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A COMMERCIAL INTERNET PRESENCE – CHECKLIST FOR CONSUMER-FOCUSED FUNCTIONALITIES

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Abstract

A necessity for a framework for orientation arises due to the number of functionalities applicable for commercial Internet presences. Therefore, the paper presents a checklist for consumer-focused functionalities. This checklist has been confirmed through a pilot study among best practice Internet presences. An additional study, still running, sketches the use of the functionalities identified by commercial Internet presences belonging to companies creating the highest turnovers in their industries in Europe. Further, a follow-up study will be designed in order to create connections describing the preferences and needs of customers based on the functionalities encountered.

Keywords: *E-Commerce (B2C), Web Site Analysis, IS Functionalities, Consumer Preferences*

1 PROBLEM STATEMENT

Beside core functionalities, consumers expect additional, value-adding services on Internet presences. With target-oriented services a positive effect on consumer satisfaction can be achieved (Van Riel et al. 2001). Based on the business strategy, the Internet offers by far better opportunities for strategic positioning compared to other information technologies (lower entry costs, faster return-on-investment, available critical mass of consumers) (Timmers 2000, Porter 2001).

The expectations of consumers increase with the continuous evolution of the Internet from an information and communication platform to a transaction and interaction platform. Based on an augmented need for information and growing demand for additional functionalities, a commercial Internet presence has to allow for more than need satisfaction that is accompanied by the purchase of goods (Shankar et al. 2003). With consumer satisfaction being an important influence on repurchases the offering of additional functionalities is crucial (Cho and Park 2001). Furthermore, consumer satisfaction is influenced by product quality, quality of the purchase process, performance of the consumer service, complete and on-time delivery as well as overall impression of the transaction (Cho and Park 2001). In this context, it is necessary to set up a checklist for consumer-focused functionalities. This checklist represents a guideline for emerging, and an evaluation framework for existing Internet presences.

The research topic covered by this paper is positioned between the increasing importance of B2C e-commerce and its driving force convenience. Fundamental consumer related factors of convenience for purchasing on the Internet are access convenience, search convenience, possession convenience, and transaction convenience. These factors, as considered in the checklist, help expanding the company's market and can positively influence the strategic business goals consumer loyalty and consumer acquisition (Hudetz and Duscha 2006, Gittenberger 2007). It is intended to provide a comprehensive overview of functionalities of commercial Internet presences as they are recommended in state-of-the-art literature.

2 INTEGRATION IN THE VALUE CHAIN AND STRUCTURE

The functionalities covered by the checklist can be found in the three primary activities: outbound logistics, marketing and sales, and service (Porter 2001, Krüger and Bach 2001). Based on the primary activities of a company, the work at hand is dealing with the sales transaction phase. The frame of reference used is an extended version of the Hansen and Neumann framework (2005) (see figure 1). The sales transaction phase is started by the initial information phase induced by the consumer or the company. Building on that, the agreement phase comprehends the negotiation of the scope of services and the terms of sale. Initiated by a consumer's order, the transaction phase is dealing with order processing, payment, delivery, and potential after-sales activities.

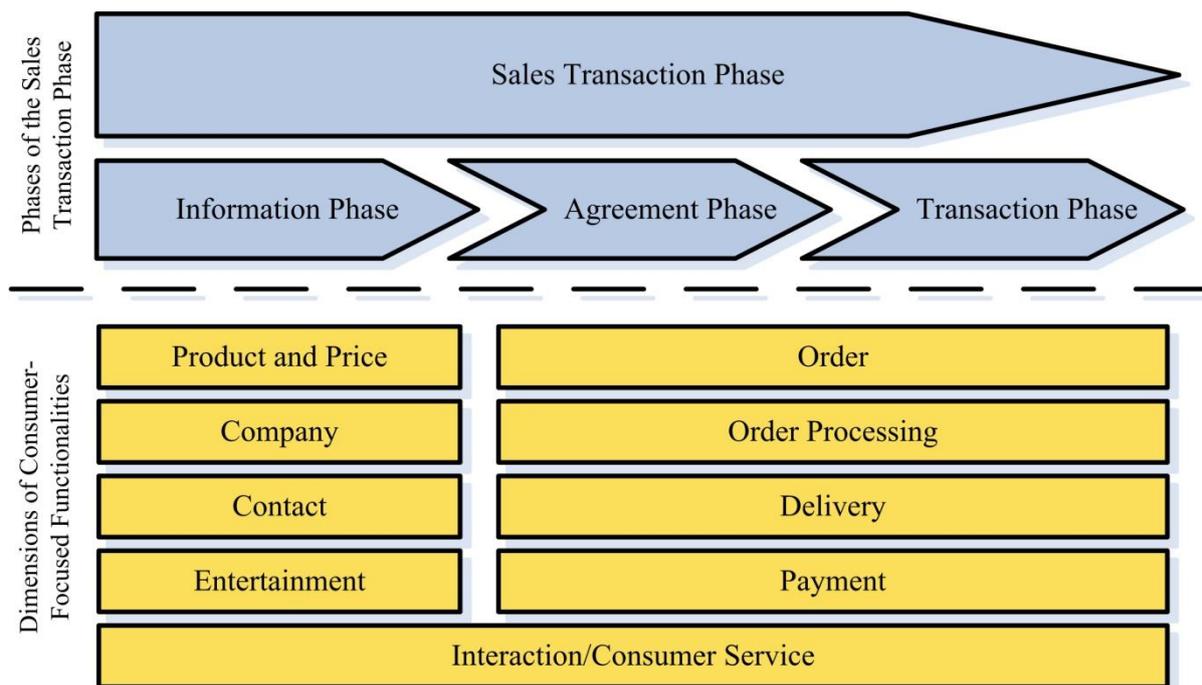


Figure 1. *Phases of the sales transaction phase and the corresponding dimensions of consumer-focused functionalities*

Considering the abundance of functionalities (for example search function, personalization, sweepstakes) a structure for Internet presence-based functionalities was developed. This structure is created on dimensions of functionalities which can be also attributed to the sub-phases of the sales transaction phase. As illustrated in figure 1, the information phase predominantly deals with information-focused functionalities in the dimensions *Product and Price*, *Company*, *Contact* and *Entertainment*. Because of a strong functional correlation between agreement and transaction phase, corresponding functionalities are aggregated. The dimensions addressed are *Order*, *Order processing*, *Delivery*, and *Payment*. The scheme is expanded by the sales transaction-spanning dimension of *Interaction/Consumer Service*. This supplement is needed for functionalities being employed phase-independently.

3 CHECKLIST FOR CONSUMER FOCUSED FUNCTIONALITIES

Based on processes of the control view (as used in the ARIS framework), a systematic arrangement of consumer-focused functionalities is presented in table 1. On the top level the checklist uses the structure as depicted in figure 1 and is further classified using the identified functionalities. Subordinate to functionalities, relevant information objects are set. These information objects can be used as a basis for evaluation. The dimensions and the functionalities will be described below.

Product and Price

- Product Catalog
 - Name
 - Brand
 - Category
 - Description
 - Price
 - Product Illustration
 - Picture (2D)
 - Model (3D)
 - Duration of the Offer
 - Duration of the Contract
 - Discounts/Special Offers
 - Scope of Delivery
 - Introduction of new Products
- Detailed Product Catalog
 - Weight
 - Size
 - Audio Examples
 - Special Delivery Requirements
 - Spare Parts
 - Accessory
 - Place of Manufacture
 - Warranty Information
 - Assembly and Usage Information
 - Installation Instructions
 - Product-Related Insurances
 - Product-Related Support
 - Information on Maintenance
 - Information and Direction for Use
 - Certificate or Seal of Quality
 - Types of Packaging (e.g. Gift Wrap)
- Product Configurator
- Product Comparison
- Product Recommendation
- Navigation
 - Price
 - Brand
 - Weight
 - Size
 - Category
 - Novelties
 - Best Ratings
 - Bestsellers
- Availability Check
- Display of Alternative Products
- Product Test Downloads
- Product Advertisement
- Newsletter
- Inform-A-Friend Functionality
- RSS-Feed
- FAQ

Company

- Information about the Company
- General Terms and Conditions

Entertainment

- Sweepstakes
- Competitions
- E-Cards
- Online Games

Order

- Pre-Sales Information
 - Ways of Ordering
 - Steps within the Buying Process
 - Data the Consumer has to Supply
 - Supported Languages
 - Contract of Purchase
 - Technical Features to Correct Typing Errors
 - Secure Selling Process
 - Returns
- Electronic Shopping Cart
- Submission and Adaption of Consumer Data
- Verification of Availability
- Billing
- Cancelation of Orders
- Choice of Delivery Method for Second Delivery Attempt
- Reservations
- Service Appointments

Order Processing

- Order Confirmation
- Delivery Confirmation
- Order Status (Tracking)
- Estimated Delivery Date
- Complaint Status
- Initiation of Returns

Delivery

- Pre-Delivery Information
 - Delivery Time
 - Delivery Insurance
 - Delivery Cost
 - Method of Delivery
 - Countries Delivered to
 - Available Transport Packaging
 - Secure Delivery
- Delivery of Digital Goods
 - Method of Delivery
 - Delivery Time
 - Place of Delivery

Payment

- Pre-Payment Information
 - Payment and Methods of Payment
 - Secure Payment
- Credit Card Payment
- PayPal Payment
- Paysafecard Payment
- Bank Collection Payment
- Money Transfer Payment
- Mobile Payment
- Cash at Pick-up Payment

Company Advertisement	Vouchers, Discounts, Returns, and Coupons
Newsletter	Consideration
RSS-Feed	Interaction/Consumer Support
FAQ	Chatbot
Contact	Auction
Contact Information	Online Survey
Fax	Login
E-Mail	Initial Registration
Telephone	Personalization
VoIP	Retrieval of the Consumer's Preferences
Instant Messaging	Search
Postal Address	Wish Lists
Forum	Remote Diagnosis and Remote Maintenance
Contact Form (Feedback, Support, Returns, Maintenance, Requests)	Sitemap
Complaint Form	Warranty Status
	Repair Status
	Adjustment of the Font-Size

Table 1. Checklist for consumer-focused functionalities of a commercial Internet presence

3.1 Product and Price

As already mentioned, the availability of information is an important success factor. According to *Product and Price*, electronic product catalogs and detailed electronic product catalogs will be differentiated in order to highlight the different levels of information. Other possible functionalities are attributable to the areas of product individualization, comparison of products and automatically generated recommendations. Product ratings and reviews allow consumers to evaluate products themselves. With structured navigation based on different aspects (like product categories, price and size) and elaborated product search, a good overview of offers and products can be provided. Functionalities influencing the purchasing decision are, among others, availability checks and downloadable test versions of digital goods. Additionally, means of advertising like product promotion (on the web portal), the provision of newsletters, RSS-feeds and FAQ are commonly used. Shifting the promotional activity to consumers is realized by the „inform-a-friend“-functionality, with information being directly forwarded to prospective buyers (Gittenberger 2007, Kim and Lee 2002, Schütte and Vering 2004, Hansen and Neumann 2005).

3.2 Company

Besides mandatory legal information on the company and its general terms and conditions, similar to the previous category *Product and Price* promotional tools, newsletters, RSS-feeds and FAQ can be implemented (Gittenberger 2007).

3.3 Contact

The provision of appropriate ways of contact increases the probability of consumer-initiated approaches (Neale et al. 2006). Additional to mail and telephone, functionalities like instant messaging, Voice-over-IP-service (VoIP), forums and forms can be made available. A comprehensive and satisfying complaint management, which can be implemented via complaint forms, has to be realized (Schoenbachler and Gordon 2002).

3.4 Entertainment

The functionalities of this dimension are targeted at entertaining consumers and presenting news, making them stay longer on the Internet presence to browse the content. This behaviour can be realized by sweepstakes, contests, electronic greeting cards or online games (Bridges and Florsheim 2007,

Childers et al. 2001, Novak et al. 2000). Especially in sensitive areas such as health care, the integrity of the Internet presence should be focused rather than the value of entertainment.

3.5 Order

The order-related dimension has to be formed precisely, clearly and should include all essential information. This necessity arises from the order process being directly turnover-generating and highly influencing consumer's uncertainty regarding transactions on the Internet (Schröder and Bohlmann 2007). Shopping cart, data input and cancelation of executed orders as well as providing ex ante information about all necessary steps are covered by this dimension. Because of the high impact on the consumer's buying decision, the buying process requires an accurate realization (Cho and Park 2001, Becker and Schütte 2004, Schütte and Vering 2004).

3.6 Order Management

To provide the order status information, functionalities like order confirmation, shipping confirmation, order tracking and the query of the planned delivery time are implemented. Furthermore, keeping track of the complaint status and the initiation of returns can be made available to the consumer (Schütte and Vering 2004, Neale et al. 2006).

3.7 Delivery

This dimension covers the delivery of non-tangible goods as well as the choice of delivery options for tangible and non-tangible goods. The range of delivery methods supplied is highly influenced by the kind of distributed product (Madlberger and Sester 2005, Schütte and Vering 2004).

3.8 Payment

High potential for improvement has been detected in the functionalities and aspects of payment and payment security by Austrian Internet users (Gittenberger 2007). A study of the Austrian national bank showed a tendency towards the use of credit card, bank collection and bank transfers on the Internet. The use of other payment methods as mentioned in the checklist is marginal (Stix and Wagner 2006). Ex ante information on the payment process as well as redeeming of discounts, incentives or vouchers are also covered by this dimension. (Becker and Schütte 2004, Gittenberger 2007)

3.9 Interaction/Consumer Service

This transaction-spanning dimension was added to the framework of Hansen and Neumann (2005) concerning consumer-focused functionalities of information systems (see figure 1). It covers all functionalities supporting the sales transaction phase without being specific to one of its three parts. Examples are chatbots for counselling consumers or the personalization of Internet presences. In addition, wish lists (public or private wish lists) and search functionality can enhance the Internet presence. Furthermore, the dimension *Interaction/Consumer Service* contains service-related functionalities like remote diagnosis and remote maintenance as well as warranty status and repair status requests (Novak et al. 2000, Bridges and Florsheim 2007).

4 PRACTICE RELATED IMPLEMENTATION AND ILLUSTRATION

The checklist developed in the previous chapter has to be verified on the basis of preselected, industry-specific Internet presences. Therefore, a pilot study for gaining knowledge about functionalities used in different industries was conducted.

For this pilot study (see figure 2) four Internet presences per preselected category of the Webby Awards 2007¹² have been chosen (food/beverage, consumer electronics, and fashion), and the availability of the functionalities has been evaluated. These heterogeneous industries were selected in order to cover a comprehensive view on commercial Internet presences.

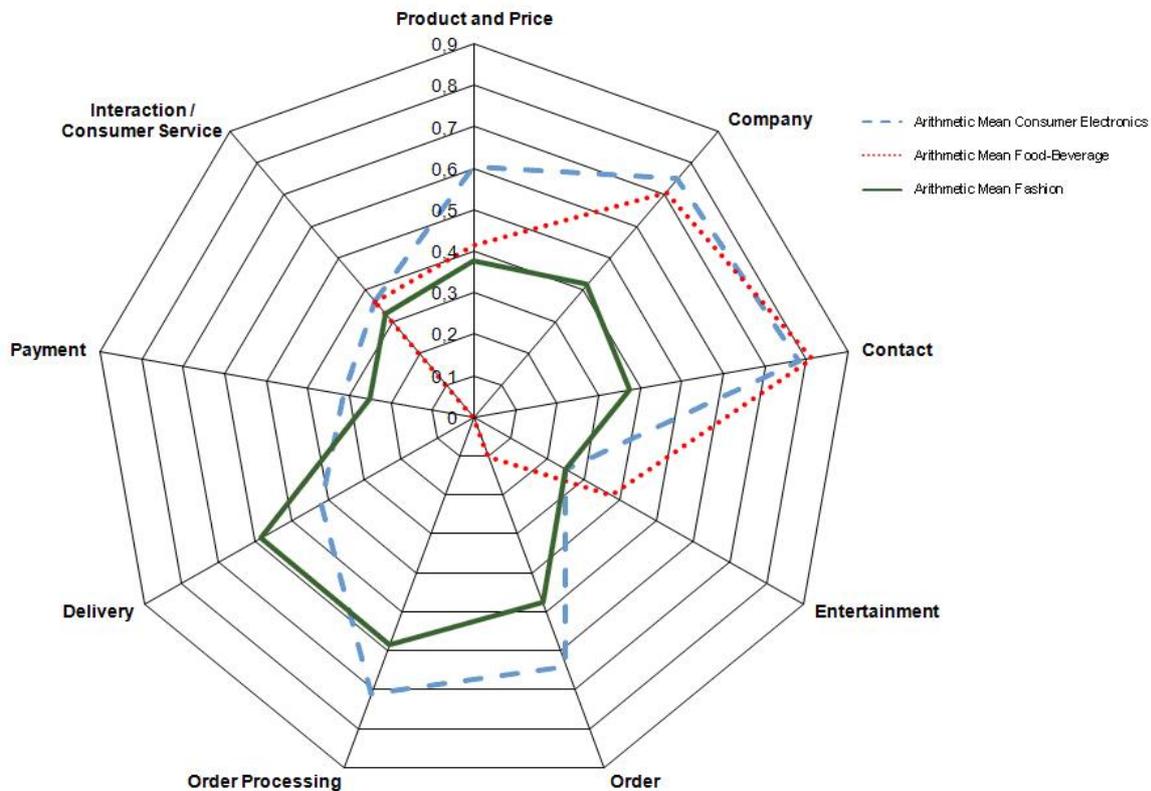


Figure 2. Occurrence of dimensions concerning specific industries (pilot study)

Traditionally, technology-oriented industries like consumer electronics use e-commerce more intensively (Hudetz and Duscha 2006). In contrast, the food/beverage-industry seems to be less qualified for e-commerce. The following rule of thumb describes this problem: The more perishable and the more replaceable foods are, the less qualified they are for e-commerce. Spirits, for example, are suitable for online-markets because they are rather standardized and less perishable (Hansen and Neumann 2005).

Both, the fashion- and the food/beverage-industries, are underrepresented concerning Internet presences in Europe; the fashion-industry however has a higher share of online sales. According to Gittenberger, the highest annual turnovers (after tax) among Austrian retailers in e-commerce in 2006 have been realized in consumer electronics followed by fashion (Gittenberger 2007). The industry with the lowest percentage concerning the overall turnover in e-commerce is traditionally the food/beverage-industry (Hansen and Neumann 2005).

While conducting and analyzing the pilot study the necessity of increasing the sample size became inevitable. This has been achieved through an additional study with an extended number of Internet presences examined.

This running study is focusing on the 180 highest ranked European companies running B2C e-commerce according to their annual turnover. The basis of the study depicts a list of product categories which are preferred in e-commerce purchases (Graumann and Wolf 2008). The product categories were then transformed into industry definitions. According to these industry definitions the companies were

¹² <http://www.webbyawards.com>

selected using the AMADEUS database, a collection of all European companies. In each industry selected, 30 companies were chosen starting with the highest annual turnover.

The evaluation is based on the functionalities identified in the checklist. The values of a dimension are determined by the occurrence of functionalities that belong to that specific dimension. These occurrences are calculated as a percentage of the whole of the dimension-related functionalities. Further, the industry-specific values are assessed by averaging the corresponding dimensions of the Internet presences and illustrated using spider web diagrams. Therefore, functionalities are represented in a compressed way via dimensions.

5 RESULTS

The pilot study (see figure 2) was conducted among those Internet presences being chosen for the webby award and showed a significant trend of accurately designed Internet presences meeting the consumers' expectations (judging criteria for the webby awards were the Internet presences' content, structure and navigation, visual design, functionality, interactivity, and overall experience). Contrary to these results, with the running study being based on companies having the highest turnovers in their industry, a picture on the actual use of functionalities can be given.

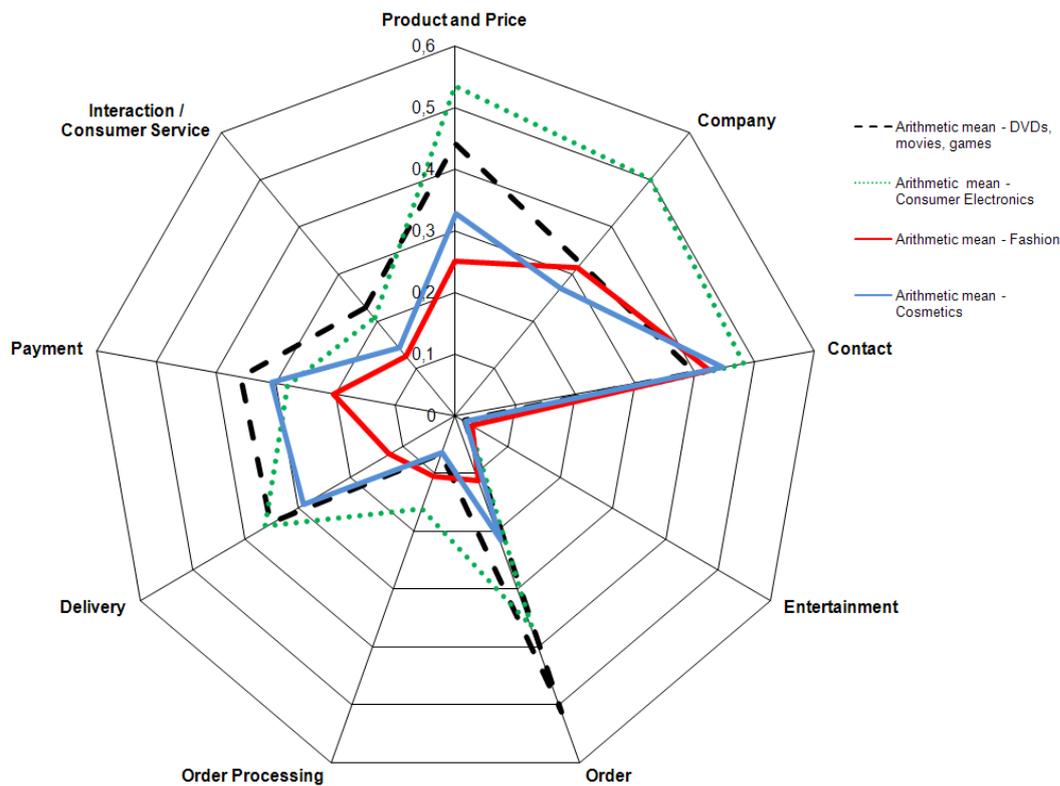


Figure 3. Occurrence of dimensions concerning specific industries (running study)

Figure 3 shows the current results of the running study in a spider chart based on different industries. The most eye-catching similarity is that tendencies for the dimensions are pretty similar across different industries. Taking a closer look on the differences, industry-inherent explanations for the values can be given. Taking the consumer electronics industry as a role model for an industry with consumers being rather technophile and information-aware, the peculiarities in the information-based dimensions *Product and Price* as well as *Company* and *Contact* can be explained (Gittenberger 2007). Another reason may be fierce competition in this industry. The degree of competition is assumed to be highly dependent on the degree of standardization of a product and its substitutability. Given the consumer electronics industry, both aspects are highly applicable to the products sold. Assuming the consumer

electronics industry provides the products with the highest prices among the industries observed, a heightened need for information can be explained thereby. (Hansen and Neumann 2005, Kotler and Keller 2006)

The fashion industry as a role model for selling “look and feel” products, compared to consumer electronics, lower values in information-related dimensions can be found. It is assumed that this is directly correlated with the nature of the products sold in this industry. Whereas textual descriptions do not define a “look and feel”-product precisely, more efforts will be needed in finding ways of presenting these kinds of products digitally. Industries facing the problem of inadequate descriptions usually highly depend on a working customer support and return system. Although a simplified order and return process can diminish consumer’s obstacles and uncertainties and foster positive buying decisions, the results of the running study do not reflect this fact. (Hudetz and Duscha 2006, Schröder and Bohlmann 2007)

Furthermore, it is remarkable that there are significant differences in the dimensions *Payment*, *Delivery* and *Order*. Regarding the dimensions *Entertainment* and *Interaction/Consumer support* the lack of functionalities in all industries is obvious. This may be contributed to a missing awareness of the importance of these functionalities or a slow adoption of these rather new aspects in the companies observed.

6 CONCLUSION AND OUTLOOK

The paper at hand is developed for providing a list of constitutive elements as well as an evaluation scheme for commercial Internet presences. In respect thereof, this checklist creates an overview of and a guideline for potential functionalities. Based on the results of Shankar et al. (2003) and the observed frequency of functionalities in the pilot study, the following recommendations can be made:

Consumer satisfaction and therefore consumer buying behavior is influenced by the information content and the ease of finding the information needed (Cho and Park 2001). Accurate design of the dimensions of the checklist focusing the information phase (*Product and Price*, *Company*, *Contact*, *Entertainment*) is strongly recommended. In order to create utility for recurring consumers, incentives need to be created in the dimensions *Entertainment* and *Interaction/Consumer Service*. With a strong influence of the design of the buying process and the after-sales activities on the buying decision, an accurate arrangement of the buying process and the means of contact are vital (Cho and Park 2001).

Note, unconditional adoption of the functionalities listed in the checklist is not favorable. The design of an Internet presence has to be aligned with the business strategy and with the needs and expectations of the target group (Porter 2001, Van Riel et al. 2001). The use of a disproportionate number of functionalities may rather distract the consumer than increase the consumer’s perceived value (Van Riel et al. 2001). Moreover, the use of every dimension may not be advisable for any business model or industry (a strong focus in the dimension *Entertainment* may rather contribute to declining confidence in industries like health care, for example).

Limitations of the work at hand are given through the sample size and the selection of industries observed. Further, distinguishing between company sizes could provide additional insight into special company-size related demands. The work at hand is focused on a descriptive generation of information in the field of consumer-focused functionalities on Internet presences, an upcoming study is focused at creating causal relations between functionalities and consumer satisfaction. This approach bears the possibility of extending the results by weighting the functionalities from the evaluation scheme and providing recommended action on the design of commercial Internet presences.

The categorization of the different functionalities tries to avoid redundancies. Extending and refining this checklist is a declared topic for further research. To detect mismatches between realized functionalities in Internet presences and functionalities demanded by the consumers, further research is necessary. This will be realized by conducting consumer surveys to find out which functionalities are

demanded by consumers. This survey will be carried out for each industry separately. The findings will establish a profound knowledge for selecting the appropriate functionalities for the consumers targeted by a specific industry.

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