

2013

# Success and Failure: Two Longitudinal Case Studies on Media-Tablet Usage in CRM

Thomas Sammer

*University of St.Gallen, thomas.sammer@unisg.ch*

Sandro Vögeli

*The Offices at Central World, sandro@primestreetgroup.com*

Andrea Back

*University of St. Gallen, andrea.back@unisg.ch*

Follow this and additional works at: <http://aisel.aisnet.org/icmb2013>

---

## Recommended Citation

Sammer, Thomas; Vögeli, Sandro; and Back, Andrea, "Success and Failure: Two Longitudinal Case Studies on Media-Tablet Usage in CRM" (2013). *2013 International Conference on Mobile Business*. 12.

<http://aisel.aisnet.org/icmb2013/12>

This material is brought to you by the International Conference on Mobile Business (ICMB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in 2013 International Conference on Mobile Business by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# SUCCESS AND FAILURE: TWO LONGITUDINAL CASE STUDIES ON MEDIA-TABLET USAGE IN CRM

Sammer, Thomas, Institute of Information Management, University of St.Gallen, Müller-Friedberg-Str. 8, 9000 St.Gallen, Switzerland, thomas.sammer@unisg.ch

Vögeli, Sandro, PrimeStreet Advisory, The Offices at Central World , 999/9 Rama I Road, Patumwan, Bangkok 10330, Thailand, sandro@primestreetgroup.com

Back, Andrea, Institute of Information Management, University of St.Gallen, Müller-Friedberg-Str. 8, 9000 St.Gallen, Switzerland, andrea.back@unisg.ch

## Abstract

*Media-tablets are gaining widespread acceptance in companies and are increasingly being used for various business tasks. However, although there are several successful examples, a growing number of media-tablet projects get turned down. Based on case study data covering one year, this paper presents two projects that introduced a front office customer-relationship-management application for media-tablets. For each case, we conducted expert interviews in 2011 and 2012 with both the project manager and internal client of the project, documented the existing solution, and conducted a user survey. Over the time frame, the two projects evolved differently in terms of success. While one project was further advanced, the other had in fact been turned-down completely by management. A comparison of the cases reveals that the successful project was funded by an operating department, and the advantages of the solution had been communicated to all internal stakeholders. In contrast, the other project was driven primarily by user demand for media-tablets and was executed as an innovation project without a clear business rationale. Therefore, we advise managers to ensure that media-tablet projects follow a well-defined business logic and to communicate the advantages to all relevant internal stakeholders.*

*Keywords: Consumerization of IT; Media-tablet; Mobile Computing; Case Study Research.*

# 1 Introduction

In 2010, the market for tablet computers was revitalized with the introduction of a novel class of devices, so-called media-tablets, in the form of products such as the Apple iPad and other gesture-interaction based tablet computers. Besides the novel interface-concept, these devices are ideally suited for entertainment purposes and enable a user-friendly and intuitive computing experience. Both the hardware and software of media-tablets are not intended for professional usage. However, besides their remarkable success as entertainment devices, there is also a broad agreement across many IT consultants (Akella et al. 2012), technology advisors (Frost & Sullivan 2011a; Willis 2011), software (Sybase Inc. 2011) and hardware vendors (Apple Inc. 2011), IT magazines (Kontzer 2012), and scholars (Pitt et al. 2011a) that the media-tablet also has the potential to create remarkable business value for organizational usage. For example, Frost & Sullivan forecasts that one of the major challenges for IT departments in the upcoming years will be to support and maintain an integrated working environment consisting of smartphones, media-tablets and laptop computers (Frost & Sullivan 2011b). The IT advisory company Gartner reports that at their December 2010 Infrastructure and Operations Conference, 85% of the audience expected to support media-tablets at the work place in the near future, and 48% were already doing so (Cosgrove 2011). This fast growing demand for the professional use of media-tablets is also evident in the strategy of leading business software vendors, which have already released the first tablet versions of their business solutions. Brand names like SAP, Oracle, Siemens and salesforce.com are just a few vendors which now offer media-tablet versions of their business software (Nelson and Willis 2011). Not surprisingly, Gartner names the media-tablet as the “number one” strategic technology trend for 2012 (Cearley and Claunch 2012).

Following this broad agreement and the widespread buzz, organizations of any size and any industry are instigating IT projects to employ media-tablets for a variety of business activities (Frost & Sullivan 2011a; Kontzer 2012) and, hence, making considerable investments that demand a return. Despite these initiatives, the main focus of a media-tablet remains on entertainment. To effectively employ media-tablets for business purposes, organizations first have to explore the suitability, areas of operation and business value of the technology. This has led to a situation in which many organizations approach this issue on a trial-and-error basis, which leads to an inefficient adoption process characterized by uncertainty, the risk of failure, and lost investments.

In order to improve the prevailing processes, one way is to foster the exchange of experiences with the adoption of media-tablets in business. In this context, research can act as a facilitator for knowledge transfer and support practice by deriving recommendations and guidelines from empirical studies. From an academic perspective, the adoption of media-tablets in business is also of relevance and has so far not been researched. While previous studies (Gebauer et al. 2010; Kadyte 2004; Sheng et al. 2005) explored the impact of various mobile devices on business processes, most have the same shortcoming; they were done before the introduction of the media-tablet and focus primarily on the aspect of mobility. However, besides increased mobility, the media-tablet also offers additional features that can lead to value gains. Accordingly, several contributions in the field of information systems research (Pitt et al. 2011b, 2010; Watson et al. 2011) indicate that the differences between media-tablets and their predecessors are evident. Hence, research concerning media-tablets in particular, will contribute to existing knowledge on the adoption of mobile devices. To investigate this issue, we explore the following research question:

What factors contribute to a successful adoption of media-tablets for professional business usage?

According to Gartner, the media-tablet has significant implications in customer-relationship-management (CRM), and many companies are promoting the adoption of media-tablets to enhance their CRM systems (Desisto 2011; Dunne 2011). In order to answer the research question, we conduct research on cases where different companies adopt media-tablets to support their CRM. For each case, we collect information in telephone interviews with project managers and internal clients, by

reviewing documents, and conducting questionnaire-based user-surveys over the course of one year (2011 – 2012). Using a comparative case study approach, we derive recommendations for practice and contribute to a broader understanding of corporate mobile IT usage and to the existing theory of mobile IT adoption in business.

The remainder of the paper is organized as follows. Section 2 contains an introduction on related work and theory, and defines theoretical propositions. Section 3 discusses the methodological approach, the case selection, and case study protocol. Section 4 reports on the two cases, both independently and comparatively. Section 5 discusses the results and their implications for theory and practice, as well as the limitations of the study and opportunities for future research.

## 2 Theoretical Framework

To formulate the study methodology and set the scope, we follow the recommendation of Yin (2003) and start with theory development as part of the design phase. The goal is to have a sufficient blueprint for the case study.

### 2.1 Theoretical Background

In general, media-tablets can be seen as an alternative to two other types of mobile devices, namely laptops and smartphones (Pitt et al. 2011b). Basically, it is a tablet-form-factor device with a seven to twelve inch color display, running a lightweight operating system. The human-computer-interface primarily relies on touch gestures and a virtual keyboard instead of a built-in hardware keyboard, leading to advantages in form, weight and ease of use (Pitt et al. 2011b). One of the most well-known media-tablet products is the Apple iPad.

Like smartphones and laptops, media-tablets are also capable of running customized enterprise-standard applications. We will focus on applications that support CRM, so-called IT-based customer solutions, such as sales force automation (Payne and Frow 2005). To categorize the different aspects of CRM, we apply a business-processes-oriented perspective, based on the CRM framework of Payne and Frow (2005) as illustrated in Figure 1. This framework encompasses five main CRM processes: (I) the strategy development process, (II) value creation process, (III) multichannel integration process, (IV) information management process, and (V) the performance assessment process. Based on this categorization, we further define the scope of our research and discuss the influence of media-tablets on CRM.

As we focus on applications, we start with the (IV) information management process. This process includes the data basis and back-end system (data repository) of the CRM, the IT infrastructure and middleware (IT systems), analysis tools, and applications. The applications are divided into two domains, front office and back office software applications. In this study, we focus on the use of media-tablets for front office applications.

Front office applications support certain customer communication channels and therefore have an impact on associated areas in the (III) multichannel integration process, which includes six generic channels ranging from physical to virtual. This is where the interaction with the customer takes place. Media-tablet applications can potentially be employed for most of the channels: sales force, outlet personnel and telephone staff can be supported by media-tablet applications; eCommerce, and mCommerce by software applications provided to customers on public App Stores (application distribution platforms such as the Apple App Store or Google Play). In this study, we focus on media-tablet applications that are tailored to support the CRM activities of the sales force.

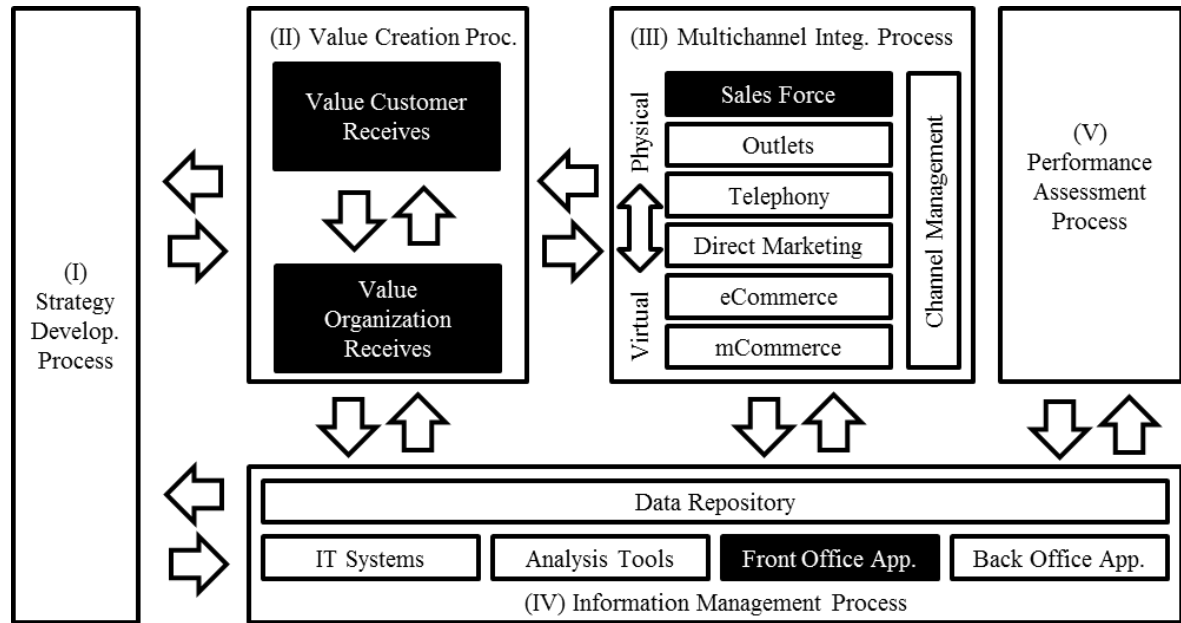


Figure 1: A Conceptual Framework for CRM, adapted from Payne and Frow (2005). Black Boxes indicate the Context of the Research.

The interaction with customers through channels creates value and therefore influences the (II) value creation process. The value creation process is two-sided: CRM creates on the one hand value for the customer (value the customer obtains), and on the other hand for the company (value the organization obtains). The customer receives value as the information gathered through the CRM process contributes to the value proposition of the service or product of the company. Precise information about customers allows companies to offer added value (for example, if an insurance company knows that a customer plans to go on a long trip, they can remind him to take out an appropriate insurance policy) and customized products and services (for example, offers that are tailored to the requirements of the particular customer). Such information leads to superior products and services and thus creates customer value. This is also termed the coproduction of customer value (Payne and Frow 2005). In turn, the CRM system also creates value for the company. The major benefits of CRM for companies are the acquisition of potential customers and the retention of existing ones. In conjunction with this, many authors also refer to customer retention rates and customer share as the most important metrics for CRM success (Verhoef 2003). If a front office application creates value, it would evolve in this process area.

For the remaining two CRM processes, (I) strategy development and (V) performance assessment, we assume that a media-tablet application does not influence them. In summary, we will focus on front office media-tablet applications for the sales force and their contribution to the value creation process of CRM. The areas of interest are marked in Figure 1 with a black background and white letters.

## 2.2 Theoretical Proposition

To target our research question, we need to identify factors that influence the success of media-tablets in the described CRM process areas (II), (III), and (IV). We define success as the creation of a relative advantage of the new applications compared to their predecessors. In the case studies, we will therefore identify factors that influence the creation of a relative advantage of the media-tablet application. Besides creating a relative advantage, research also indicates that for a successful adoption, the communication of advantages to the internal stakeholders of the company is an important factor (Wilson et al. 2002). A successful media-tablet adoption will therefore need to

communicate the relative advantage of the new application to the internal stakeholders. For the purposes of this study, we include the internal client, project management and users in this group of relevant internal stakeholders. If all three stakeholders are aware of the relative advantage of the new application, this will support a successful adoption. Based on this notion, we formulate the following theoretical proposition to guide our case study:

*The case study will demonstrate why implementation only succeeds when the media-tablet solution creates a relative advantage that is properly communicated to all related stakeholders. In addition, the case study will also show that simply porting the existing CRM front office application to media-tablets is not sufficient to ensure a successful implementation.*

### 3 Methodology

In a first step, we define a set of criteria for determining appropriate projects to select our case studies. First, we consider only media-tablet solutions that are currently in use or have been tested under real conditions. Second, only companies that have implemented a CRM front office media-tablet application for the sales force are considered. Third, the solution has to be a tailor-made iPad-based application.

Next, we contacted partner companies of our institute to identify companies with appropriate projects that would be willing to participate in the study. Out of those who replied or responded, we selected three cases and reviewed the project descriptions to select applications with comparable functionalities and objectives. Finally, we selected two cases that can be considered as comparable in both aspects of functionality and objective.

To assess the theoretical proposition and the research question, we define an appropriate form of measurement, namely a case study protocol that considers the adoption of a CRM front office media-tablet application for the sales force. To obtain this information, we introduced two perspectives: those of management and of users. The management perspective gathers information about the application from the project managers and internal clients; the user perspective gathers information from the users of the solution.

The case study protocol encompasses both perspectives. Basically, the case study protocol is a standardized categorization for collecting and organizing data (Yin 2003). To define the case study protocol, we integrate the aspects included in the CRM framework by Payne and Frow (2005) and the aspect of project communication defined by Wilson et al. (2002) into one categorization scheme that includes: (1) the relative advantage of the front office application, (2) the relative advantage for the sales force channel, (3) the relative advantage in the value creation process, and (4) the project communication. These four categories represent the case study protocol.

#### 3.1 Interviews

To assess the management perspective, we conducted semi-structured telephone interviews with the project managers and the internal clients of the project. The interviews were audio-recorded and transcribed, and lasted about one hour. An interview guide based on the case study protocol was created in order to help to keep the focus on the key elements of the interview, while still allowing some room for an open conversation (Mayer 2009). For each case, we conducted an interview in 2011 with the project managers and reviewed the application. In case Alpha, we conducted two additional interviews in 2012: one with the project manager and one with the internal client. Regarding case Beta, we were not able to conduct an interview in 2012 with the project manager or the internal client, as the whole project team left the company and the project was also turned down in 2012. Therefore, we contacted other employees in the IT department of the company and received additional information by email about the latest project status.

### 3.2 User Survey

To assess the user perspective, we employed a quantitative questionnaire. The questionnaire was sent out to the users by email. Users had to rate predefined statements based on the level of acceptance. We used a verbal five-point Likert scale to reduce the time required for answering and thus maximize the response rate. We formulated the questions for the survey by using previously validated measures derived from the literature (Delone and McLean 1992, 2003; Gebauer and Shaw 2004; Gebauer et al. 2010; Lee and Chung 2009; Petter et al. 2008). For quality assurance, each question was tested and validated with the question appraisal system of Faulbaum et al. (2009) by members of our faculty. All items in the questionnaire are listed in Table 1. In total, we received 67 answers, 61 from case Alpha (45% response rate) and 6 from case Beta (100% response rate).

To ensure measurement quality and accuracy, we applied an explorative factor analysis (varimax principal component analysis with Kaiser standardisation). The results are presented in Table 1. Based on this analysis, the items mostly proved valid, except for the separation between (3) relative advantage in the value creation process and (4) project communication. However, given that we apply descriptive statistics and that the used items are logically distinguishable from one another, we accept the results as valid.

Category	Items for User Perspective	Factor Analysis				Case Alpha		Case Beta	
		1	2	3	4	Mean	STD	Mean	STD
(1) Relative advantage of the front office application	The iPad is mobile.	<b>0.79</b>	-0.11	0.16	0.16	4.5	0.5	4.8	0.4
	The iPad can instantly be used.	<b>0.75</b>	0.13	0.19	-0.03	4.7	0.5	4.8	0.4
	The iPad is easy to operate.	<b>0.71</b>	-0.02	0.17	0.08	4.5	0.6	4.5	0.5
	The iPad touch-screen has the ideal size.	<b>0.64</b>	0.19	-0.15	0.09	4.3	0.6	4.5	0.8
	[...] is available whenever I need it.	-0.03	<b>0.72</b>	0.37	0.23	3.4	0.9	4.5	0.5
	[...] is reliable.	0.11	<b>0.69</b>	0.37	0.24	3.6	0.8	4.0	0.8
(2) Relative advantage for the sales force channel	[...] enables me to save time.	0.24	0.14	<b>0.84</b>	0.17	3.0	1.1	4.8	0.4
	[...] makes my job easier.	0.09	0.11	<b>0.83</b>	0.40	3.1	0.9	5.0	0.0
	[...] enables me to be more productive.	0.29	0.21	<b>0.80</b>	0.21	2.9	1.0	4.8	0.4
	[...] improves customer perceptions of the quality of service	-0.06	0.17	<b>0.65</b>	0.26	3.5	1.0	4.2	0.7
(3) Relative advantage in the value creation process	[...] provides understandable information.	0.05	0.37	0.08	<b>0.81</b>	3.6	0.6	4.3	0.5
	[...] allows me to present information the way I need it.	-0.04	0.08	0.30	<b>0.85</b>	3.7	0.9	4.5	0.5
	[...] provides relevant information.	0.20	0.25	0.30	<b>0.78</b>	3.3	0.9	4.7	0.5
	[...] provides correct information.	0.10	0.28	0.05	<b>0.78</b>	3.6	0.8	4.0	0.6
	[...] provides complete information.	0.24	0.35	0.18	<b>0.76</b>	2.7	0.9	3.8	0.4
(4) Project comm.	Overall I am very satisfied with [...].	0.11	0.00	0.40	<b>0.84</b>	3.1	1.0	4.8	0.4
	I would strongly recommend [...] to others.	0.02	0.13	0.42	<b>0.79</b>	3.3	1.0	4.7	0.5

Table 1: List of Items ([...] is a Placeholder for the Application Name). Answers range from strong disagreement (1) to strong agreement (5).

## 4 Results

In this section, we describe the two cases, based on the collected information. The information was derived from four interviews, reviewing the applications, collecting secondary information about the company and the case, a user survey, and email communication. Table 2 gives an overview of the collected information and the time period of collection.

Type of Information	Case Alpha		Case Beta	
	2011	2012	2011	2012*
Interview Project Manager	1	1	1	0
Interview Internal Client	0	1	0	0
Review of the Application	Yes	Yes	Yes	No
Secondary Information (Web Search)	Yes	Yes	Yes	Yes
User Survey	Yes (n=61)	No	Yes (n=6)	No
Project Status Information	Interview	Interview	Interview	Email

Table 2: Overview on Case Information (\* Case Beta was turned down in 2012).

#### 4.1 Case Alpha: Financial Service Provider Alpha

*Company Alpha* is a financial service provider based in Switzerland that delivers professional and personal financial services. Alpha is one of the national leaders in payment transactions and can be considered as a large company, with its more than 1.000 employees. It serves both business (B2B) and private customers (B2C) by offering services such as payments, investments, financing and retirement planning. In order to maintain its leading position, Alpha aims to play a pioneering role in the implementation of IT solutions. The researched media-tablet solution aims to support the sales force designated for business customers (B2B) with mobile CRM functionality. Therefore, the users of the application are B2B sales agents. In 2011, when we first contacted the company, the application had already been rolled out to all of the 150 B2B sales agents after a closed pilot project in 2010. The application had been in use for more than one month.

Concerning the relative advantage of the (1) front office application, the internal client and the project manager agree that the new application has the same functionality as the predecessor, which is still used parallel as a desktop application. In fact, it is just a tablet-optimized version of the existing CRM application. The application includes a profile of each customer, including different status information such as hard-facts (financial key figures) and soft-facts (planned next steps). In addition, the application is capable of triggering certain activities such as ordering offers, credit cards, or signing contracts. Before the introduction of the media-tablet, all these actions were paper-based. Hence, the sales agent used printed paper forms for each activity, which were filled out together with the client and faxed after the meeting to the back office. Therefore, the new application creates efficiency gains with the reduction of media breaks, as these activities are now done electronically using the media-tablet. From the user perspective, the results display a high level of satisfaction with the used media-tablet hardware (see Table 1) and moderate satisfaction concerning the application.<sup>1</sup>

In addition, the reduction of media breaks also led to efficiency gains in the (2) sales force channel. Before the introduction of the media-tablet, the use of laptop computers was not permitted during client meetings: “We have this guideline for our sales agents, which says that it is not recommended to use a laptop during a client meeting. When the sales agent opens his laptop, this creates a psychological barrier between him and the client. But with a tablet, this is not a problem at all.” (Head of Sales Business Clients)

This led to a situation in which the sales agent had to print out the information concerning the client before the meeting. New information regarding the client was then added to the CRM system after the meeting. With the new solution, all the information is available during the meeting and new information is easily added there and then, increasing the efficiency of the sales agent. However, from

---

<sup>1</sup> Degrees of satisfaction are defined as follows: high >4, moderate 3 to 4, weak <3.



a user perspective, the results display only moderate satisfaction. The users disagree especially with the statement that the application increases their productivity (mean of 2.9), which is in contrast to the perceptions of management.

Concerning (3) value creation, we find evidence from the management perspective that an increased information quality positively influences value creation, as the sales agent now has all the information with her/him in the meeting. It is also indicated that the client saves time, because she/he does not need to enter standard information. For example, if the client orders a new credit card, he only has to select the right option on the media-tablet, sign, and click “send”. Before, the client had to fill out a paper form that included standard information, such as company name, company address, and bank account information. However, in terms of the user perspective, satisfaction with the information quality is rated as moderate to weak.

Regarding the (4) project communication, the project received support from top-management and was triggered top-down: “It was in the interest of management that we evaluate business cases for the professional use of media-tablets. For us, it was not about using the iPad, but about gaining experience in how to use media-tablets for our business and how to create sustainable business value.”(Project Manager)

The users and the internal client had been also very open to the project: “This is an important project to us. Our company wants to be the industry leader in innovation and technology and it was therefore clear for everyone that we will gain our own experience with this new technology.” (Head of Sales Business Clients)

In 2011 and 2012, the internal client and the project manager agreed that the project is a success and that the application will be further advanced and also rolled-out to the private customer segment in 2013. However, concerning the user survey from 2011, the results display only moderate satisfaction with the application.

## **4.2 Case Beta: Hearing Aid Manufacturer Beta**

*Company Beta* develops, produces, and distributes advanced personal hearing systems. The company is one of several hearing aid providers in Switzerland. Beta sells its products through business partners and can be considered a large company, with its more than 1.000 employees. The media-tablet solution has been developed to support the sales force with a mobile CRM front office application. Therefore, the users of the applications are B2B sales agents. The main job of the sales agents is to sell products to the business partners (mainly retailers or “hearing studios”). When we started the data collection in 2011, the project had a closed pilot status and included six volunteer sales agents that had used the new media-tablet application for more than one month.

The media-tablet application integrates information about the client and the sales agent (selling history and key figures), an electronic product catalog, and the functionality to sign-up for a special retailer bonus program (if a certain level of purchases is reached, company Beta would offer a special discount to the client). Therefore, the application represents a new (1) front office application, which includes CRM information and a product catalog. The CRM information is also displayed in new way: “Before, the sales agent had to collect the information from different spreadsheets and even do the calculation by themselves. Now, the App shows the key figures automatically” (Project Manager). This novel information dashboard includes the sales history of a certain client and the sales performance in the current month of the logged-in sales agent.

With this new functionality, meeting preparation has improved in efficiency and quality, which creates an advantage in the (1) front office application and the (2) sales force channel. In addition, the results from the user survey also display high satisfaction in both categories and efficiency gains in the sales force channel: “The new solution has also decreased the paper work for the sales agent and helps her/him to save time.” (Project Manager).

Concerning the (3) value creation process, the management indicated that the device would support the brand image, as company Beta is considered as a high-tech company selling premium products. But concerning the CRM activities, the solution did not provide additional information during the meeting for either the client (the catalog was always available as website and as print) or the sales agent (the key figures had been available before, but required manual calculation). However, the user survey reveals that the sales agents are satisfied with the information provided by the application.

Regarding the (4) project communication, the project manager explains that the project was driven mainly by the sales agent’s demand to use a media-tablet: “We got several requests from our sales agents to provide them with an iPad. To react to this new demand, we decided to start a project to develop an iPad App that would support our sales force” (Project Manager). The project was then launched as an innovation project with a cash burn and without a defined business case or a budget limit. There was also no specific internal client who funded the project as it was not financed by the sales department, but by the general IT innovation budget. In 2012, a steering committee then considered the value of the project and decided to turn it down. The reasoning was that the project costs had been too high to justify the realized business value of the application.

Nevertheless, the user survey indicates that the sales agents had been satisfied with the application. However, given that the project was triggered by the specific demand from sales agents to “use an iPad”, this figures are maybe potentially biased.

### 4.3 Case Comparison

The two projects reveal several differences. While Alpha focused on bringing existing functionality to the media-tablet to allow computer support during the meeting, company Beta indicated that one of their major aims, besides solely reacting to the increasing demand of sales agents to “use an iPad for the job”, was to use a device that is more portable than the existing laptop computers: “Our sales agents are very mobile and therefore, it was clear to us that a more portable device would create a competitive edge for them” (Project Manager). Therefore, concerning the application, Beta achieved more new functionality than Alpha, which merely ported the existing functionality to a new device.

Category	Case Alpha	Case Beta
(1) Relative Adv. Front Office Application	<ul style="list-style-type: none"> <li>Optimized media-tablet version, which allows computer support during the meeting.</li> <li>Decreased media breaks.</li> </ul>	<ul style="list-style-type: none"> <li>Combination of CRM information and a product catalog.</li> <li>Automatic information visualization.</li> <li>Decreased media breaks</li> </ul>
(2) Relative Adv. Sales Force Channel	<ul style="list-style-type: none"> <li>Management perceives productivity gains.</li> <li>Users perceive moderate to weak productivity gains.</li> </ul>	<ul style="list-style-type: none"> <li>Project manager perceives productivity gains.</li> <li>Users perceive high productivity gains.</li> </ul>
(3) Relative Adv. Value Creation Process	<ul style="list-style-type: none"> <li>Management perceives advantages due to increased information quality and time savings for the client.</li> <li>Users perceive moderate to weak information quality.</li> </ul>	<ul style="list-style-type: none"> <li>Project manager perceives advantages due to a positive image effect of the device.</li> <li>Users perceive high information quality.</li> </ul>
(4) Relative Adv. Project Comm.	<ul style="list-style-type: none"> <li>Project was triggered top-down.</li> <li>Received top-management support.</li> <li>No stakeholder rejected the project.</li> </ul>	<ul style="list-style-type: none"> <li>Project was triggered bottom-up.</li> <li>Top-management turned down the project.</li> <li>Top-management rejected the project.</li> </ul>

Table 3: Comparison of Case A and Case B.

In both cases, there are indications that the application creates productivity gains. But concerning the degree to which the application influences the meeting situation, the process at Alpha significantly changed, as before sales agents had no computer support at all during the meeting. In the case of Beta, the sales agents already used computers (laptops) during the meeting before the introduction of the

media-tablet, which means that the meeting situation has not changed as much as for Alpha. This is also indicated in the value creation process, where Alpha reports that the sales agents now have better information quality and achieve time savings for their clients. For case Beta, the project manager mostly argues that the positive image associated with the used device also has a positive effect for the company.

Significant differences are also evident in the project communication. While case Alpha was triggered and supported by top-management, case Beta was triggered bottom-up and then turned down by top-management. Also, the funding was different. While Alpha is partly funded with budget provided by the sales department, Beta was not funded by an operating department. Table 3 gives a structured comparison of the cases Alpha and Beta.

## 5 Discussion and Conclusion

By comparing the two cases, it is evident that each case started and evolved differently. The important role of top-management as proposed by Wilson et al. (2002) is confirmed by the fact that one project had the support of the top-management since the beginning and evolved as an ongoing and so-called “successful” project, while the other was started bottom-up and did not receive top-management support, being turned down after the pilot phase. This indicates that the common guidelines on CRM implementation (Wilson et al. 2002) and IT project management in general are still valid and capable of supporting a successful media-tablet-based CRM implementation. However, the results reveal that both projects achieved some relative advantages in all researched areas. For case Alpha, the evidence shows that all internal stakeholders agreed that the application creates business value for the company. For case Beta, this agreement among the internal stakeholders was not achieved. One influencing factor could be that while Beta was set-up as an innovation project without a predefined business case, Alpha was executed as a project requested by the sales department.

With regard to our research question, we propose that the type of project – an innovation project or one driven by an operating department – is an influencing factor. In this study, the operating-department-driven project turned out to be more successful than the one labeled as innovation project. We further propose that a clear communication of the relative advantage created by the media-tablet application compared to its predecessor is an important factor in the successful adoption of this new technology. However, we find no support for the proposition that a simple replacement of the existing CRM front office application with a media-tablet-based application would not be sufficient. Case Alpha indicates that even the functionality of the application was not extended, compared to the existing CRM application, the fact that this functionality is now available during the meeting, led to advantages for the sales force channel and the value creation process. Therefore, the media-tablet enabled the existing process to benefit from informational and electronic added-value. Nevertheless, we need to acknowledge that this advantage may be achieved only due to the fact that company Alpha has a guideline not to use laptop computers during client meetings. This circumstance limits the generalizability of the conclusion and needs further research.

However, both cases reveal that media-tablets are capable to create benefits that are beyond an increased mobility. The achieved convenience of the computer support leads to advantages in the value creation for the company and for the customer by improving both, the front office application and the sales forces channel in general. Concerning the front office application, the media-tablet support led to efficiency gains by decreasing media breaks and creating time savings for the customer. Additionally, the sales force channel gains benefits due to an increased productivity and advancements in information quality. Based on this conclusion, we propose an additional advantage of media-tablets besides mobile added-value, which has so far not been addressed in current research (Pitt et al. 2011b), namely the integrativeness of computer devices in conversational situations, which is based on the statement that media-tablets are better suited for use during meetings than laptop computers. Interestingly, this aspect is discussed in one of the original articles on ubiquitous computing, but has been not researched further. Besides the omnipresence of IT, ubiquity also describes the disappearance

of the distraction created by the PC-era computers (Weiser 1991). Marc Weiser formulated this as follows: “Ubiquitous computing is the method of enhancing computer use by making many computers available throughout the physical environment, but making them effectively invisible to the user. [...] the computer today is isolated and isolating from the overall situation, and fails to get out of the way of the work. In other words, rather than being a tool through which we work, and so disappears from our awareness, the computer too often remains the focus of attention” (Weiser 1993). This aspect seems to be influencing the value creation of media-tablets, but has so far been underresearched and is not even well defined. Articles dedicated to defining the characteristics and benefits of media-tablets compared to other mobile devices (Pitt et al. 2011b) also neglect this aspect. We therefore propose that future research define this aspect of the integrativeness of certain computer devices into conversational situations. A better understanding of this issue would be especially important for our understanding of all dimensions of value creation by existing and upcoming computer devices.

The study also has some managerial implications. Many corporations seem to have difficulty understanding the benefits of a media-tablet, compared to a laptop computer or a smartphone (Pitt et al. 2011b). A better understanding of this aspect of situational integrativeness would allow practitioners to identify situations and activities where the employment of media-tablets would raise value. In a first step, we therefore propose that practitioners identify situations or activities which are not computer-supported and evaluate whether a media-tablet application could fill this gap. To evaluate these situations, practitioners should not only consider the portability of the device but, also the situational integrativeness. Furthermore, we also recommend that practitioners be aware that an appropriate communication of the relative advantages of a media-tablet application to all stakeholders is an important factor for successful adoption. The results further indicate that projects, which are driven by an operating department and are based on a business case, could have an edge compared to innovation projects, which do not have a well-defined business case.

However, these recommendations are subject to several limitations. First, our research includes only two cases, which constrains the generalizability of the findings. The recommendations are based on unvalidated hypotheses, which need to be tested in further research, as is usual in exploratory research designs. Second, the data gathered from the user survey in case Beta is potentially positively biased, as the project was triggered by the request of the sales agents, so they may have had a personal interest in indicating high satisfaction with the application. In addition, the user survey of case Beta covers only six respondents. Third, as Beta turned down the project and all employees associated with the project left the company, the information gathered in 2012 is limited and may not be complete. Due to the fact that the project is internally considered “unsuccessful”, the willingness of Beta to communicate about the project has been limited since 2012.

## References

- Akella, J., Brown, B., Gilbert, G., and Wong, L. (2012). Mobility disruption: A CIO perspective. McKinsey on Business Technology, 27 (Fall), 32–35.
- Apple Inc. (2011). iPad in Business - The Benetton Group Sales Team. Retrieved from <http://www.apple.com/ipad/business/profiles/benetton>.
- Cearley, D. W., and Claunch, C. 2012. The Top 10 Technology Trends for 2012. Gartner Report G00230213, 1–11.
- Cosgrove, T. (2011). Managing the Next Generation of Client Computing Security. Gartner Report G00210498, 1–8.
- Delone, W. H., and McLean, E. R. (1992). Information systems success: the quest for the dependent variable. Information systems research, 3 (1), 60–95.
- Delone, W. H., and McLean, E. R. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. Journal of Management Information Systems, 19 (4), 9–30.
- Desisto, R. P. (2011). iPads: Customer-Facing Selling Will Drive iPad Use for Sales What You Need to Know. Gartner Report G00213136, 1–5.

- Dunne, M. (2011). iPads: Their Impact on the Top Six Sales Processes. Gartner Report G00213539, 1–7.
- Faulbaum, F., Prüfer, P., and Rexroth, M. (2009). Was ist eine gute Frage?: Die systematische Evaluation der Fragenqualität (German Edition). VS Verlag für Sozialwissenschaften, Wiesbaden.
- Frost & Sullivan. (2011a). Brazilian Enterprise Tablets Market: Successful Business Case Studies. Frost & Sullivan Report 9855-72, 1–37.
- Frost & Sullivan. (2011b). Six Technology Trends that will Change Your Life. Frost & Sullivan Report 9847-64, 1–8.
- Gebauer, J., and 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.
- Gebauer, J., Shaw, M. J., and Gribbins, M. L. (2010). Task-technology fit for mobile information systems. *Journal of Information Technology* 25 (3), 259–272.
- Kadyte, V. (2004). Uncovering the Potential Benefits of Mobile Technology in a Business Relationship Context: A Case Study. In *Proceedings of the 12th ECIS*, Turku, Finland.
- Kontzer, T. (2012). Managing Mobility in the Enterprise. *CIO Insight* (121), 14–17.
- Lee, K. C., and Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective. *Interacting with Computers* 21 (5-6), 385–392.
- Mayer, H. O. (2009). Interview und schriftliche Befragung: Entwicklung, Durchführung und Auswertung. 5th Edition. Oldenbourg Wissenschaftsverlag, Oldenburg.
- Nelson, S. D., and Willis, D. A. (2011). Enterprise Applications for Tablets. Gartner Report G00214074, 1–4.
- Payne, A., and Frow, P. (2005). A Strategic Framework for Customer Relationship Management. *Journal of Marketing* 69 (October), 167–176.
- Petter, S., DeLone, W., and McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems* 17 (3), 236–263.
- Pitt, L., Berthon, P., and Robson, K. (2011a). Tablet Business Applications. The Society for Information Management's Advanced Practices Council (March), 1–20.
- Pitt, L., Berthon, P., and Robson, K. (2011b). Deciding when to use tablets for business applications. *MIS Quarterly Executive* 10 (3), 133–139.
- Pitt, L. F., Parent, M., Junglas, I., Chan, A., and Spyropoulou, S. (2010). Integrating the smartphone into a sound environmental information systems strategy: Principles, practices and a research agenda. *The Journal of Strategic Information Systems* 20 (1), 37–27.
- Sheng, H., Nah, F. F.-H., and Siau, K. (2005). Strategic implications of mobile technology: A case study using Value-Focused Thinking. *The Journal of Strategic Information Systems* 14 (3), 269–290.
- Sybase Inc. (2011). Enterprise Mobility Guide 2011. Retrieved from [www.sybase.com/mobilityguide](http://www.sybase.com/mobilityguide).
- Verhoef, P. C. (2003). Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development. *Journal of Marketing* 67 (October), 30–45.
- Watson, R. T., Boudreau, M.-C., Chen, A. J., and Sepulveda, H. H. (2011). Green projects: An information drives analysis of four cases. *The Journal of Strategic Information Systems* 20 (1), 55–62.
- Weiser, M. (1991). The computer for the 21st century. *Scientific American* 3 (3), 94–104.
- Weiser, M. (1993). Some computer science issues in ubiquitous computing. *Communications of the ACM* 36 (7), 75–84.
- Willis, D. A. (2011). iPad and Beyond: The Media Tablet in Business. Gartner Report G00211735, 1–7.
- Wilson, H., Daniel, E., and McDonald, M. (2002). Factors for Success in Customer Relationship Management (CRM) Systems. *Journal of Marketing Management* 18 (1-2), 193–219.
- Yin, R. K. (2003). Case Study Research: Design and Methods. 4th Edition. Sage Publications, Thousand Oaks, USA.