

Mobile Claims Management

Practical Implications and Recommendations

I-Lab Whitepaper

KEYWORDS

Mobile Technology, Innovation, Claims Management, Motor Insurance, Business Value of IT

Table of Contents

Executive Summary	3
1 Introduction	4
2 The Potential of Mobile Technology in Claims Management	6
3 Mobile Claims Assistant: A Technical Integration between Smartphones and Claims Management Enterprise Systems.....	8
4 Practical Implications and Recommendations	11
4.1 Business Process Perspective	11
4.2 Technology Perspective	12
4.3 Customer Perspective	13
4.4 Business Value Perspective	14
5 Conclusions and Outlook	16
References	18
About I-Lab	20

Executive Summary

In most developed countries motor insurers face limited growth opportunities due to market saturation and high competitive pressure. To improve their market performance, motor insurers strive for competitive differentiation through value-added customer services and try to decrease loss adjustment expenses and incurred losses. While studies estimate a 10-15% cost savings potential in claims management, this untapped potential is difficult to address. Reasons include late, incomplete, and inaccurate loss reports after car accidents, time-consuming claim investigations, and the insufficient integration of business partners in the claims management process. While insurers are concerned with cost savings and process efficiency, customers lack assistance when it comes to car accidents. Under these exceptional circumstances, customers require immediate assistance and support during the claims process. Against this background, the application of mobile technology and in particular smartphones can address the outlined challenges of insurance carriers and the needs of their customers.

The paper at hand is based on our research on mobile claims management during the last three years and focuses on practical implications and recommendations. Our research resulted in various publications in academic journals and practitioner-oriented outlets. The most comprehensive overview can be found in the dissertation 'Mobile Claims Management: IT-Based Innovation in Motor Insurance' [1].

The findings indicate that the use of mobile apps in the insurance industry is still in an early phase and existing solutions are mostly limited to stand-alone apps that assist customers with the loss report after a car accident. Results from expert interviews indicate that the integration between smartphones and insurance enterprise systems will be a key enabler for cost savings in the medium term. Against this background, we developed the 'Mobile Claims Assistant' solution, which integrates smartphones with commercial claims management enterprise systems.

Results from our quantitative customer survey indicate customers' high intention to use smartphones in the aftermath of a car accident, while results from a qualitative user study show a statistically significant increase of customers' trust in the insurer after using the 'Mobile Claims Assistant'. Finally, a key contribution of our research concerns practical implications and recommendations along the four different perspectives of business processes, technology, customers, and business value.

1 Introduction

Motor insurance is the class of business with the largest premium volume within property and casualty insurance. However, in most developed countries growth opportunities are limited due to market saturation and the low growth rates of the underlying markets. At the same time, new competitors from related industries (e.g., car manufacturers and automobile clubs) entered the market and put pressure on motor insurers. Against this background, insurers are searching for ways to gain market shares and to improve their financial performance. The competitive pressure leaves little room for price differentiation and makes large-scale premium increases difficult to achieve.

A first approach to improve insurers' market position is competitive differentiation by means of value-added customer services. A second approach is to improve the combined ratio by decreasing loss adjustment expenses and incurred losses. However, there are several reasons why cost savings are difficult to achieve. They include late, incomplete, and inaccurate loss reports after car accidents, time-consuming claim investigations, and the insufficient integration of business partners such as repair shops in the claims management process [2]. Early and more detailed information about an insurance claim could enable the insurer to pro-actively manage the process and shorten the average claim life cycle from the first notice of loss to the closure of the claim. Based on timely information and active process management, insurers can benefit from an increased process transparency while loss adjustment expenses can be decreased. In addition, an early notification of the insurer allows for the integration of business partners to settle the claim and enables insurance companies to decrease incurred losses [3-5].

While insurance companies strive to decrease costs by streamlining their claims management processes, customers lack adequate assistance when it comes to an insurance claim – the 'moment of truth' in claims management. In such unpleasant and emotionally stressful situations, customers require both immediate assistance and support with the submission of the loss report. As consumer research of Axa UK amongst 2,000 motorists showed, only 34% of the respondents claimed to know exactly what to do in case of an accident and just 57% would remember to take photos of the accident scene [6]. From a customer perspective, mobile phones are ubiquitously available and technology affinity is steadily increasing. While the direct contact to a human counterpart is a native need after a car accident, the mobile phone has emerged as the most dominant mediation device in safety-critical situations.

Qualitative interview data as well as quantitative studies show that peoples' perception of mobile phones is to never be alone in emergencies [7].

Against this background, the application of mobile technology in claims management can address the outlined needs of insurance customers as well as the challenges of insurance carriers. Accordingly, mobile technology can support customers in the aftermath of car accidents to quickly submit a structured loss report and to benefit from faster access to assistance services. From an insurer's point of view, a mobile solution that supports customers during the claims management process can address the outlined cost savings potential and can be offered as a value-added customer service. In addition, the mobile phone can be considered as a new communication channel that increases the interaction frequency between insurance carriers and their customers [8].

The remainder of this paper is organized as follows. In Chapter 2, we discuss the potential of mobile technology in claims management. The chapter is structured along the key findings from several pre-studies that motivated the decision to focus on mobile claims management as a research topic. Based on the findings in Chapter 2, we developed the 'Mobile Claims Assistant' solution, which is presented in Chapter 3. At the core of this paper, we discuss practical implications and recommendations for insurers in Chapter 4. The chapter is structured along the four different perspectives of *business processes*, *technology*, *customers*, and *business value* and the key findings are condensed to a list of recommendations. The paper concludes with an outlook on future research in Chapter 5.

2 The Potential of Mobile Technology in Claims Management

The decision to focus our research on the application of mobile technology in claims management was based on several pre-studies [9]. As a starting point, we executed a literature review and conducted workshops with insurance and technology experts to identify the set of 21 mobile insurance apps outlined in Figure 1. Each app can be assigned to the core insurance functions of marketing / sales, policy administration / servicing, and claims management. As a next step, we conducted seven exploratory focus groups with insurers on the one hand and a quantitative customer survey with 2,000 insurance customers from Germany, Austria, and Switzerland on the other hand. A key finding was that both insurers and customers favored service-centered apps as opposed to marketing and sales apps. Especially high ratings were measured for mobile apps that offer support in claim situations, which included [10]:

- Emergency button
- First aid guide for emergency situations
- Mobile first notice of loss
- Information on the status of a claim

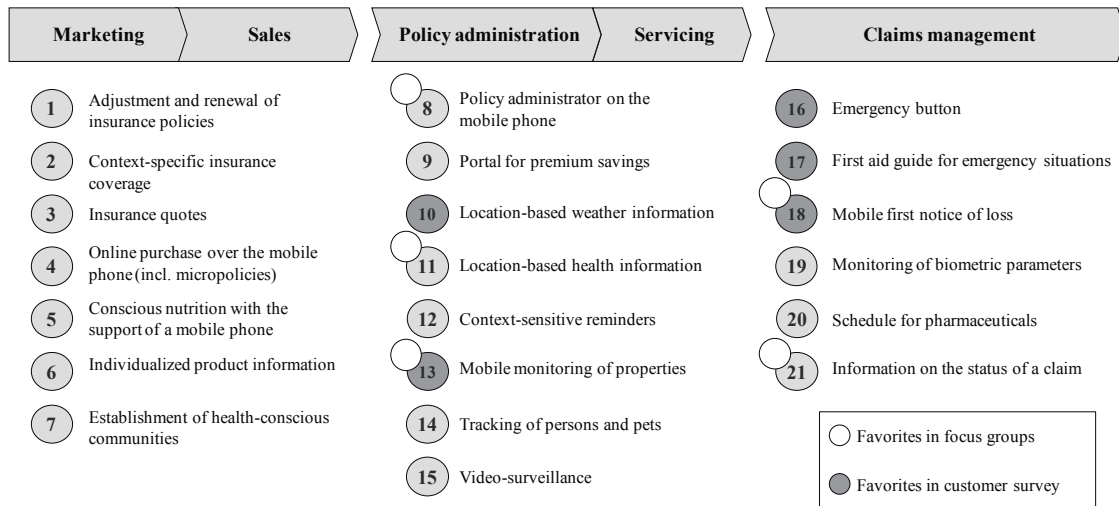


Figure 1 Categorization of Smartphone Apps in the Insurance Industry

Consequently, we conducted a market survey of 'mobile claims apps', i.e. mobile apps that support customers after car accidents [11]. Starting with US insurer Nationwide in April 2009, an increasing number of motor insurers launched mobile apps and by now almost every major motor insurer offers a corresponding mobile app. The most common functions are the direct call of an insurance agent (94% of all apps), the step-

by-step loss report (86%), the automatic localization (78%), and the possibility to attach photos of the accident scene (67%). A consistent finding across all offered solutions is the lack of integration between smartphones and claims management enterprise systems.

A complementary literature review revealed the large cost savings potential of business process innovations in claims management [3,4,12]. As an example, Accenture analyzed more than 12,000 settled claims and interviewed over 5,000 claim personnel in North America and Europe in order to analyze the business potential of an industrialization of claims management business processes. Based on a combination of closed-file reviews and expert interviews, the study findings indicate a cost savings potential of 10-15% [5]. In addition, our hypotheses that the integration between smartphones and claims management enterprise systems is a prerequisite to address the denoted cost savings potential of mobile claims apps was confirmed by a series of 13 interviews with insurance experts from Austria, Germany, Switzerland, and the US [13].

In summary, our studies showed that the most promising and feasible application areas for mobile technology in the insurance industry are claims management and related assistance services. On the one hand, corresponding apps address a customer need, while on the other hand the integration with claims management enterprise systems can leverage cost savings potential and contributes to operational excellence. However, the findings from our market survey also showed that none of the existent solutions features a technical integration between smartphones and commercial claims management enterprise systems, which is considered a key driver for cost savings and operational excellence. We therefore developed the 'Mobile Claims Assistant' solution, which is discussed in detail in the following chapter.

3 Mobile Claims Assistant: A Technical Integration between Smartphones and Claims Management Enterprise Systems

All mobile apps analyzed during the market survey assist insurance customers in the aftermath of a car accident. This includes support with the loss report as well as value-added assistance services such as the navigation to the closest repair shop. However, as outlined before solutions currently available on the market lack a technical integration between smartphones and claims management enterprise systems. This media break prevents insurers from leveraging the full potential of mobile apps in terms of process efficiency, data accuracy, and business partner integration [14]. To put our findings to practice, we developed a dedicated integration architecture that connects smartphones with claims management enterprise systems. As shown in the resulting application scenario in Figure 2, a smartphone is used to submit a loss report to the claims management enterprise system via an integration architecture.

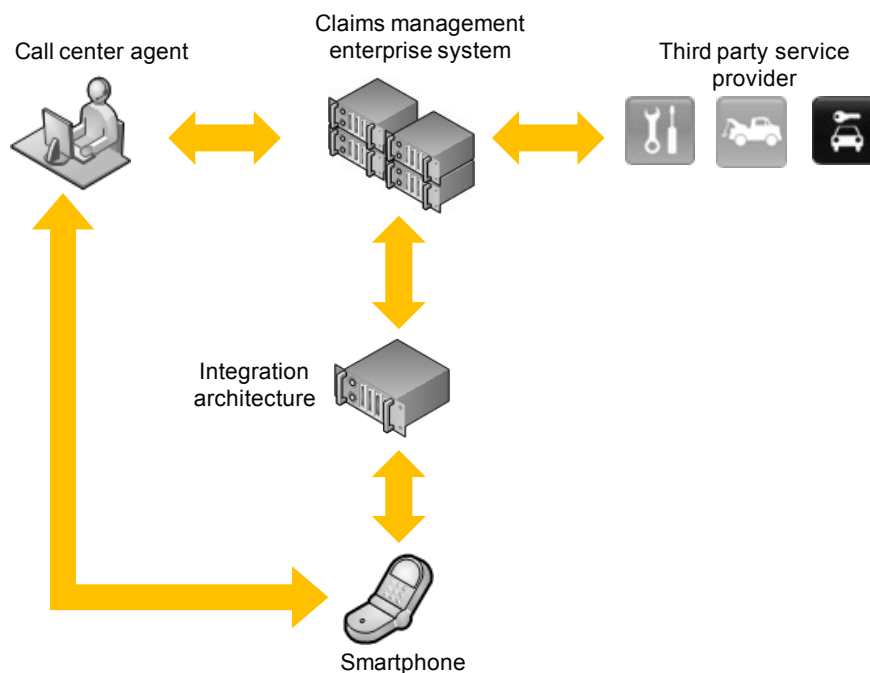


Figure 2 Application Scenario

In urgent cases, customers can immediately place an emergency call and submit their current position as well as personal data. In addition, the loss report can be enriched with information such as pictures of the accident scene. After the claim was submitted to the claims management enterprise system, the insurance company offers additional

location-based services to the customer. For example, the customer can request a tow truck or receive directions to the closest authorized repair shop. The app also provides helpful information like a customer's eligibility for a rental car as well as the arrival time of a requested tow truck. From the insurer perspective, claim personnel can review the transmitted information (e.g., pictures of the accident scene or crash sensor data) in the claims management enterprise system. The claim file also contains information about the business partners that are associated with the claim and offer the various third party services.

The solution was developed for three different smartphone platforms and mobile apps were implemented for HTC's G1, the HTC Magic, the Nexus One (all based on the Google Android operating system), the Blackberry Storm 9500, and the iPhone. For our prototypical implementation, we connected the smartphones with the *SAP Claims Management* solution as indicated in Figure 3.

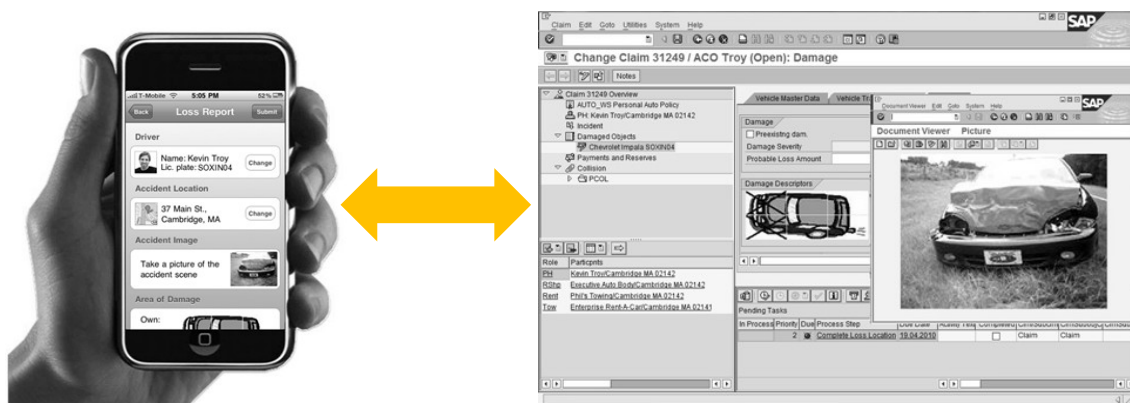


Figure 3 Smartphone App and SAP Claims Management Solution

In order to connect the various mobile devices with the commercial SAP system, we developed a service-oriented integration architecture (see Figure 4). From a technology perspective, the architecture consists of a set of Enterprise Java Beans components, which are deployed on an SAP NetWeaver web application server and offer their functionality as Web Services.

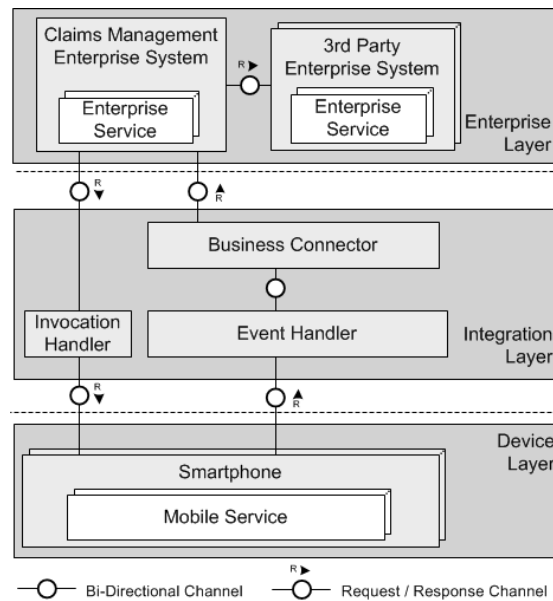


Figure 4 Service-Oriented Integration Architecture

The deployment of Web Service technology at all architectural layers allows for an easy integration with Enterprise Services and follows recent efforts to solve interoperability issues by using Web Services at the device layer [15,16]. As visualized in the FMC Block Diagram in Figure 5, the three components of the architecture that reside at the integration layer connect the device layer with the enterprise layer. The *Event Handler* component implements the OASIS Web Services Notification (WSN) standard [17] to disseminate device-level events and decouples the device layer from the enterprise layer. The *Business Connector* component enables a uniform access to enterprise systems deployed at the enterprise layer. Finally, the *Invocation Handler* component allows claims management enterprise systems to invoke mobile services offered by smartphones.

4 Practical Implications and Recommendations

Based on our studies of mobile claims management during the last three years, practical implications and recommendations are discussed along four different perspectives: *business processes*, *technology*, *customers*, and *business value*. The key findings are condensed to a list of recommendations for motor insurers that plan to leverage mobile claims management. As the recommendations are discussed from an external perspective and do not consider the specific strengths and weaknesses of a given insurance company, the findings are general in nature and can be broadly applied to develop or advance a mobile claims management strategy and solution offering.

4.1 Business Process Perspective

As part of our research, we conducted a business process analysis, which provided insurers with insights about the pain points in claims management business processes that can be addressed by mobile technology. The analysis identified the pain points with the largest cost savings potential and fostered an understanding of the different types of effects of mobile technology on the claims management value chain.

Recommendation 1: Leverage Mobile Claims Apps to Integrate Business Partners

Insurers should strive to leverage mobile claims apps to integrate business partners such as repair shops, towing services, and rental car companies in the claims management process. By providing customers with timely information about assistance service providers, insurers can leverage mobile claims apps to create a comprehensive end-to-end service experience for their customers. This can in turn increase the level of process automation and thus allows decreasing loss adjustment expenses.

At the same time, the early involvement in the claims management process enables the selection of suitable business partners, which can lead to decreased incurred losses. However, the selection of suitable business partners requires cross-company business processes between insurers and their respective business partners. As an example, automatically arranging an appointment at a suitable repair shop and providing the information on customers' mobile devices requires an enterprise system at the repair shop that provides the necessary information. When it comes to business partner networks, another challenge concerns the integration of partners in fragmented service industries. While insurers can generate economies of scale when cooperating with large networks of repair shops, the situation is more complex when it comes to the

collaboration with towing services. The landscape of companies providing towing services is even more fragmented than in the area of repair shops and thus insurers need to cooperate with many local business partners that run heterogeneous enterprise systems, if any. The situation is similar when it comes to the cooperation between insurers and rental car companies. Consequently, insurers should leverage mobile claims apps to integrate business partners, but at same time need to invest in the integration of cross-company business processes.

4.2 Technology Perspective

From a technology perspective, the ‘Mobile Claims Assistant’ exemplifies the integration between smartphones and claims management enterprise systems that is an enabler for cost savings. In terms of backend connectivity the solution goes beyond the functional capabilities of mobile claims apps currently offered on the market.

Recommendation 2: Integrate Smartphones with Claims Management Enterprise Systems to Decrease Costs

Our business process analysis led to the hypothesis that the integration between smartphones and claims management enterprise systems is an enabler for cost savings. As a next step, the hypothesis was confirmed by the interviewed experts, who expect that mobile claims management can lead to medium term cost savings, given a sufficient technology acceptance by customers and the outlined technical integration. In order to prepare their claims management solutions for the integration of mobile devices, insurers need to develop appropriate processes and interfaces. Based on open interfaces and the required plausibility checks, tomorrow’s mobile claims apps could submit a loss report more efficiently and without media breaks to a claims management solution. From a technology perspective, the enterprise integration of mobile devices can enable the complete automation of dedicated incident types in the sense of a customer self-service.

Recommendation 3: Support Heterogeneous Mobile Platforms to Reach More Customers

Most mobile claims apps are offered for iPhones with a few exceptions that are available for Google Android and BlackBerry smartphones as well. To reach more customers, insurers need to support a broader range of mobile platforms including Blackberry OS, Google Android, Symbian, Windows Mobile, etc. Especially Android-based smartphones quickly gain market share and cannot be neglected any more. The migration to additional operating systems is a growth opportunity that can increase the user base of an insurer’s mobile offering. However, app development and maintenance

is not a core competency of an insurance company. In order to move from a marketing-centric app designed for one platform only to a mobile strategy supporting all major mobile platforms, insurers will most likely need to cooperate with a third party software company that develops apps for different platforms based on requirements defined by the insurer.

4.3 Customer Perspective

After developing the 'Mobile Claims Assistant', we conducted a qualitative user study where 25 customers that recently experienced a car accident evaluated the solution. A key goal of the evaluation was to understand customers' demand for post-accident services and if they were willing to report an insurance claim using a smartphone in the first place. In addition, the user study also aimed at clarifying to which extent a mobile app and the associated value-added services contribute to a positive customer experience, thus generating trust and goodwill. The findings from this study and the earlier quantitative customer survey suggest that customers feel prepared to submit a loss report using their smartphones. However, the user study also showed that customers miss the personal contact to an insurance expert. This implies that insurers need to carefully design the customer interaction when moving forward with the development of mobile claims apps.

Recommendation 4: Use Service Bundling to Increase Interaction Frequency

The development of a mobile claims app can be considered as the starting point for a more advanced mobile service offering. Today's mobile claims apps already bundle a set of services targeted to assist customers after car accidents. Examples include a rental car finder, a repair shop finder, the ability to request a tow truck or a taxi, and a gas station finder. By bundling a variety of services, insurers can create a personal assistance solution, which also covers aspects beyond car accidents. In fact, insurers could combine many of the available stand-alone assistance apps offered by independent software companies and thus increase interaction frequency and service range. Examples include weather apps, mobility apps, and healthcare apps. The key to leverage this opportunity is to find a reasonable common denominator for all bundled services, because otherwise the app is perceived as a random collection of unrelated services. Service bundling can be used to shape the brand image and to differentiate the offering from competitive apps. Finally, it is important to use service bundling to increase the level of customer engagement. The combination of high-frequency services with low-frequency claims and assistance services ensures that the app is used more often. Consequently, customers are exposed to the insurer's brand and experience the app in a useful context.

Recommendation 5: Apply Mobile Apps to Improve Brand Perception and to Build Trust

As the findings of our user study show, mobile claims apps play an important role to improve brand perception and to build trust. In the past, customers usually got in touch with their insurance carrier at most twice: when closing the contract and in case of an insurance claim. Based on mobile apps that focus on useful services, insurers can create frequent points of interaction with their customers and emotionalize the relationship with customers. This unprecedented possibility to shape customer contacts helps building trust in the insurer and increases customer loyalty. Ultimately, apps can become part of a 'new media marketing mix' along with social networks. Against this background, insurers can decide to shift parts of their marketing budget from traditional TV and print campaigns to the development of apps. Compared to the 'one-time exposure' of a TV or print ad, apps enable insurers to be create a presence on customers' smartphones and to offer value-added services. For insurers it is crucial to bundle a set of useful services within their app, because as a customer survey showed, a positive service experience is more likely to generate trust than sales functionality. Insurers already spend money on the development of mobile apps and as the conducted interviews revealed, experts expect that apps will gain in importance in future market mix decisions.

4.4 Business Value Perspective

A key result of our research on the business value of mobile claims management is the development of a business case calculator. The spreadsheet model can be used to calculate investment valuation criteria such as the net present value or the internal rate of return of an investment in a mobile claims management solution. Assumptions about customers' technology acceptance, smartphone share, and cost savings potential can be specified as input parameters, which ensure the flexibility of the business case calculator.

Recommendation 6: Align Process Innovations, Technology Investments, and Customer Services in Mobile Claims Management

As the business case calculator shows, the generation of business value through mobile claims management depends on the interplay of influencing factors such as process innovations, technology investments, and enhanced customer services. To realize the potential cost savings and to generate business value from mobile claims management, insurers need to ensure that the underlying processes allow for the integration of business partners, that the technology platform enables the integration of mobile devices and claims management enterprise systems, and that the bundling of

value-added services leads to a high adoption rate of mobile claims apps. In summary, the value creation of mobile claims management depends on the conjoint implementation of all three factors and fails if one factor is neglected.

5 Conclusions and Outlook

The paper at hand is based on our research on mobile claims management during the last three years and focuses on practical implications and recommendations. Our findings indicate that the use of mobile apps in the insurance industry is still in an early phase and existing solutions are mostly limited to stand-alone apps that assist customers with the loss report after a car accident. Consequently, mobile strategies, if existent, range from marketing-centric apps to first steps towards a more efficient processing of customers' digital loss reports and an integration of business partners. Results from expert interviews indicate that the integration between smartphones and insurance enterprise systems will be a key enabler for cost savings in the medium term. However, technology investments need to be aligned with process innovations and a positive customer experience. The resulting technology adoption along with the increasing smartphone share are prerequisites for a successful mobile strategy.

Since customers' technology adoption is a key success factor when introducing mobile claims management, the previous panel-based studies should be complemented by field studies in the future. So far field studies of mobile claims management were not feasible, because few customers recently used a mobile claims app to report an insurance claim. However, based on the increasing market penetration of mobile claims apps, field studies will become viable in the near future. Field studies will also show which assistance services are suitable to positively emotionalize the loss event. In addition, it will reveal if customers are ultimately able to report a car accident via a mobile claims app, given the exceptional circumstances. Finally, insurers will need to focus on the suitability of their mobile claims apps for everyday usage. Given the low frequency of loss events, the bundling with helpful and frequently used assistance services is a key success factor for the market penetration of mobile claims apps.

A second area of future research concerns the technical integration between customers' smartphones and insurers' enterprise systems, which should be extended towards customer relationship management (CRM) and business intelligence (BI) systems. Based on the integration with a commercial CRM system, insurers can collect and analyze customers' satisfaction with the claims management process as well as their rating of services provided by business partners such as repair shops. Upon the next customer contact the information is available to customer service representatives and sales agents and allows them to improve the communication with customers. Having a customer's assessment of the previous claims experience at hand enables field staff to prepare a more personalized sales pitch and the information can be used to engage in the conversation.

As a next step the collected data enables well-grounded decisions about business partner relationships. Since customers can evaluate services provided by all involved business partners via the 'Mobile Claims Assistant', an insurer can leverage this data to develop an understanding of customer satisfaction at the level of individual business partners. The insurer can iterate across all customer evaluations stored in the CRM system and aggregate the data at a company-level. Applying business analytics tools and combining the ratings with location information enables an insurer to understand which business partners perform particularly well / poorly in certain regions. As an example, it becomes possible to derive that a rental car business partner in a certain area receives particularly bad customer ratings and that the collaboration should therefore be discontinued.

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About I-Lab

I-Lab (Insurance Lab) is a joint initiative of the ETH Zürich, the University of St. Gallen, and industry partners. Research topics at the I-Lab are located within the triangle of “technology – innovation – insurance.” In close cooperation with industry partners, we conduct studies, build demonstrators as well as prototypes, and develop business ideas and business models. We focus technologically on the Internet of Things and mobile services on cellular phones. The I-Lab is headed by Lukas Ackermann and supervised by Elgar Fleisch, Professor for Information and Technology Management at the ETH Zürich and the University of St. Gallen, and Walter Ackermann, Director of the Institute of Insurance Economics at the University of St. Gallen.