Chapter VI
Strategy Aligned Process Selection for Mobile Customer Services

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ABSTRACT

In this chapter we analyze how companies define their customer value proposition and how the selection of successful mobile customer services is done in alignment with this strategic positioning. We derive a set of five different strategic goals (price leadership, product quality leadership, customer intimacy leadership, accessibility leadership, innovation leadership) and apply this classification to case studies we analyzed. We show interdependencies between the strategic premises and the processes selected for being supported by mobile technology, resulting in typical properties which qualify processes for mobilization. These are used to derive guidelines for strategy aligned process selection when implementing mobile customer services.

INTRODUCTION

Mobilizing Customer-Oriented Business Processes

Technological advancements in mobile communications enable new ways of doing business (Feldman, 2000, pp. 26; Stafford & Gilleson, 2003), often referred to as mobile business (MB) or mobile commerce (MC). While Turowski and Pousttchi (2003, p. 3) do not distinguish between the two but rather use the term *mobile commerce*, Lehner (2003, pp. 6-8) and Zobel (2001, pp. 2-3) define *mobile business* as the application of mobile technologies to improve or extend business processes and open new market segments and

of different strategic focuses from Crawford and Mathews (2001) and Treacy and Wiersema (1994). We derive a set of five different strategic goals which are specifically focused on the company's interaction with the customer and apply this classification to the analyzed cases. We analyze the selection of processes for the support by mobile technology in the cases and identify the relationship between the strategic premises according to the framework derived from Crawford and Mathews (2001) and Treacy and Wiersema (1994). This results in typical properties which qualify processes for mobilization. The final section summarizes the findings and gives an outlook on further research to be done in this field.

Research Methodology

Our research approach follows the concept of case study research as described by Eisenhardt (1989), Stake (1995), and Yin (2002). The cases (see the third section) have been selected from available published material, in the case of the Helsana health insurance, cologne public transport authority, eBay, and Lufthansa airline the authors have been involved in-depth through a long-term research partnership. Selection was based on the following criteria: a) availability of information about the company's strategic orientation towards customers, b) the case deals primarily with the introduction of mobile technology (be it cellular, synchronization, or other), and c) the process(es) affected by the introduced technology is a customer-oriented business process as defined in the process model developed by the authors' research team and described in Geib et al. (2005). Data were collected by analysis of the published available material about the projects and the companies in general as well as by semi-structured interviews with employees involved in the projects. Only the core aspects from the previously published cases are summarized in this chapter.

The data from each case was analyzed following the strategy suggested by Yin (2002).

The analysis had the primary objective of understanding the process selection and the influence which the corporate strategy had in this process. The findings finally have been integrated into a generalization of strategy's implications for the process selection and design.

BACKGROUND

Mobile Business

Technological advancements in mobile communications enable new ways of doing business (Raisinghani, 2002), often referred to as mobile business or mobile commerce. While Turowski and Pousttchi (2003) do not distinguish between the two but rather use the term *mobile commerce*, Lehner (2003) and Zobel (2001) define *mobile business* as the application of mobile technologies to improve or extend business processes and open new market segments. They differentiate between MB and MC, the latter being a rather subordinate MB field focusing on the handling of transactions. With a similar understanding of the term, Möhlenbruch and Schmieder (2001) conceptualize MB in analogy to electronic business and distinguish fields such as mobile supply chain management, mobile procurement, mobile customer relationship management, and so forth (see Figure 1). We follow this more general understanding and concentrate on mobile CRM (mCRM), which we define as mobile technologies' application in order to support CRM processes such as marketing, sales and service delivery.

The research development in MB and MC can be compared to the development in electronic business and e-commerce. It can be structured into multiple stages. The first stage begins with the technological foundation in IT and infrastructure. It is followed by simple consumer-focused application and service concepts along with business models for technology and base service providers. These applications and services are being advanced fur-

Table 1. Classification of technical benefits of mobile technologies

Benefit	Definition	References
Ubiquity	Mobile technologies allow for IS to become accessible from virtually any place and at virtually any time.	Anckar & D'Incau, 2002a, 2002b; Balasubramanian, Peterson, & Jarvenpaa, 2002; Clarke III, 2001; Laukkanen, 2005; Laukkanen & Lauronen, 2005; Lehner, 2003, 11ff.; Pousttchi, Turowski, & Weizmann, 2003; Wohlfahrt, 2001
Context sensitivity	Mobile technologies allow for the contextualization of IS. The context may include the identification of the individual user as well as geographic position and physical environment.	Clarke III, 2001; Laukkanen, 2005; Laukkanen & Lauronen, 2005; Lehner, 2003, 11ff.; Pousttchi et al., 2003, 11ff.; Siau, Sheng, & Nah, 2004; Skelton & Chen, 2005; Wamser, 2003; Wohlfahrt, 2001
Interactivity	Mobile technologies allow for greater interactivity in IS, since they typically provide an "always online" connectivity and have shorter set-up times (e.g., for booting, "instant on").	Anckar & D'Incau, 2002a, 2002b; Clarke III, 2001; Hartmann & Dirksen, 2001; Laukkanen, 2005, 11ff.; Laukkanen & Lauronen, 2005; Lehner, 2003
Convenience and familiarity	For certain tasks, mobile technologies can offer a higher degree of convenience as compared to standard desktop or laptop PCs. This is partially due to limited functionality, thus reduced complexity and higher ease of use. For example, most users are capable of using most features of their cell phones (voice and text communication, address book, etc.), while most users only use a fraction of their PCs functionality.	Anckar & D'Incau, 2002a, 2002b; Gebauer, 2002; Gebauer & Shaw, 2004; Kenny & Marshall, 2000; Lehner, 2003, 11ff.; Perry, O'Hara, Sellen, Brown, & Harper, 2001; Siau, Sheng, & Nah, 2004; Van der Heijden & Valiente, 2002; Wohlfahrt, 2001
Multimediality	Mobile technologies have gained multimedia functionality over the years, for example, most cell phones shipped today include a digital camera, current models even with sufficient resolution for quality snapshots.	Han, Cho, & Choi, 2005; Kung, Hsu, Lin, & Liu, 2006; Pousttchi et al., 2003; Wamser, 2003; Wolf & Wang, 2005

strategy alignment of IT investments there is only little research addressing the strategic aspects of applying MB (Amberg & Remus, 2003; Clarke III, 2001; Sadeh, 2002; Sheng et al., 2005; Wamser & Buschmann, 2006). Even fewer research addresses strategic potentials of *mobile business to businesses* whose core competencies are outside of the technology or base service field, such as financial service providers (Looney, Jessup, & Valacich, 2004).

Customer Relationship Management

The origins of CRM can be traced back to the management concept of Relationship Marketing (RM) (Levitt, 1983). RM is an integrated effort to identify, build up, and maintain a network with individual customers for the mutual benefit of both sides (Shani & Chalasani, 1992, p. 34). RM is of largely strategic character and lacks a holistic view on business processes, although they are regarded as important (Parvatiyar & Sheth, 2000).

Advances in IT had a significant influence on CRM, focusing mainly on the IS layer in the past. The goal was to support the existing isolated approach of dealing with customer relationships. With the CRM philosophy aiming at creating an integrated view of the customer across the enterprise, these systems were connected and today form the building blocks of comprehensive integrated CRM systems.

We consider CRM to view the customer relationship as an investment, which is to contribute to the bottom line of the enterprise. The design and management of customer relationships is to strengthen the competitive position of an enterprise by increasing the loyalty of customers. While this extends beyond the use of IT, IT is still an important enabler of modern CRM.

Apart from the strategy-oriented concept of RM and systems oriented concepts, there are

Figure 2. Mobile business value chain (Zobel, 2001, p. 122)
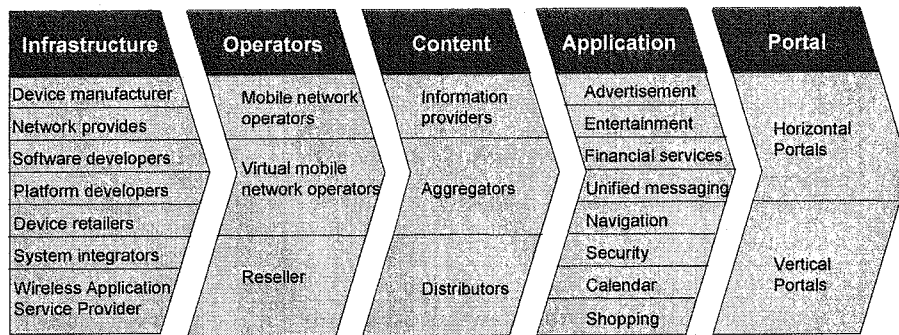
several CRM approaches with special focus on business processes (Schulze, Thiesse, Bach, & Österle, 2000). However, these approaches are based on the separation of the functional areas of marketing, sales, and service, which by itself does not provide a cross-functional process view.

CRM processes typically require not only transactional data, which can be automatically collected and stored in relational databases, but also a significant amount of knowledge. Also, CRM processes are typically complex and only structured to a certain extent. Hence, they can be considered knowledge-intensive processes (Eppler, Seifried, & Röpnack, 1999). Besides developing an integrated view of CRM processes, it is therefore critical to address the management of knowledge flows from and to the customer across all communication channels as well as to enable the use of the knowledge about the customers.

Customer Focus in Mobile Business

When trying to achieve strategy alignment of mobile solutions in CRM, the analysis of the customer value proposition (i.e., the market strategy) is a crucial step. Some researchers have given guidance for a company's positioning in a mobile value chain, but guidance on how to analyze different customer value propositions and how to support

these by mobile support for business processes still is lacking.

Zobel (2001) introduces a value chain of MC (see Figure 1). It begins with network infrastructure providers, providing, for example, IP infrastructure and devices. On the second stage, operators provide mobile infrastructure for such cellular networks. On the third stage, content is provided, for example, by news agencies, media owners, and so forth. On the fourth stage mobile applications (such as payment solutions, security solutions, etc.) are built on top of the network infrastructure and content. Players on this stage are service operators (e.g., mobile ticketing services), transaction clearing centers, and so forth. Finally an interface to the MC is provided by mobile portal providers. A similar value chain can be found in Paavilainen (2002). For each stage, Paavilainen explains strategies and business models showing opportunities for market players.

Published MB value chains do not cover the user of the output of the value chain though. Works analyzing consumer value have mostly focused on mobile services provided via the mobile network operator. What is lacking in published research is a concept how businesses should go about using mobile solutions in customer processes, for example, companies offering mobile services such as banking or businesses using

3 (dominant position in the market), to focus a secondary attribute to reach level 2 (differentiating from competitors), and to maintain level 1 (market average) on the remaining three attributes.

In a different study analyzing multiple cases from market leaders in several branches (such as Casio, Kellogg's, FedEx) Treacy and Wiersema (1994) identify the following three main strategic goals (Treacy & Wiersema, 1994, p. 29):

- **Operational excellence:** Focus on the combination of quality, price, and ease of purchase without being exceptionally innovative in products or customer service.
- **Product leadership:** Focus on exceptional innovation in product features.
- **Customer intimacy:** Focus on the intimate one-to-one relationship to the customer.

Combining the results of Crawford and Mathews (2001) and Treacy and Wiersema (1994) it becomes obvious that the aspects of "Product Quality" (Crawford & Mathews) and "Product Leadership" (Treacy & Wiersema) as well as "Customer Service" and "Customer Intimacy" are almost identical in concept. Further more, the aspect of "Price" (Crawford & Mathews) is included by "Operational Excellence" (Treacy & Wiersema). Thus the list of attributes can be consolidated to:

- Price
- Customer intimacy
- Accessibility
- Product quality

STRATEGY ALIGNED MOBILE BUSINESS: INSIGHTS FROM THE REAL WORLD

In order to identify interdependencies between corporate market strategy (following the framework explained previously) and the selection of business processes to be supported by mobile solutions, we analyzed 10 cases. As mentioned in the second section, the cases have been published before and the analysis was mainly based on the published material. In the following each of the cases will be briefly summarized, pointing out the aspects of most relevance to our analysis. For further details about the cases, please refer to the original publications. For each of the cases, we briefly describe the company background, followed by the specific challenge that lead to the introduction of a mobile solution to support a business process. We also briefly describe the implemented solution and the characteristics of relevance for our analysis.

Helsana/Progrès: Mobile Marketing

Company Background

Helsana (http://www.helsana.ch) is the largest health insurance provider in Switzerland with about €2.5 million annual premium yield (2002). Its brand Progrès (http://www.progres.ch) represents affordable offerings for young customers. The brand strategy focuses on *maximum availability* and *competitive prices*.

Challenge

- There is only a short time frame for contract switching, thus high marketing efforts by all competitors overload the customers' perception.
- Customers show a high price sensitivity and low interest in the product itself thus they need a spontaneous and instant trigger.

Solution

Customers can retrieve an offer for Progrès insurance within 1-2 seconds via SMS, allowing Helsana to:

- Providing high level, individual service to anonymous customers buying at ticketing machines is impossible.

Solution

A mobile ticket has been introduced by which customers can order a ticket for public transportation by simply calling a free 1-800 number. The ticket is delivered as a text message to their mobile within seconds. Customers need to register before they can use the service (except for one free trial ticket per mobile phone number). With this new system, it is possible:

- To allow discounts for customers who repeatedly buy single tickets (e.g., customers who by the third single ticket within one day, receive a full-day pass, and save about 20% of the fare)
- To create customer profiles and individualize services for customers
- To improve the Cologne public transport authority's image as an innovative service provider

eBay in Germany: Mobile Transactions

Company Background

eBay is probably the most well-known online auction platform in the world. Customers range from professional sellers (power sellers) to occasional private sellers to private buyers. eBay's customer value proposition focuses on *global reach, variety of traded items, efficient information services,* and *low trading fees and item prices.* eBay experiences impressive growth rates, in many figures constantly around and above 30%.

Challenge

- eBays biggest challenge currently is to maintain the large growth rates in a more and more saturated market. eBay tries to maintain this growth by acquiring new members (which is hard to achieve in almost saturated markets), activation of passive members and maximizing activity of active members. Currently, all member activity is dependent on the member's access to a Web-enabled PC, since eBay is a typical Web application.

Solution

In order to increase the reach of the platform and the activity of existing members, eBay introduced an SMS-based bidding process in Germany. Members who have placed the highest bid on an item can register for an alerting service, which notifies them when another member has placed a higher bid or when the auction is over and they won. Also, in response to the message about a higher bid, the recipient can place a new bid via SMS. With this new interaction channel, eBay members:

- Receive up-to-date information on auctions they personally participate in wherever they are
- Can respond to higher bids by other members and thus stay active in their auctions even when not in reach of Web-enabled PC

Eneco: Mobile Field Force

Company Background

Eneco (http://www.eneco.nl) is a Dutch energy supplier with about €2 billion annual turnover (2002). The corporate strategy aims to achieve customer loyalty by supplying a *high level of*

- To maintain the solutions' innovativeness Verizon needs to reduce time-to-market for its products and services as much as possible.

Solution

Verizon equipped its own sales force with mobile corporate data access, for example, to its CRM application, and thereby:

- Improved customer service and consulting due to better and more proactive information availability for sales agents
- Improved its visibility as an innovator by demonstrating wireless solution know-how on-site

For further details about this case, see Lerner and Frank (2004, pp. 36-37).

Novartis: Mobile Info Services

Company Background

Novartis (http://www.novartis.ch, http://www. novartis.co.uk) is a Swiss pharmaceutical manufacturer with $24.8 billion annual turnover and $5 billion annual profit (2003). Novartis' Consumer Health business unit positions itself as an innovative company having a *positive impact on people's lives (i.e., customer intimacy)*, making *available the right information at the right time (i.e., accessibility)*.

Challenge

- Novartis wants its brand to be seen as a partner helping lower the burden of allergies in everyday life.
- The "Aller-eze" product should be seen as the main product in the anti-allergy (especially hay fever) market, that is, customers'

creating the association between the two intuitively.

Solution

To introduce the new anti-allergic product "Aller-eze" Novartis' British affiliate launched a mobile marketing initiative. By offering a subscription service providing patients with timely, location-specific allergy warnings and hints for patients, Novartis succeeded in:

- "Aller-eze" being perceived as a partner providing daily support, easing the pain of allergy patients
- Emphasizing the innovative image of Novartis as a whole

For further details about this case, see Lerner and Frank (2004, pp. 74-75).

Lufthansa: Mobile Info Services

Company Background

Lufthansa is one of the largest airlines and a founding member of the star alliance, the largest network of cooperating airlines in the world. It considers itself a *full-range service provider addressing all customer segments* with different product variations. Price-sensitive customers can book *cheap rates with low service level*, business customers can book *flexible rates with high service level* and luxury customers are treated with *exclusive service*. Lufthansa also cultivates an innovative image, for example, by adopting new technologies early.

Challenge

- Events such as delays or cancellations create new information which is viable for customers, which are traveling and therefore mobile by nature.

following common strategic focus attributes/goals which make up the strategic framework used for our analysis:

- **Price:** Offering low, transparent, and fair prices compared to the market
- **Customer intimacy:** Offering hassle-free service on a personal level, establishing a one-to-one relationship with customers
- **Product quality:** Offering the best product features in the market
- **Accessibility:** Offering simple, anytime-anywhere-anyhow access to products
- **Innovativeness:** Being perceived as an innovator or early-adopter of new, innovative technologies

Table 3 summarizes the prioritization of these attributes across the analyzed cases; applying the classification from Crawford and Mathews (2001) of primary focus, secondary focus, and no focus (i.e., the company pursues market average performance).

Obviously, the strategic framework as introduced in the second section and which has been extended here can be used to classify the mobile

initiatives in the analyzed cases. The following common aspects of the selected customer-oriented processes, depending on the strategic orientation, can be observed.

Comparing the correlations between strategic focus and process selections for mobile support in the case studies, the following observations can be made. Companies focusing primarily on price were not found in the sample, companies who focus on price as the second distinguishing attribute have chosen processes where either process steps could be eliminated by removing media breaches (Eneco) or processes where mobile technology allows for better price transparency and the communication of the price on an individual basis (Progrès). Most companies have the focus on customer intimacy. These companies have chosen processes where mobile technology allows for customer support in spontaneous or emergency situations (eBay, Novartis, Lufthansa) or processes where contextualization (mostly personalization) allowed for a convincing one-to-one interaction (Gossard, Cologne PTA). Only SOS Médcins focuses on product quality, their product is a service offering which is improved by better information support to mobile service

Table 3. Overview of strategic focus in the analyzed cases

	Price	Intimacy	Product	Accessibility	Innovation
Progrès	●	◌	◌	○	●
Gossard G4Me	◌	○	●	◌	●
Cologne PTA	◌	○	◌	◌	●
eBay in Germany	●	◌	◌	○	●
Eneco	●	○	◌	◌	◌
SOS Médcins	◌	◌	○	●	◌
Verizon	◌	●	◌	◌	○
Novartis	◌	○	◌	●	◌
Lufthansa	◌	○	◌	◌	●
LottoNL	◌	●	◌	○	◌

Legend: ○ = primary focus   ● = secondary focus   ◌ = no focus (market average)

Strategic Focus on Product Quality

The analyzed cases indicate that a strategy focused on quality of product is hard to support unless the product is either closely related to mobile technology or is a knowledge-intensive service product. For example, Verizon could support the product quality and how this quality is perceived by customers by showing its products and services on-site via its own sales agents. The knowledge aspect played an important role in the case of SOS Médecins, where the product of medical service has been greatly enhanced by providing the doctor with complete and current knowledge about the visited patient.

OUTLOOK

The MB industry will mature further. On the one hand, the technological evolution will bring about more sophisticated devices and networks, which allow for more sophisticated applications and services. On the other hand, the market will likely experience a shakeout leading to more clearly distinguished roles in the value chain. Currently, especially in Western Europe, many mobile network operators try to control the entire value chain, leaving little room for other partners, claiming large parts of the profit potential and thus rendering the applications of MC and MB relatively unattractive. Price competition and a maturing market will likely cure this phenomenon.

CONCLUSION AND FURTHER RESEARCH

The analysis presented in this chapter shows how the alignment of the use of MB technology with corporate strategy can be achieved, with special respect to business processes in customer interaction. We have identified five different strategic focuses and explain which criteria the processes should fulfill to provide the best support to the corporate strategy when being mobilized, thus promise to realize their full potential (i.e., the best ROI of the related IT investments).

Since the analysis so far is based on 10 cases, which are not representative for a general target audience, the framework should be further validated by further cases studies and quantitative empirical research. Other aspects that should be addressed by further research include a detailed method for process selection, business process redesign, and technology selection to provide businesses with a structured method on how to achieve best effects with the application of MB technology.

REFERENCES

Ali, S., Torabi, T., & Ali, H. (2006). A case for business process deployment for location aware applications. *International Journal of Computer Science and Network Security, 6*(8a), 118-127.

Amberg, M., Figge, S., & Wehrmann, J. (2003). A cooperation model for personalised and situation dependent services in mobile networks. In A. Olivé, M. Yoshikawa, & E. S. Yu (Eds.), *Advanced conceptual modeling techniques* (2784 ed.). Berlin, Germany: Springer.

Amberg, M., & Remus, U. (2003). Multi-channel commerce: Hybridstrategien und controlling. In W. Uhr, W. Esswein, & E. Schoop (Eds.), *Wirtschaftsinformatik 2003/Band II* (pp. 795-817). Heidelberg, Germany: Physica-Verlag.

Anckar, B., & D'Incau, D. (2002a). Value creation in mobile commerce: Findings from a consumer survey. *Journal of Information Technology Theory and Application, 4*(1), 43-64.

Anckar, B., & D'Incau, D. (2002b, January 7-10). *Value-added services in mobile commerce: An analytical framework and empirical findings from a national consumer survey.* Paper presented at

Figge, S. (2001, May 3). *Situation dependent m-commerce applications*. Paper presented at the Conference on Telecommunications and Information Markets—COTIM, Providence, RI.

Figge, S. (2002). Die open mobile architecture—Systemumgebung für mobile Dienste der nächsten Generation. *Wirtschaftsinformatik, 44*(4), 375-378.

Figge, S., Schrott, G., Muntermann, J., & Rannenberg, K. (2002, June 16). *EARNING M-ONEY—A situation based approach for mobile business models*. Paper presented at the European Conference on Information Systems, Neapel, Italy.

Fleisch, E. (2001). *Business perspectives on ubiquitous computing*. St. Gallen, Switzerland.

Fleisch, E., & Bechmann, T. (2002). *Ubiquitous computing: Wie "intelligente Dinge" die Assekuranz verändern*. St. Gallen, Switzerland.

Fleisch, E., Mattern, F., & Österle, H. (2002). *Betriebliche anwendungen mobiler technologien: Ubiquitous commerce*. St. Gallen, Switerzland.

Fritsch, L., & Rossnagel, H. (2004). SIM-based mobile electronic signatures: Enabling m-business with certification on demand. *Card Forum International, 8*(1), 38-40.

Funk, J. L. (2003). *Mobile disruption: The technologies and applications driving the obile Internet*. Hoboken, NJ: Jon Wiley & Sons.

Gebauer, J. (2002, June 17). *Assessing the value of emerging technologies: The case of mobile technologies to enhance business to business applications*. Paper presented at the 15th Bled Electronic Commerce Conference, Bled, Slovenia.

Gebauer, J., & Shaw, M. J. (2004). Success factors and impacts of mobile business applications: Results from a mobile e-procurement study. *International Journal of Electronic Commerce, 8*(3), 19-41.

Gebert, H., Geib, M., Kolbe, L. M., & Brenner, W. (2003). Knowledge-enabled customer relationship management. *Journal of Knowledge Management, 7*(5), 107-123.

Geib, M., Reichold, A., Kolbe, L. M., & Brenner, W. (2005, January 3). *Architecture for customer relationship management approaches in financial services*, Big Island, HI.

Han, S.-Y., Cho, M.-K., & Choi, M.-K. (2005, July 11). *Ubitem: A framework for interactive marketing in location-based gaming environment*. Paper presented at the Proceedings of the Fourth International Conference on Mobile Business (mBusiness), Sydney, Australia.

Hartline, M. D., Maxham, J. G., & McKee, D. O. (2000). Corridors of influence in the dissemination of customer-oriented strategy to customer contact service employees. *Journal of Marketing, 64*(2), 35-50.

Hartmann, S., & Dirksen, V. (2001). Effizienzsteigerungen von unternehmensinternen Prozessen durch die Integration von Komponenten des M-Business. *Information Management & Consulting, 16*(2), 16-19.

Hitt, L., & Brynjolfsson, E. (1994, December). *Creating value and destroying profits? Three measures of information technology's contribution*.

Humpert, F., & Habbel, F.-R. (2002). Mobile Dienste für die Öffentlichkeit. *HMD Praxis der Wirtschaftsinformatik, 226*, 37-43.

Kadyte, V. (2005, July 11). *Process visibility: How mobile technology can enhance business-customer care in the paper industry*. Paper presented at the Proceedings of the Fourth International Conference on Mobile Business (mBusiness), Sydney, Australia.

Kenny, D., & Marshall, J. F. (2000). Contextual marketing—The real business of the Internet. *Harvard Business Review, 78*(6), 119-125.

Paavilainen, J. (2002). *Mobile business strategies: Understanding the technologies and opportunities*. London: Addison-Wesley.

Park, C. (2006). Hedonic and utilitarian values of mobile Internet in Korea. *International Journal of Mobile Communications, 4*(5), 497-508.

Parvatiyar, A., & Sheth, J. N. (2000). The domain and conceptual foundations of relationship marketing. In J. N. Sheth & A. Parvatiyar (Eds.), *Handbook of relationship marketing* (pp. 3-38). Thousand Oaks: Sage.

Perry, M., O'Hara, K., Sellen, A., Brown, B., & Harper, R. (2001). Dealing with mobility: Understanding access anytime, anywhere. *Transactions on Computer-Human Interaction, 8*(4), 323-247.

Porter, M. E. (1979). *How competitive forces shape strategy*. Boston: Harvard Business School Press.

Porter, M. E. (1996). What is strategy? *Harvard Business Review, 74*(6), 61-78.

Porter, M. E. (1998). *Competitive advantage: Creating and sustaining superior performance*. New York: Free Press.

Pousttchi, K., Turowski, K., & Weizmann, M. (2003). *Added value-based approach to analyze electronic commerce and mobile commerce business models*. Paper presented at the International Conference of Management and Technology in the New Enterprise, La Habana, Cuba.

Raisinghani, M. (2002). Mobile commerce: Transforming the vision into reality. *Information Resources Management Journal, 15*(2), 3-4.

Rannenberg, K. (2004). Identity management in mobile cellular networks and related applications. *Information Security Technical Report, 9*(1), 77-85.

Reichold, A., Schierholz, R., Kolbe, L. M., & Brenner, W. (2003, September 1). *M-Commerce at Helsana health insurance: Mobile premium calculator*. Paper presented at the Dexa '03, Prag.

Reichold, A., Schierholz, R., Kolbe, L., & Brenner, W. (2004). Mobile-commerce bei der Helsana: Mobile Prämienerstellung. In K. Wilde & H. Hippner (Eds.), *Management von CRM-Projekten*: Gabler.

Reichwald, R. (2002). *Mobile Kommunikation: Wertschöpfung, Technologien, neue Dienste*. Wiesbaden: Gabler.

Reichwald, R., & Meier, R. (2002). Generierung von Kundenwert mit mobilen Diensten. In R. Reichwald (Ed.), *Mobile Kommunikation—Wertschöpfung, Technologien, neue Dienste* (pp. 207-230). Wiesbaden, Germany: Gabler.

Romano, N. C., & Fjermestad, J. (2002). Electronic commerce customer relationship management: An assessment of research. *International Journal of Electronic Commerce, 6*(2), 61-113.

Romano, N. C., & Fjermestad, J. (2003). Electronic commerce customer relationship management: A research agenda. *Information Technology and Management, 4*(2-3), 233-258.

Rust, R. T., Inman, J. J., Jia, J., & Zahorik, A. (1999). What you don't know about customer-perceived quality: The role of customer expectation distributions. *Marketing Science, 18*(1), 77-92.

Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on marketing: Using customer equity to focus marketing strategy. *Journal of Marketing, 68*(1), 109-127.

Rust, R. T., Zeithaml, V. A., & Lemon, K. N. (2000). *Driving customer equity: How customer lifetime value is reshaping customer strategy*. New York: The Free Press.

Sadeh, N. (2002). *M-Commerce: Technologies, services, and business models*. New York: John Wiley & Sons.

Weill, P., & Broadbent, M. (1998). *Leveraging the new infrastructure—How market leaders capitalize on information technology.* Boston: Harvard Business School Press.

Weill, P., Subramani, M., & Broadbent, M. (2002). Building IT infrastructure for strategic agility. *MIT Sloan Management Review, 44*(1), 57-65.

Weill, P., & Vitale, M. (2002). What IT infrastructure capabilities are needed to implement e-business models. *MIS Quarterly Executive, 1*(1), 17-34.

Wernerfelt, B. (1984). A resource based view of the firm. *Strategic Management Journal, 5*(2), 171-180.

Wohlfahrt, J. (2001). One-to-one marketing in mobile commerce. *Information Management & Consulting, 16*(2), 49-54.

Wolf, H., & Wang, M. (2005, July 11-13). *A framework with a peer fostering mechanism for mobile P2P game.* Paper presented at the Proceedings of the Fourth International Conference on Mobile Business (mBusiness), Sydney, Australia.

Wong, C. C., & Hiew, P. L. (2005, July 11-13). *Mobile entertainment: Review and refine.* Paper presented at the Proceedings of the Fourth International Conference on Mobile Business (mBusiness), Sydney, Australia.

Yin, R. K. (2002). *Case study research. Design and methods* (Vol. 5, 3rd ed.). London: Sage.

Zobel, J. (2001). *Mobile business und m-commerce—Die Märkte der Zukunft erobern.* München, Germany: Hanser.