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An applied e-business approach for reinsurance services

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Abstract *This article reports a practical application of intelligence gathering and strategic planning online. Firms in the reinsurance industry (defined in the text) face changed market realities and new challenges. As they attempt to chart new strategies and apply innovative business models in response to the changing marketplace, information technology can make a significant contribution. Internet-based e-business strategies and related business models have proven utility, which has greatly benefited many organizations in the service sector. The question is not whether e-business-based strategic business models will work for firms in this industry, but how to make them work effectively. The field study reported here proposes and tests a practical and systematic framework, finding it to be highly effective and applicable.*

Introduction

The reinsurance industry consists of firms which manage and redistribute risk by acting as insurers of insurers. The combination of inefficient business models with frequent and severe catastrophes, such as hurricanes and airline crashes, has led to a crisis in the industry in recent years. In this context, customers are dealing with higher premiums while reinsurers are suffering from shrinking margins. The challenges faced by reinsurers are further exacerbated by the blurring of the traditional boundaries between reinsurers, insurers and capital markets. This fuzziness is attributed to three major marketplace realities. First, insurers are growing in size and becoming more diversified, and are thus able to carry more risk themselves. Second, reinsurers are increasingly serving corporate clients, who previously had been exclusively customers of insurers. Third, the vast capital markets are trying to reduce their excess investment in insurance and reinsurance markets. As a result of these new challenging realities, reinsurers are facing increased competition, lower underwriting premiums, and a general loss of market share.

Based on these new marketplace realities and the challenges they dictate, different business models are necessary if the firms in the industry are to survive and thrive. In this context, these firms must re-examine their value-added supply chain and find new ways to add value in order to overcome the barriers and inefficiencies which characterized their traditional business approach. In the process, the relationships between the insurance companies, reinsurance companies, and those insured must be redefined. An innovative business model which is marketplace-driven, customer-focused and information-technology based may prove to be a necessary step towards curing the strategic and operational ills of reinsurance firms.

The authors suggest that an e-business model which integrates the different facets of web-based internet technologies has the potential for dramatically improving the way that the reinsurance industry conducts its business. Their objective is to present a

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conceptual framework to guide the introduction of such e-business based model in the reinsurance industry. The framework is illustrated using a field study. A practical approach is offered to facilitate the effective implementation of the advocated model.

Background

The reinsurance industry consists of insurance companies which manage and redistribute risk by acting as insurers of insurers. The major four European firms, in terms of reinsurance premiums written, include Munich Re Group, Swiss Re Group, Berkshire Hathaway Re Group and ERC Group.

Prior to the nineteenth century, insurers were large enough to cover the risks of the pre-industrial world economies. However, the Industrial Revolution was a major factor in insurers being thereafter incapable of taking on all risks, brought about by rising value concentration. This led directly to the creation of reinsurance companies, acting as insurers of the excess risks of insurers. Thus, the relationship between reinsurers and insurers was well defined with clearly established boundaries.

These traditional boundaries between reinsurers, insurers and capital markets began to blur at the end of the twentieth century due to new dynamics of the marketplace, in terms of both scale and scope. The insurance industry had become inefficient, due to the large number of intermediaries such as agents and brokers. The business model used in this industry was unfavorable to clients and reinsurers. High costs, lack of responsiveness, inflexibility and high information loss were behind the lack of ability of this business model to perform effectively in today's marketplace (Swiss Re, 1999a). As a result, customers had to pay higher premiums while reinsurers suffered from shrinking margins. The subject of the field study to be reported here, ERC Frankona, suffered from the same inefficiency and ineffectiveness as other forms in the industry, and resolved to build a new business model.

The relevant literature

The explosive evolution and revolution of the internet and related technologies gave birth to the term "e-commerce" and later made "e-business" a familiar term. Today, though both terms are often used in the same context, a clear distinction between the two is becoming widely acceptable. According to GE Capital (1999) and Siemens/ICN (1999, p. 3), e-commerce refers only to "the actual transfer or ordering of products or services in exchange for cash". In addition, "e-commerce is only conducted on the Internet" (GE Capital, 1999; Siemens/ICN, 1999, p. 3). The rapid advancements in technical capabilities of the internet, however, led to the evolution of e-commerce to e-business. In this context, GE Capital (1999) views e-business as "the extension of electronic business processes to customers and the linking between customer front-end systems with [. . .] back-end systems". Thus, e-business is a broader term which encompasses e-commerce and other electronic business related activities.

The differences between e-commerce and e-business notwithstanding, the application of internet technologies led to "improved communication and the exploitation of the Internet's marketing and branding capabilities" (Siemens/ICN, 1999, p. 3). While specific methods for using internet-based technologies vary from industry to industry, the benefits are almost universal (Golem Network News, 1999; Boeing, 2000; Spanjaard, 2000). In addition, it is important to note that advances in technology now permit internet access via wireless systems such as mobile phones especially designed for specific tasks and applications.

One tool for viewing the strategic impact of the lower transaction cost offered by the Internet for e-business is the Boston Consulting Group's model that trades off "richness" and "reach". In this context, "richness" refers to the bandwidth of the system, level of interaction with the customer and amount of information exchanged, while "reach" refers to the extent to which each of the modes in the system are linked together (Boston Consulting Group, 1999b).

An important impact of internet-based technologies on the business model is the network effect, first identified by the founder of 3Com Corp. (Boston.com, 2000). This describes the situation in which operating costs grow only linearly with the number of connections, while the network's value increases exponentially. Since the internet is accessible by millions of people at low transaction costs, Swiss Re (1999b, p. 8) considers it "a ubiquitous piece of client software and a universal infrastructure with great attraction".

Boston Consulting Group (1999a) has studied e-business growth in various industries in Germany. The results are shown in Figure 1. Insurances are expected to grow at a rate of 30 percent, while auctions are expected to have a growth of 1,670 percent. The potential impact of such growth on the German economy is huge. For example, the data in Figure 1 indicate a market growth in excess of (in pre-€ terms) 2,200 million DM, generated though the use of web-based technologies. There is little doubt that the insurance industry is in the early stages of capitalizing on this exciting potential.

To do so by formulating and implementing an effective new business model that is e-business based, decision makers in the reinsurance industry are in need of a systematic, strategic business model, capable of considering all relevant operational details, and a practical framework to guide its implementation. The remainder of this article is devoted to the developing such an approach and illustrating its utility.

Category	Growth '99 vs. '98 in Germany	Est. turnover '99 (Mio. DM)	Example (by the author)
Auctions	1,670%	320	eBay
Automobiles	600%	10	Audi
CDs/Videos/Tickets	210%	70	CDNow
Travel	210%	730	British Airways
Books	190%	230	Amazon
Food	190%	20	Harrods
Sports and Games	180%	30	adidas
Entertainment electronics	170%	120	Nike
Clothing	140%	150	Sony
Computers	130%	230	Dell
DIY/Furniture	100%	20	Ikea
Brokerage	70%	190	Charles Schwab
Insurances	30%	5	iNSWEB
Total	200%	2,200	

Source: Boston Consulting Group (1999a)

Figure 1.
E-business growth across various industries in Germany

The framework

The framework depicted in Figure 2 is derived from the literature and from the practical experience of the authors. It is intended to provide a roadmap for the practical formulation and implementation of an effective e-business model for firms in the reinsurance industry. The framework illustrates the major steps and strategic and operational interdependencies involved in its implementation. The implementation methodology comprises three major phases and 24 detailed steps. These phases are:

(1) deciding;

(2) selection; and

(3) implementation.

To illustrate the process, we begin with the simplified framework shown in Figure 2. We then walk the reader through the detailed steps in each of the three phases (Figures 3-5). Finally, we integrate all the pieces in the form of the full conceptual framework shown in Figure 6.

In the first phase, *deciding*, we start by working the problem backwards, starting from the desired business result (see Figure 3). Senior leadership makes the strategic decision to pursue e-business (1). This decision is translated into a strategic plan (2), designed to promote overall strategic effectiveness. A market screening sub-process (3) is used to study potential customers and markets (7), potential partners (4), products (5) and technical requirements and processes (6).

At the end of the first phase, the organization has made the strategic decision to use web-based technologies, and has developed an initial business concept. The output of the first phase provides the strategic orientation for considering and selecting partnerships, joint ventures, mergers and acquisitions. Potential partners are those businesses who could use the reinsurer's proposed e-business product to complement their current product line and offer a better value proposition to their customers. Once these potential partners have been identified and an initial value proposition is defined, then the firm is ready to enter phase 2.

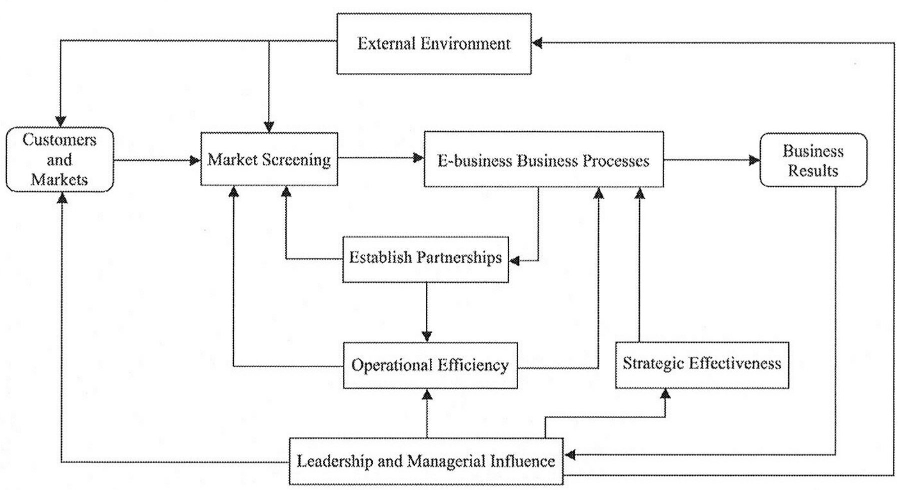

Figure 2.
A simplified conceptual e-business model framework

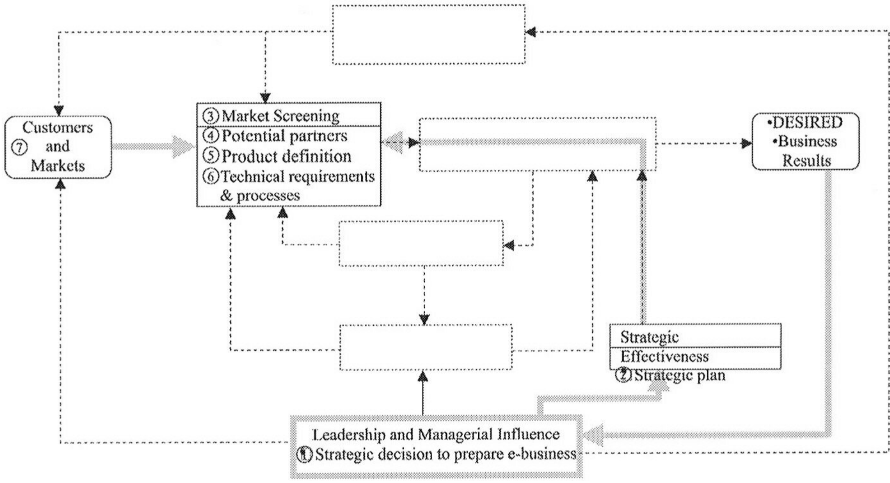

Figure 3.
Phase 1: deciding

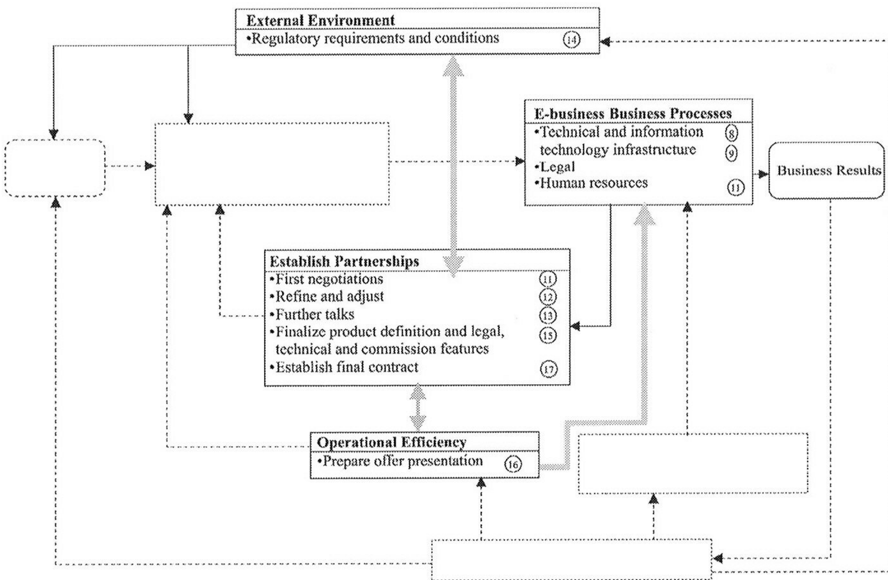

Figure 4.
Phase 2: selection

Phase 2, *selection*, is illustrated in Figure 4. First, the technical and information technology infrastructure is defined (8). Generally, this will have a dramatic impact on existing business processes. So, it is important to address the major legal issues (9), to assess the impact on the current organization and the human resources (10) who must be trained in the new way of doing business, and to consider the supporting technologies. Armed with an initial value proposition and a plan to provide the necessary information technology infrastructure, first negotiations (11) are conducted

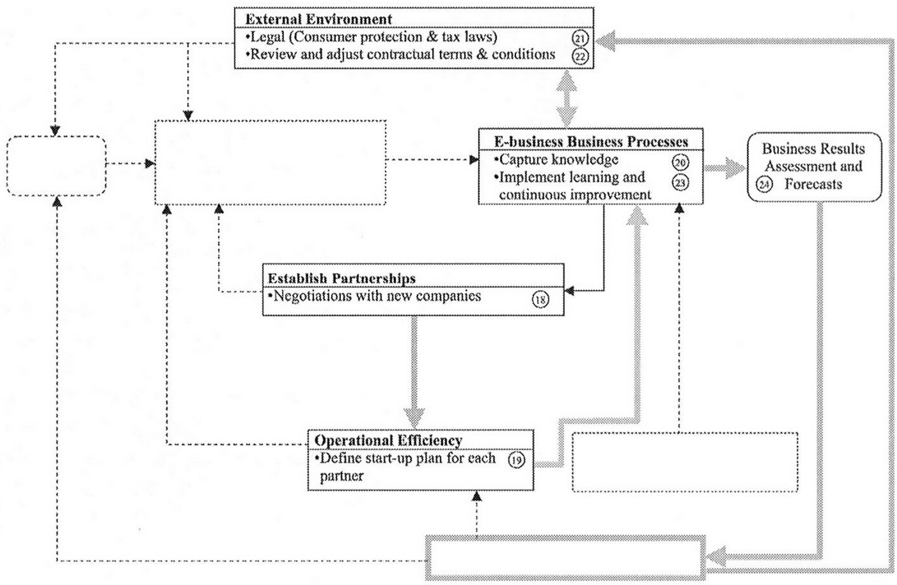

Figure 5.
Phase 3: implementation

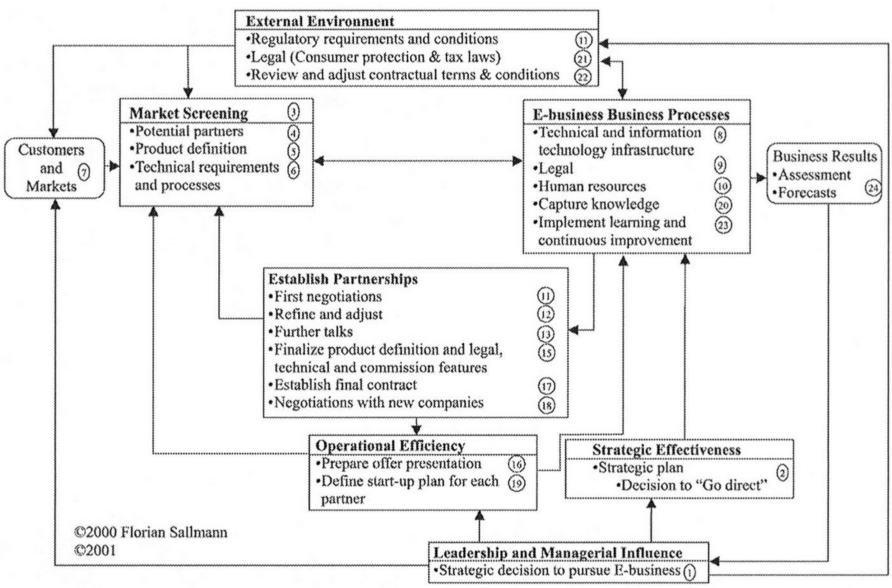

Figure 6.
A conceptual e-business model framework

with the potential business partners. These define the broad interests of the reinsurer and their partners in the industry. They concentrate on the potential for growth in the e-business dimension and the information technology infrastructure that the reinsurer has defined in establishing e-business processes. The outcome of these initial negotiations is an agreement on a better value proposition for the customer.

Refinements and adjustments (12) are made to the value proposition, the e-business processes, the information technology infrastructure, and the terms and conditions of the business relationships. Appropriate regulatory requirements and conditions (14) are incorporated into the business model and the negotiation process. After further negotiations, the product is "definitized", agreements concerning compensation, commissions and revenue-sharing agreements are documented (15), and a final contract is established (16 and 17). Once the business arrangement is thereby formalized, negotiations with new companies (partners) can proceed. Throughout the process of establishing strategic partnerships, the need to view the entire value-added supply chain in a transparent fashion is underscored. This requires that all steps from the perspectives of client to the insurer and reinsurer are viewed as if they were performed by one organization with the appropriate information technology infrastructure.

The output of phase 2 is a well-defined contract between the business partners. This contract and the strategic decision to pursue e-business relationships (18) provide the transition to phase 3, *implementation* (see Figure 5). With the contract baseline in hand, the initial focus is on operational efficiency, so a start-up plan is defined in some detail (19). At this point, it is also important to design the information technology internal to the organization so the knowledge is captured (20).

The external environment must also be revisited to ensure that consumer protection and tax laws (21) have been appropriately reflected in the contractual terms and conditions (22). Finally, a learning and continuous-improvement process is implemented (23) to ensure that the e-business processes are refined and the overall business model is adapted, on the basis of experience gained during implementation. Business results are assessed and forecasts (24) are made which are provided to senior leadership to aid the strategic thinking and managerial influence process.

The *deciding*, *selection* and *implementation* phases ("DSI phases") and their 24 implementation steps are shown in the comprehensive conceptual framework in Figure 6, which underscores the importance of a systematic, strategic and operationally sound approach to meeting the marketplace challenges in the reinsurance insurance industry.

The field study

Nature of the problem

The problem addressed by the researchers in this field study had two facets:

(1) the decreasing margins in the traditional reinsurance business; and

(2) the fact that the insurance industry as a whole was changing due to the emerging influence of e-business.

ERC Frankona, the reinsurance firm which is the focus of this study, had to re-orient its business model in order to be more competitive, given the new realities of the marketplace. ERC Frankona's parent company, GE, was the driving force behind the need for a more competitive business model. GE required an average return on invested equity of 20 percent from its subsidiaries, regardless of difficult industry conditions, and its CEO clearly emphasized the relevance of e-business for the company over the next five years (Business Week Online, 1999). ERC Frankona's management evaluated various business opportunities against these givens. One was the possibility of integrating forward, and thus gaining a bigger portion of the value chain. It was clear that this strategy would have to be pursued carefully to avoid the risk of losing existing customers. They also decided that in the case of directly addressing the end-customer, it would not build up a costly sales network like the traditional insurance companies. Considering all factors, e-business did seem to be a possible source of additional revenues and had to be evaluated.

ERC Frankona was founded in 1914 and employs more than 4,000 people worldwide. Recently the company added 'Re' to its name, to make it even more clearly identifiable as part of General Electric (GE). Its 100-percent owned subsidiary, Würzburger Versicherungs-AG, has a travel insurance product, TravelSecure®. Würzburger was founded in 1989 and made its name in the specialty primary insurance sector in Germany, with innovative and tailor-made products. Today it has over 100,000 clients who take advantage of its products and services.

Würzburger was chosen as an e-business pilot project for several reasons. It was suitable as a testing ground and in the long run as an e-business platform for many other e-business products, as it owned the required primary insurance licence. In addition, it had recently changed its strategic focus from accident insurance to travel insurance, as a consequence of the pioneering position of e-business in travel relative to other industries.

The question was to decide whether or not online travel insurance was a good option for entering the e-business arena, for both Würzburger and ERC Frankona. After a favourable strategic decision by ERC Frankona's board of directors, details of how e-business was going to be implemented needed to be determined. At the beginning of the field study, the company, like most German insurance companies, had practically no e-business experience. Its web site was seen as a marketing communications tool rather than a new sales channel. Thus, Würzburger's management needed a systematic approach to guide the strategic and operational facets of the e-business effort.

Application of the framework in the field study setting

Phase 1: deciding. The first step toward an e-business based business model is the strategic decision to pursue e-business. Since ERC Frankona is a subsidiary of General Electric Capital, senior management was guided by GE's approach to making strategic decisions. In this context, it took a major strategic commitment to abandon the traditional business model in favor of an e-business based model. Therefore, its senior management was called on to play a key important leadership role in the context of the strategic decision making process. Barriers and opportunities were evaluated. Barriers to entry included the fear of losing face in case of failure, high initial costs of e-business investments, and the risk of cannibalizing their own business. GE referred to this phenomenon as "DYB.com" (DestroyYourBusiness.com), and saw it as an opportunity to constantly reinvent their own business (*The Economist*, 1999, p. 25). According to Brealey and Myers (1996, p. 21), companies should decide in favor of a project when a positive net present value (NPV) is likely, defined as the difference between the "discounted, or present, value of the future income and the amount of the initial investment". As in any other GE project, the NPV criterion was used to evaluate the worthiness of the e-business project. The initial decision to pursue e-business had to be based on well thought out financial forecasts spanning several possible scenarios. For that purpose, GE had developed tools such as the "GE Teamcharter" (Kern, 1999), which helped senior project management to select and prioritize promising business projects. Projects with the potential for the highest NPV were given top priority.

In this study, the senior leaders at ERC Frankona made the strategic decision to pursue the e-business opportunity. Once the commitment was made, the framework provided by the researchers and presented in this article was used to guide the implementation of strategic commitments. The strategic decision and its implementation were bound by several guiding principles, which incorporated factors such as customers and markets, business results, operational efficiency and the external environment. These are explored next.

Given the strategic decision to pursue e-business and the strategic thinking embodied in the guiding principles, the next step of the *deciding* phase was to capture this strategic orientation in the strategic plan. The company chose to enter the online primary insurance market from a wide range of strategic e-business opportunities. In the industry, such an action is called "go direct". Würzburger was selected as the platform for a pilot project in online travel insurance. Its CEO selected a Project Manager internally, and gave him the task of setting up a team that would develop and extend the capability to exploit e-business opportunities. The Project Manager chose the lead author of this article as his first team member.

Once the strategic plan was in place, customers and markets had to be identified. The vast and explosively growing community of internet users had to be matched to the company's potential customers. All customers making online travel reservations were considered. This decision was supported by the awareness that online travel booking was already widely accepted by internet users and that travel insurance was a product with low complexity. For regulatory reasons explained below, German and European travelers were the initial target group. An international expansion was planned as a later step.

Once the customers and markets were defined, further market screening helped determine the appropriate sales channels. Würzburger decided to sell travel insurance via suitable partners who sold travel products such as flights or accommodation over the internet. This step was conducted exclusively over the internet and by telephone. The examined companies' names, addresses and additional information were captured in a database and grouped into traditional airlines, low cost airlines, online travel agencies, web portals, travel portals and online tour operators.

Roughly half of the companies in each category already had a partner in online travel insurance. Only Swissair had a fully integrated booking process for travel insurance. Existing partnerships with Würzburger's offline competitors were transferred to the online business in all other cases. Thus, customers wanting to book travel insurance ordered it over the phone after booking a travel product, and confirmation followed by fax or mail. The biggest competitors of Würzburger were three German travel operators, who all made attempts to become e-business enabled.

Potential partners were also identified during the market screening step. The two most obvious partners were Yahoo!, as the number one web portal (GfK Media Research, 1999) and Lufthansa, as one of the leading traditional airlines. Both companies sold flight tickets online, but did not offer the opportunity to book travel insurance at the same time. A database of other potential partners was also established. The next step was to define the proposed product by gaining knowledge about the existing online travel insurance products. A broad spectrum of e-business products was considered, including:

- temporary health insurance;
- cancellation insurance; and
- luggage insurance.

Next, technical requirements were reviewed and process modifications were defined. Since Würzburger already offered TravelSecure (Sallman, 1999), a product specifically developed for sale over the Internet, this became the baseline technology. However, it was suited only for direct sale on the company's own web site. This meant that customers wanting to book travel insurance had to log on directly or to find the site via a search engine. The likelihood of a significant number of hits was small, due to the company's low market profile. Sale via third parties had completely different technical requirements, such as running an application on two web sites or the possibility to bill by credit card. These general requirements were refined and finalized before contacting the first potential partner. Technical requirements and processes could not be specified by benchmarking since the industry was generally behind, as identified during market screening.

Phase 2: selection. The outputs of the *deciding* phase provided the information necessary for the *selection* phase. Guided by the framework (see Figure 4), several potential partners were contacted. Concurrently, the project's e-business environment was shaped and refined.

First, negotiations regarding the online travel insurance were opened with Yahoo! and Lufthansa. The aim of the first meeting was to introduce ERC Frankona, learn about Yahoo! and its business model, and explore the possibility of Yahoo! travel insurance, which could close a visible gap in its product range. Possible pricing models were discussed at a second meeting, but no agreement could be reached and the negotiations were postponed until a third meeting, at which Yahoo! requested a €40,000 up-front advertising fee, not including development costs. Actual total flight bookings were below 1,000, far below ERC Frankona's expectations, so negotiations were terminated since a win-win outcome could not be achieved.

Next, a meeting was set up with a Lufthansa vice-president, to present the company and to discuss the possibility of a partnership. Lufthansa provided detailed information about its e-business plans, the goal of which was to acquire Lufthansa Preferred Partners in an auction for several different products being sold over Lufthansa's web portal. The outcome was that ERC Frankona reached the final round of the auction, when it and the other participating companies had to make an offer to Lufthansa. The eventual winner of the auction bought its partnership for an up-front payment of €100,000 and up to 90 percent commission on travel insurances sold. ERC Frankona decided that this too would not have been a win-win relationship.

Based on lessons learned from these initial partnership attempts, the proposed product and technical implementation were revised and improved. For that purpose, ERC Frankona's IT and e-business expert became a constant team member. The team evaluated the technical requirements and the know-how gained from Yahoo! and Lufthansa, and developed three different e-business implementation models. Then the team reformulated its approach and contacted two new potential partners: KLM had recently merged with Alitalia (Rietbergen, 1999) and Lastminute.com was one of the travel portals previously captured in the market screening.

After several telephone phone conversations with KLM, addressing the online implementation and proposed product range, a revised company and product presentation was tailored to the airline's needs, and one of the authors met KLM's e-commerce leader in Amsterdam. Partly because KLM's e-business efforts were already far advanced relative to its counterparts and partly because of the refined offer, detailed questions could be addressed during the visit, regarding product features, technical issues including project time frame and legal and commission requirements. KLM requested a detailed offer regarding online travel insurance and other possible cross-selling opportunities with GE, which would help their e-commerce team with internal promotion of the proposed partnership.

Lastminute.com is an Internet start-up company specializing in last-minute and extravagant travel and entertainment needs, such as flights, accommodation, musicals and even deep sea diving to the Titanic. Their Travel Manager for Germany was invited to a meeting. He had previously contacted all competitors in the industry without receiving a solution that fitted his company's idea of total customer satisfaction, and Würzburger's proposed booking process appeared to be what he had been searching for. He agreed on a commission-based payment and signaled high flexibility regarding the pricing of the individual products.

As a next step in the *selection* phase, regulatory requirements and conditions were studied in detail. Since the liberalization of the insurance market and the introduction of EU Third Generation Directives in 1994 (Remshardt, 1999), insurers required only a licence from their home regulatory authority. Foreign countries gave a *pro forma* permission, which took a few weeks to receive. Immediately following the author's visit to KLM, Würzburger applied for the equivalent national licenses from all other EU countries.

Based on the results obtained in the steps outlined above, a product definition including the legal and commission parameters was established. Both companies had already accepted Würzburger's proposal for the three different travel insurances. Solutions were also found for the major legal concerns. A disclaimer and printable terms and conditions would be included in the booking process. The customers would recognize Würzburger as risk carrier and had access via phone to an assistance hotline in case of emergency. The company agreed to immediately refund "cheating" customers who claimed not to have received a mailed confirmation. This satisfied the requirements of the German regulatory authority (Bundesaufsichtsamt für das Versicherungswesen, 1999, p. 2). These customers would be put on a black list to prevent further abuse. Both companies signaled their flexibility if other unforeseen legal problems arose at a later stage. For the technical implementation, Lastminute.com invited ERC Frankona's IT and e-business expert to discuss matters further. In the case of KLM, technical discussions were expected only after closing the final contract.

A two-week sub-project was set up in order to make the final offer presentation. A five-strong core team, including one of the authors, undertook the final negotiations with KLM and Lastminute.com. This process provided a template that would be reusable in future, by combining the acquired knowledge about those two companies and outlining possibilities for partnerships of wider scope. It proved to be easily adaptable.

Based on the results of these steps in the *selection* phase, provisions were made to draw up the final contract and formalize the partnership agreement. The e-business processes were then examined in some detail, and the framework modified in the light of the experience of the field study, so that technical and information infrastructures and associated human resource impacts could be evaluated prior to conducting detailed negotiations.

In the first completed partnership, Lastminute.com and Würzburger chose the private-label model. In a series of jointly staffed workshops, the necessary technical and information technology infrastructure were finalized. The technical architecture of both companies was the basis for a solution that would fully integrate the travel insurance sales process into Lastminute.com's travel sales process. According to Bammesberger (2000), Lastminute.com used Microsoft Merchant Server and the Unix Informix database. An independent provider in London hosted the site. Lastminute.com's system was able to determine the amount of commission for different partners, based upon revenues generated: for online travel insurance, a CGI programmer was installed on its server. Data were then to be transmitted via encoded e-mail, which would communicate destination of journey, means of transportation, dates of travel, costs of journey, name of insured, address of insured, date of birth of insured, sex of insured, type of insurance, booking reference number, and collection information (at the time of writing, it was unclear whether that would be supplied by ERC Frankona or Lastminute.com).

The final legal processes of an e-business online travel insurance partnership were then tailored to the joint-venture contract.

Phase 3: implementation. Conclusion of the *selection* phase provided the contractual terms and conditions required for *implementation* and refinement. The human resource considerations provided linkage and smooth transition between phases. In this field study, for example, staff requirements for the administration of several partnerships were evaluated. Würzburger selected a fluent English-speaker to coordinate the requests from their partners, supervise the sales figures and make forecasts. His output would form the basis of the CEO's tactical and strategic decisions, for example regarding the pricing and features of the individual policies, or concerning existing or new partnerships. In addition, their web master would be responsible for any web site and programmer updates requested by the partners. The Würzburger team would be supported by ERC Frankona's IT resource until all required knowledge had been transferred. The top management of ERC Frankona would act as enabler for further e-business activities.

As an early step in the *implementation* phase, more potential partners were actively considered, reflecting concerns about losing these attractive companies to competitors and the determination to gain a leading position in the online travel insurance market. These included Excite Germany and Virgin Express. The business development manager of the former accepted an invitation to an exploratory meeting, and signaled high interest in a partnership. The latter responded favorably to initial conversations and an e-mailed offer presentation, but postponed further negotiations and a personal visit on the grounds that a new subsidiary airline was being established in Australia.

For KLM, European travel insurance became the primary focus. Therefore, Würzburger applied for the necessary licences for all EU countries. With the contract closed and the technical platform developed, plans were refined to pursue the European market on a country by country basis as licenses were received. Furthermore, coverage was to be always the highest in all participating countries. The insurance premium would be in euros, in order to offer the highest convenience and transparency. Finally, both partners saw travel insurance only as a starting point for other GE products that could be sold direct to KLM or via their web site.

Establishing several partnerships simultaneously required capturing all acquired knowledge from the outset of the project. All electronic and printed information was stored by one of the authors and made available to others as necessary. As the project team grew in size and several potential customers were contacted, a knowledge database was established on the internet. Each team member was given password-restricted access and was required to regularly update project progress. The project team furthermore realized that the Internet could be used as a means to capture knowledge from customers making online travel reservations, by installing cookies (mini-programs read and processed by the web browser every time a user re-entered a web site) on customers' PCs (Schlabach, 1999a, b). To comply with GE's high privacy standards, information collected by that means would be restricted to internal purposes only. Hence, user patterns could be established to help tailor travel insurance and other products to the customer's needs. In addition, a customer database including an e-mail list would help to develop a closer customer relationship at a very low price. An influential analysis of the insurance industry suggested that Würzburger was ahead of its competitors (Boston Consulting Group, 1999b, p. 13).

The project team and ERC Frankona's management continuously monitored qualitative results in the process of setting up the partnership with Lastminute.com. From the moment of signing the contract, that output was supported by quantified results. The IT costs for setting up the e-business platform had to be measured. Far more expensive than the actual hardware and software was the salary cost of the IT staff. Although maintenance costs were low, they were not negligible. The cost-benefit equation was assessed by tracking revenues after tax from the partnership. In this context, the aim is to identify the appropriate price for the product and a suitable commission rate for each partner. Methods for forecasting expenditures and revenues were established in order to support the decision making process regarding other e-business projects.

Lessons learned

During the conduct of this field study, the project team encountered a number of issues and risks that had not been foreseen. These concerned the location of the court where any arguments between the insurance company and the customer would be settled (*Süddeutsche Zeitung*, 1999), the security of credit card payments, liability in the case of server breakdowns, and the issue of tax to be deducted in the many countries in which insurance cover was offered. The policy was to assess and constantly monitor all possible influences. It was concluded that a certain amount of entrepreneurial risk was unavoidable, and that the long-term pay-off from knowledge gained would offset the possible damage (Geiger, 1999).

Another lesson learnt from this field study was that the contractual terms and conditions of any e-business joint venture agreement need to be reviewed and adjusted from time to time. A constant review would prevent competitors from making better offers to existing partnerships. In addition, it would protect Würzburger from the consequences of unforeseen changes in the legal, technical and regulatory environment laws. The partnership with Lastminute.com was seen as a good opportunity to gain the experience needed. In the long run, constant review and adjustment would help to strengthen business results.

In the course of the project, the team experienced a steep learning curve. The constant use of the knowledge database accelerated the learning process. In addition, a continuous improvement of the product and refinement of technical requirements and processes took place in the course of the project. Maintaining a sustainable competitive advantage was a primary objective of Lastminute.com and future partners because of the highly dynamic e-business environment. Würzburger hoped that by constantly improving its e-business platform, it could gain a significant market share in the long run. Furthermore, it wanted to use the knowledge gained for the extension of business relationships with companies such as KLM to other products.

Concluding remarks

The applied research study presented in this article set out to re-engineer a business model and the operational practices associated with it. It was motivated by the competitive realities of the reinsurance marketplace and the opportunities available through the utilization of information technology.

The management evaluation of this applied research effort underscores the organizational strategic and operational benefits achieved. At the strategic level, this project resulted in a customer-focused and technology-based e-business model, consistent with the mission and vision statements of the parent company, GE. The new strategic model redefined the nature of the supply chain, with strong emphasis on value-added strategic alliances with travel agencies and major airline companies. At the operational level, direct benefits were smoothing of operations, improved organizational and customer communications, and the streamlining of business process through the enhanced use of information technology.

The field study not only substantiated the conceptual framework shown in Figure 6, but also led to a practical value-added business model for ERC Frankona. During the course of the project, the team gathered a significant amount of market knowledge about different online travel sales channels. The business outcome was a unique online booking process for the sale of travel insurance, including an online demonstration of the process. The presentation to KLM successfully demonstrated a complete offer presentation, resulting in a potential joint-venture partnership. Finally, a prospect pipeline with 30 key accounts was created and each prospect successively addressed.

At the time of completion of the field study, two major partnerships were being refined. One has since been concluded and the other is still in progress. These new partnerships and the resulting business model provide significant cross-selling potential. The model will be adapted to accommodate expanding business relationships.

Issues dealing with the effectiveness in the reinsurance industry of traditional business models versus those based on e-business have not yet been examined in depth. Therefore, it is possible that the extraordinary business transformation of the banking industry, for example, could be repeated in the reinsurance industry. The result could be a threat from many formerly unknown competitors. Hence, a situation in which e-business companies such as Charles Schwab can become a serious threat to traditional banks such as Merrill Lynch (Boston Consulting Group, 1999a) could also occur in the reinsurance industry. However, as in the case of banking, it could also mean great opportunities for traditional reinsurers. There is no doubt that e-business has the potential to revolutionize the reinsurance industry. However, the extent to which such potential may be achieved may depend to a large extent on the dynamics of the industry.

According to a spokesman for ERC Frankona:

> An important intangible benefit of this project includes the fact that our organization is now using web-based Internet technology, which was not only necessitated by the realities of the e-business market, but has now become a vital element of our daily operations and strategic orientation. The significance of this project is already felt throughout our organization, due to its immediate and short-term operational and strategic benefits.

The positive results of the field study which applied the framework presented in this article should encourage firms in the reinsurance industry at least to reconsider their traditional business models in light of the trends and potential benefits of e-business.

References

Bammesberger, T. (2000), "Determination of technical e-business platform", Munich.

Boeing (2000), "Boeing part page", available at: www.boeing.com/assocproducts/bpart/partpage/index.htm

Boston Consulting Group (1999a), *E-Business,* Spezial Konferenz, Kronberg.

Boston Consulting Group (1999b), *Vergessen Sie E-commerce! Wie das Internet die Versicherungslandschaft verändern wird*, Boston Consulting Group, Düsseldorf.

Boston.com (2000), 31 January, available at: www.boston.com/globe/magazine/5-23/metcalfe.shtml

Brealey, R. and Myers, C. (1996), *Principles of Corporate Finance*, McGraw-Hill, New York, NY.

Bundesaufsichtsamt für das Versicherungswesen (1999), *Grenzen des Vertriebs von Versicherungsprodukten über das Internet*, R 2/99, Bundesaufsichtsamt für das Versicherungswesen, Berlin.

Business Week Online (1999), "This is the greatest opportunity yet", *Business Week Online*, June 18, p. 1.

(The) Economist (1999), "DYB.com", *The Economist*, September 18, p. 25.

GE Capital (1999), "ERC Frankona Intranet", 3 November, available at: http://er-cor-lp1.erc.gecapital.com/ebusiness.nsf/pages/WhatisEBusiness990514

Geiger, H. (1999), "Assessment of external legal environment for e-business", Munich.

GfK Media Research (1999), *4. Untersuchungswelle, Präsentation der zentralen Ergebnisse*, GfK Media Research, Frankfurt.

Golem Network News (1999), 29 November, available at: www.gnn.de/9911/99112904-ad.html

Kern, H. (1999), "Interview about Farao and Rio", Munich.

Remshardt, N. (1999), "Clarification of legal regulations within the EU", Munich.

Rietbergen, G. (1999), "KLM/Alitalia e-commerce strategy", Amsterdam.

Sallman, F. (1999), "Interview with Torsten Schultheis", Germany.

Schlabach, T. (1999a), "Clarification of technical issues for travel insurance", Munich.

Schlabach, T. (1999b), "Interview about e-business in the reinsurance industry", Munich.

Siemens/ICN (1999), "New Services in a Web centric World, ICN ISA e-business strategy", Munich.

Spanjaard, B. (2000), "Interview about SICS/nt", London.

Süddeutsche Zeitung (1999), "Regeln fürs Internet", *Süddeutsche Zeitung*, November 8.

Swiss Re (1999), *Information and Communication meet Insurance*, Swiss Re, Munich.

Swiss Re (1999), *IT-Optionen für die Versicherungsbranche*, Swiss Re, Düsseldorf.

Further reading

Baldrige National Quality Program (2000), "Criteria for performance excellence", Baldrige National Quality Program, National Institute of Standards and Technology, Gaithersburg, MD, p. 6.

Beste, M. (1999a), "Discussion about current e-business research", Munich.

Beste, M. (1999b), "Interview about trends in the reinsurance industry", Munich.

British Deming Association (2000), 14 January, available at: www.deming.org.uk

Deloitte & Touche LLP (1999), *The Insurance Industry. A Study in E-commerce*, Deloitte & Touche, New York, NY.

ERC Frankona (1999), *E-business Platform Strategy*, Appendix A, EBIU, Munich.

ERC Frankona (2000b), Reinsurance online project (LTC), ERC Frankona, Munich.

GartnerGroup (1999), *Five Points to E-business Success*, Gartner Group, Stamford, CT.

Hitt, M., Ireland, R. and Hoskisson, R. (1999), *Strategic Management*, South Western College Publishing, Cincinnati, OH.

Leader HQ (2000), January 14, available at: www.skymark.com/resources/leaders

Lynch, R. (2000), *Corporate Strategy*, 2nd ed., Pearson Education, Harlow.

National Institute of Standards and Technology (2000), March 14, available at: www.nist.gov/public_affairs/releases/g99-210.htm

PricewaterhouseCoopers (2000), January 12, available at: www.e-business.pwcglobal.com/do_for_you/ meeting_needs_ct_emma_demo.html

Ricoh (2000), Vol. X, 23 March, available at: www.ricoh-usa.com/about/overview/awards.htm

Seybold, P. and Marshak, R. (1998), *Customers.com® Handbook*, Patricia Seybold Group, Boston, MA.

Standard & Poors (1999), "1998's top 25 reinsurance groups ranked by net written premium", *Reinsurance*, p. 9.

Swiss Re (1999), *ELRiX, The Different Reinsurance Business System*, Swiss Re, Zurich.

US Department of Commerce (1999), *Emerging Digital Economy II*, US Department of Commerce, Washington, DC.

W3C Architecture Domain (2000), 17 January, available at: www.w3.org/XML/