basis because the broad-scope trust, which affects the applicability of remote communication techniques, differs between the countries. This difference could be measured on basis of the countries' cultures. Organizations in low context countries with loose cultures were identified as most promising because they showed to interpret messages the least on basis of its context and are willing to communicate remotely.

Customers that follow a prospector-like strategy were identified as the most promising target group at the beginning of a market launch, as they showed to have the highest level of service utilization and eventually can capitalize best on the C-KIBS' capability. This will result in a satisfied customer base, leading to an enhanced positive reputation of the supplier.

But to create a customer base C-KIBS suppliers have to send in pre-relationship stages trust-enhancing messages wherein institution-based and knowledge-based mechanisms are applied. Also identification-based mechanisms showed to have a positive impact in early stages of the customer-supplier relationships. Hence, soft and hard forms of trust are important, although hard forms of trust only have an impact in pre-relationship stages while in the early stages these forms should be replaced completely by soft forms. As mechanisms signals as well as indices should be applied because the customers know about the malleability of signals and eventually also look for indices.

The main mechanism to create knowledge and signal to create customer trust is to make processes and outcomes certain to customers. Therefore intangible information has to become tangible and a common metric should be derived against which customers can rate

the C-KIBS' performance. The author argued that a focus on C-KIBS related aspects that can be made tangible is more valuable than communicating all aspects including intangible ones because intangible information is unsuitable for knowledge creation and does not have a trust-enhancing effect, due to a lack of a common metric for evaluation. The benefits of complete information would not outweigh the threat of an information overload at the customer side. The supplier faces here the challenge to make information explicit and specific to an extent where it is valuable for the specific customer but also reusable for the target group at large. Furthermore C-KIBS suppliers should take care on the threat that the more transparent the C-KIBS becomes for the customers the more likely a vertical customer movement in the role of a supplier becomes.

The internet showed to be the optimal communication channel and a web-based presentation the optimal communication medium for these mechanisms as it allows customers to interactively engage with the medium and fosters multilateral communication. E-mail showed to be less suited for intercultural communication.

In the same way knowledge is created and delivered in the working process of C-KIBS organizations and the value of this knowledge increases during the delivery process, the marketing presentations should offer information that is immediately of value to the customer as it overcomes the knowledge asymmetry and its value would be even greater after the C-KIBS is delivered. The advised strategy for a web-based presentation was to provide abstract information for free, which generates only marginal costs for the C-KIBS supplier and letting visitors apply this information to their own cases to make it specific and eventually raise the information's value. Furthermore the provided information should be based on a common metric and incorporate the know-how, know-why, and know-what in dependence on the metric and/or the C-KIBS itself (this choice depends on the stage of the purchase decision cycle the specific marketing presentation aims at). Thereby C-KIBS suppliers can capitalize on the scarcity of specific information in the internet, signal their competence in regard to business enhancement, an understanding and valuation of the customers' desires, and induce customer/prospect-to-prospect communication. Supplier recommendations between members of the target group will eventually work as a strong indication for the supplier's trustworthiness. The information's trustworthiness can be indicated when it refers to an independent third party.

In the here presented case customers should be sensitized for the benefits of the active management of their change portfolios and should regard the research sponsor as an experienced and trustworthy partner for this active management of the customer's change

portfolio. To generate the customer trust in the sponsor's competencies and to transfer portfolio management knowledge to the customer, a wizard on basis of the MoP standard was developed. The in the wizard provided information revolved around the metric of an organization's capability in dependence of its maturity stage. Companies could determine their current portfolio management capability level and see the advantages of increasing this capability level. Eventually customers could also specify their desired portfolio management capability level. The information's trustworthiness was indicated by highlighting its 'best-practice-based character' and a reference to the OGC as originator.

Overall, this thesis showed that C-KIBS should not only be understood as a classification of KIBS in general but it is worth to focus research specifically on these classifications, as they offer specific marketing and sales opportunities but also specific threats that might be overlooked by approaching KIBS in general. The incorporation of the current market environment is a pre for scholars to be able to recommend feasible, suitable and acceptable solutions to practitioners.

8. Limitations

Naturally, literature reviews limit researchers to questions/variables that have already been studied and eventually there is the threat that important variables stay undetected. The threat of undetected variables was coped with by applying the Grounded Theory which also implied using research fields one would initially not think of when investigating KIBS. However, it is arguable by which amount correlating investigated variables that were not set in the same context before can lead to new-to-the world insights. One should also acknowledge that different kinds of studies (e.g. conceptual, field studies, quantitative and qualitative studies) are combined during the literature review. Although relating concepts to each other whose correlation was not investigated before extends the research horizon, this might result in methodological inadequacies that might concern the final framework in some details.

For example, the precise difference in importance weightings for certain factors might be arguable. A scenario can be that multiple studies reveal that factor 1 is more important than factor 2 but the difference is more marginal. Then another study reveals that factor 2 is much more important than factor 1. The question is then which outcome is reliable. This situation could be seen e.g. in the correlation of the concepts of HC/LC countries and tight/loose cultures. This effect is enhanced by the publication bias (not all studies are published), leading unavoidably to an imbalance of studies per factor.

The author tried to minimize this threat by setting these in theory developed correlations in a real world context and validating the development of the instantiation by expert reviews. Reasons for basing the instantiation's validation on expert reviews were already outlined but expert reviews have also some disadvantages. Experts "(…) may not think like users and may assume that things are usable when they are not. Expert evaluation is simply no substitute for real user interviews and testing (…)" (Powell, 2002, p. 134) as they "(…) analyze only the site itself, not a user's interaction with it." (Spyridakis, et al., 2005, p. 244) It is arguable that experts who have the knowledge to understand the potential of the C-KIBS can rate the ability of the instantiation to establish sufficient knowledge at the customer side. Furthermore the customer acceptance of the remote marketing and selling of a C-KIBS depends on the customer's cognitive and social ability (Hevner, et al., 2004, p. 81) to interpret the trust signals. Novices in judging information with less domain expertise react and assess content different to experts as they e.g. rely more on surface characteristics instead of semantic features. (Lucassen & Schraagen, 2011, p. 1235)

An expert-related bias that is specific to this design process was that the experts already experienced the information/C-KIBS and eventually were less motivated "(…) to actively judge the credibility of the information (…)" (Lucassen & Schraagen, 2011, p. 1236) which may have led to a more heuristic assessment. Indeed for information novices source experience (in other words the history of the novice) plays a great role for judging the trustworthiness. (Lucassen & Schraagen, 2011, p. 1239)

Thus, reviews by sponsor-related experts that already trust the sponsor and/or may have different cognitive and social abilities (that is reasonable with an international marketing approach) cannot be generalized to the customer group at large. Although the author minimized this bias by applying an extensive literature review, the author argues strongly for empirical follow up researches to validate the developed instantiation. The following chapter recommends techniques to do so.

9. Future Research Possibilities

Although the focus of this research was on a creative way to overcome remotely the knowledge asymmetry between C-KIBS suppliers and customers, might question how an interactive wizard performs in comparison to other presentation formats and how the trust-enhancing effect of abstract information differs from the trust-enhancing effect of specific information. Researchers would try to identify the levels of representation and conceptualization of the supplied information to foster trust in a C-KIBS environment

remotely. Eventually the impact of certain (information) requirements on trust creation can be determined and multiple presentation formats are also useful to find additional requirements. An inductive empirical analysis is helpful for detecting real user requirements and information needs. (Wijnhoven, 2010, p. 57) For this purpose researchers could offer different versions of information goods (abstract vs. specific information and different presentation formats) and thereby offering users different opportunities "(…) to interact with the content and the delivery of meta-information (…)" (Wijnhoven, 2010, p. 130). The presentation formats might then be compared on their performance.

Although textual presentations do less well induce use of a system (Markus, et al., 2002, p. 191) they are common practice as formats for marketing and selling. Thus they could be incorporated as static countermeasure for the interactive wizard.

There are different research methods for web-design. According to this field of research four research methods can be distinguished: "(…) (1) expert evaluations and automated evaluation tools, (2) usability tests, (3) surveys of users' perceptions, and (4) true experiments conducted either in laboratories or remotely via the internet." (Spyridakis, et al., 2005, p. 244)

As the focus will probably lie on the interaction of users with web-based presentations, *expert evaluations and automated evaluation tools* that only analyse the site itself are inadequate for this purpose (Spyridakis, et al., 2005, p. 244) as "(…) one validates not a measuring instrument, but rather some use to which the instrument is put (…)" (Nunally, 1978 cited according to T. Buchanan & Smith, 1999, p. 140).

Usability tests and *true experiments conducted in laboratories* are also inadequate because such controlled environments "(…) detract from the subjects' ability to act naturally (…)" (Spyridakis, et al., 2005, p. 246) and are thus limited in terms of internal and external validity (Spyridakis, et al., 2005, p. 247).

Finally *surveys of users' perceptions* are inadequate as "(…) users' perceptions, particularly in the absence of real webpages, often do not relate to their perceptions or behavior with an actual website (…)". (Spyridakis, et al., 2005, p. 247) Finally the provided information are filtered through the view of respondents, take place in an unnatural setting, might be biased by researcher's presence, and at last depend on the communication skills of the respondents. (Creswell 2009, p. 179)

Thus, a behavioural-science research paradigm is necessary. Action research (Walls, et al., 1992) – testing and observational design evaluation methods in a real context – fulfils this purpose and is eventually advised for monitoring of the instantiations' use and performing

coverage testing (Hevner, et al., 2004, p. 86) of e.g. bounce rates and ultimately performance. True experiments conducted remotely via the internet are therefore the advised research method. Its advantages will be outlined in the following.

Since the release of the World Wide Web and especially in the recent years several studies showed that internet-based research is not more or less reliable and valid than e.g. pen-and-paper surveys in regard to demographical diversity, participants' adjustment, depression or motivation and more generally in regard to internal and external validity. (T. Buchanan & Smith, 1999, p. 139; Gosling, et al., 2004, p. 95) Additionally internet-based research has the advantage of an efficient gathering of large (culturally) diverse sample groups (Bohner, Danner, Siebler, & Samson, 2002) as voluntary participation is considerable high (Reips, 2002, p. 245) and generalizable (T. Buchanan & Smith, 1999, p. 129; Horswill & Coster, 2001) although "(…) they are not completely representative of the population." (Gosling, et al., 2004, p. 95) These large samples increase the statistical power and decrease the risk of a Type II error (De Veaux, Velleman, & Bock, 2008, pp. 513-515) due to sample bias and "(…) allow for the assessment of comparison treatments with random assignment of subjects to conditions (…)" (Spyridakis, et al., 2005, p. 247).

As a remote research method, web-based research has the advantage of reduced experimenter effects (Cook, 2005, p. 542) like demand or expectancy characteristics (Spyridakis, et al., 2005, p. 246), leading to increased internal validity (Spyridakis, et al., 2005, p. 255). Web-based research also provides easy access for *naturally occurring users*, acting in their own environment, leading to greater external validity (Spyridakis, et al., 2005, p. 254).

It is recommended to focus on the internet as sole medium and not to make a media-comparative research e.g. in the form of comparing the impact of interpersonal communication with prospects and the impact of remote communication with the prospect. The main reason for this is the inevitable bias of the results in terms of confounding influential factors. To make a valid comparison between face-to-face intervention and remote intervention both mediums should be uniform, but such "(…) uniformity does not exist." (Cook, 2005, p. 541) There are too many influential factors when using different media so that it is impossible to design a study that accounts for "(…) variance within and among interventions (…)" (Cook, 2005, p. 542) via appropriate control interventions. However a change of the presentation (configuration and methods) – variance within one instructional design (Cook, 2005, p. 545) – is less biasing not only because of less to be controlled variables but also because presentation does not "(…) affect the nature or quality of the

results." (Gosling, et al., 2004, p. 100) Eventually the author recommends the development of additional web-based instantiations to test and compare their impact.

The development and implementation of different instantiations enables the researcher to assess and evaluate the feasibility and suitability (utility) of the different presentations to enable trust in the C-KIBS and its supplier in the *real world*. (Hevner, et al., 2004, p. 79) To foster the concept of *naturally occurring* it is recommended to reduce the explicit testing functions of the different web presentation formats on a minimum, to make them seem as they would have existed at the world at large (Spyridakis, et al., 2005, p. 248) and thus avoiding a Hawthorne effect (Spyridakis, et al., 2005, p. 251).

But it is critical to assure that variance between the different instantiations is only existent where desired. E.g. in every presentation the same "(…) number of words, amount of detail, syntax (passive versus active voice), use of promotional language, and word concreteness (…)" (Spyridakis, et al., 2005, p. 245) should be used to exclude e.g. the threat that variance in results will be due to more pages or more words per page.

This change in presentation formats can be done randomly by a server-side solution (Reips, 2002, p. 246), also with the aid of external tools like Google's Website Optimizer[6], to foster interpretation of cause and effect relationships and external validity (Spyridakis, et al., 2005, p. 245).

For the comparison of the effects of different presentation formats one of the following two research designs is advised.

Researchers might use one or several nonequivalent dependent variables in the form of e.g. a traditional website for product presentation or a presentation of testimonials as countermeasure for the wizard. Thereby the design might be also randomized with two treatments to rule out selection bias and a reduction of the likelihood of a testing effect. (Shadish, et al., 2002, p. 249). A pretest would be also used not only to determine the status quo but also for better diagnosis of and adjustment for attrition, to facilitate use of statistical techniques that increase statistical power (Shadish, et al., 2002, p. 261), and to examine whether treatment is equally effective at different levels of pretest. (Shadish, et al., 2002, p. 250) Whether randomization takes place before or after the pretest is equal. (Shadish, et al., 2002, p. 261)

Illustration: R O XA O
R O XB O

[6] www.google.com/websiteoptimizer

The advantage of this comparative design would be that researchers could observe the effect of the wizard in comparison to other online marketing techniques/presentation formats and to check if the wizard really contributes to the traditional web-based product/service presentation formats. However, the significance depends on the number of nonequivalent dependent variables. In principle to gain the most reliable data it might be necessary to compare the wizard with all available online marketing presentations (e.g. testimonials, suggestions in Social Networks, traditional informative website, software trials, interactive product tours etc.).

Another design might be the crossover design where both participant groups receive both/all interventions but in different order, interrupted by observations after each intervention. Stephens (2004, p. 4) used a similar design where participants saw different web layouts.

Illustration: R O XA O XB O
R O XB O XA O

In a first step researchers could ask in the pretest for the participant's general trust in portfolio management software. In a second step the participants see the wizard, are observed once more, are shown another presentation format and are observed once more. However it might be possible that in the end the highest trust in the service is observed but the question emerges if the raised trust was only due to the pure number of different trust-enhancing formats (the more the better) or indeed the format (and its content) itself had a trust-enhancing effect. Researchers should take care on this issue.

For example, if it is the case that when showing firstly the wizard and secondly another format the outcomes of the second and third observation do not differ, it is reasonable to state that the other format had no further trust enhancing effect. This could then be checked with a changed order of the different interventions.

Both designs rely on randomization of the equating groups before treatment begins to make alternative explanations implausible and to allow for valid estimates of error terms.

No matter what design researchers choose for, a double pretest design is advised for validity purposes (Shadish, et al., 2002, pp. 146-147). Similar to the study of Stephens (2004, p. 3) the pretest can incorporate the participants' propensity to trust as well as some other measures to determine the online behaviour of the participants (like the participant's experience with portfolio management software, suppliers and online purchases of business software).

Researchers can then choose on how to measure the trust-enhancing effect; implicitly, explicitly, or both. E.g. Lucassen and Schraagen (2011) chose for a pretty explicit presentation of the research questions by simply asking for the trustworthiness of the instantiations. However, there is the threat that changes in the participant's answers in the posttest might also be due to increased understanding after the use of the instantiations (testing effect). An example for implicit testing might be the observation of the numbers of participants that want to print/share the presented information.

It is advised to gather the sample by self-selection as "(…) self-selected samples provide clearer, more complete responses than participants who are not self-selected volunteers (…)" (Gosling, et al., 2004, p. 101). As solicitation mechanism physical mails should be used because emails are typically not forwarded to the responsible employee when general 'info@-emails' are used or in the case of replacements of responsible people that are no longer with the target firm. (Tingling, et al., 2003, p. 230) An advantage of physical mails is also to control the participants' diversity to lower the risk of introducing unknown confounding variables (T. Buchanan & Smith, 1999, p. 129). However, non-random sampling might threaten the internal validity due to individual participants' circumstances. If these circumstances are not identified in literature their effect on the respondent's answers stays unknown. It might be the case that these circumstances influence the answers of the respondents but due to the purposive sampling error estimates cannot be constructed. (Shavelson, 1996) This might lead to an undetected interaction of the findings with the respondent's settings and to context-dependent mediation. Eventually researchers should identify and apply other techniques to raise the internal validity.

To assure that mainly target users participate, on the study homepages (of the different instantiation formats the researchers want to test against each other) all visitors could be asked that those who do not belong to the target group please honour the study integrity and do not participate (Spyridakis, et al., 2005, p. 251). To take care of the self-selection the multiple site entry technique (Reips, 2002, p. 245) is advised. To make sure that indeed every visitor enters the study via the homepage a robots.txt file can be created to exclude search engines from indexing subpages of the website and the URLs could be set up in a way that they stay on every subpage the same.

The wizard has already some characteristics implemented that foster valid and reliable testing. A split of the wizard on several tabs/pages makes it possible to get valuable information about dropout rates like about motivational confounding (Reips, 2002, p. 245). To reduce dropout rates participants could be made able to proceed with their inputs also

when they leave some item unanswered (Reips, 2002, p. 248). Making participants already in the beginning of the experiment aware of immediate feedback/results (Reips, 2002, p. 245; Spyridakis, et al., 2005, p. 251) is also useful to reduce dropout rates.

As dropouts cannot be completely avoided, researchers might encourage drop-outs before users/visitors of the different formats indeed start using the instantiations by an application of the 'high-hurdle technique'. Thereby "(…) motivationally adverse factors are announced or concentrated as close to the beginning of the Web experiment as possible." (Reips, 2002, p. 249) These factors are presented in Table 13, cited according to Reips (2002, p. 249).

Table 13: Checklist High-Hurdle Technique (Reips, 2002, p. 249)

Seriousness	Tell participants participation is serious, and that science needs good data.
Personalization	Ask for email address and/or phone number, and other personal data.
Impression of control	Tell participants that their identity can be traced (for instance, via their computer's IP address).
Patience: Loading time	Use image files to successively reduce the loading time of Web pages.
Patience: Long texts	Place most text on the first page of the Web experiment, and reduce amount page by page.
Duration	Give an estimate of how long participation in the Web experiment will take.
Privacy	Prepare the participants for any sensitive aspects of your experiment (e.g., "you will be asked about your financial situation").
Preconditions	Name software requirements (and provide hyperlinks for immediate download).
Technical pretests	Perform tests for compatibility of Java, JavaScript, and other technologies, if applicable.
Rewards	Indicate extra rewards for full compliance.

An early request for demographic information also serves as a warm-up phase for the participants as many participants show only a "(…) short orientation (…) before making a final decision on their participation (…)" (Reips, 2002, p. 249), e.g. due to curiosity.

To test the competency of the different instantiation formats – the ability to indeed generate trust – researchers might measure the participants' use of the print-function that is already included in the wizard and which is easily includable in other presentation formats. It makes sense to reason that website visitors who print the content also appreciate it. Another possibility might be the integration of a checkbox wherein the participants would be able to give consent to receive service-related newsletters. As the allegation of own email addresses is a higher hurdle to internet users it is reasonable to conclude that these participants have at least a serious interest in the C-KIBS. For validity purposes this checkbox should be unchecked by default and has to be actively checked by the visitor.

The possibility of multiple completions is a serious threat for web tests (T. Buchanan & Smith, 1999, p. 131) and is a likely issue in regard to the wizard with a changing content on the results page. As asking for intrusive information like names or email addresses might reduce confidentiality and the number of participants (Gosling, et al., 2004, p. 101) multiple responses can be filtered by the IP addresses as organizations usually use static IP addresses, informing participants "(…) that multiple submissions are unwanted and detrimental to the study's purpose (…)" (Reips, 2002, p. 251), and a question asking for elder completion and use of the instantiation. Finally, the data set might be randomly checked for multiple submissions via an adjustment of continuous session IDs and an analysis of HTTP information. (Reips, 2002, p. 251) When multiple submissions are detected only the first answer should be recorded. The author does not advise the method that new answers overwrite elder answer (Spyridakis, et al., 2005, p. 251) because in this case the inputs will be biased as the participant become used to the test. Cookies should be avoided due to legal issues in some countries.

Furthermore the wizard was already set up in a way that it *revealed* the tool's functionality and eventually the participant's curiosity on different possible outcomes can be also satisfied and the threat of multiple responses lowered. One might also think about adding on the last pages of each presentation format or on the last page in the experiment a functionality for participants to provide feedback as there is naturally no interaction between participants and researchers and thus misunderstandings can emerge (Reips, 2002, p. 245).

However one should acknowledge that like every method web-based data are not completely bias-free like due to uncontrollable "(…) participant's environment and susceptibility to fake responses (…)" (Gosling, et al., 2004, p. 102) and the researcher's unawareness of influencing environmental factors (T. Buchanan & Smith, 1999, p. 130). But for researching web-based marketing and sales via a website web-based research is the preferable method (A. Wilson & Laskey, 2003, p. 84) but requires "(…) even more critical [validation] than the validation of normal computerized tests." (T. Buchanan & Smith, 1999, p. 131) [remark by the writer]

10. References

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