

GETTING CUSTOMERS ON-LINE - CASE LUXURY FERRIES INC.

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Executive summary

This article discusses the introduction of a web-based electronic reservation system to an established Finnish shipping company. It is based on a real-life example and on original research. In the literature study we see that on-line reservation systems in the airline industry are well studied, but less so in the maritime industries. In the article we describe the major changes in the business environment of the company

Our case company Luxury Ferries Inc. introduced a new electronic reservation system in August 2000 to the market. Some of the empirical findings include: Established companies have very different needs and priorities in electronic commerce than start-ups. Electronic commerce puts companies operating in several countries and several language areas under high pressure: through web-services the customers now find it easier to compare offerings in different countries and to display opportunistic behavior.

1 Organizational background

This article discusses the introduction of a web-based electronic reservation system to an established Finnish shipping company, called the Luxury Ferries Inc. in this article. The real company is an established company in the ferry market in the Baltic Sea. Our case company introduced a new electronic reservation system in August 2000 to the market. Since then, the big challenge has been that of getting customers to use the new web-site. All too often customers still rely on call center services or use external travel agencies, and acceptance of the electronic commerce model has been under 10 percent of total reservations.

The company is a representative of the group of established mortar companies seeking for web-extensions to their operations (Clarke & Flaherty, 2004). The article is based on a real life example and original research, even though the real name of the company is hidden.

The shipping business can be divided to many segments. We see four basic business lines:

1. Leisure cruising
2. Scheduled connections for mixed traffic
3. Time chartering for specific customers
4. Scheduled connections for freight, containerized or liner shipping.

The markets for these different segments are very different. Segments 1 and 2 represent consumer business, whereas 3 and 4 contain business-to-business transactions. Luxury Ferries Inc. is active in the second business category, but has flavors of the categories 1 and 3 in its operations: Many passengers come to the ships for leisure activities, and the ships too carry a considerable amount of freight on a ro-ro –basis.

This article is based on original empirical research performed with the company focusing on the introduction of the on-line reservation system discussed in the paper. Our case has as the research question:

- How should a ferry company introduce an on-line reservation system?

Subtopics include:

- Which activities to include, which not to include when introducing a reservation system?
- What kind of system characteristics are appreciated by the customers?
- What is the system's effect on the total business?
- What kind of supporting (marketing etc.) activities are needed to support a new on-line reservation system?

The case unfolds as follows. In section 2 we have a short literature study to research on information systems, particularly reservation systems, in the tourism industry. In Section 3 we introduce the reader to the Baltic Sea ferry market. Section 4 discusses the case Luxury Ferries Inc. in detail. In Section 5 the current state of the system which early stages are discussed in the case is revisited. Finally, conclusions are drawn in Section 6.

2 Literature study

As electronic commerce is a wide topic, this literature study concentrates upon two topics central to this article:

- 1 The tourism industry and its application of ICT
- 2 On-line reservation systems for private customers.

It is evident that both tourism and information- and communication technologies (ICT) are major growth areas among major industries. Because of the vague area of the industries, exact growth figures are hard to extract. According to European Information Technology Observatory (EITO, 2004), the total ICT market in 2004 grew by 3,0% in Western Europe, by 3,7% in the U.S.A. and by 2,2% in Japan and by 8,5% in the rest of the world. For telecommunications carrier services the figures are even higher: Western Europe 3,8%, USA 6,7%, Japan 3,8% and the rest of the world 11%. As new technologies enter the market and old give way for them, it is clear that some top technologies, often in telecommunications, enjoy much higher growth rates. To these technologies belong the ones related to Internet and mobile communication.

Tourism industry is a fascinating industry and growing fast. According to the world tourism barometer international tourist arrivals reached an all-time record of 760 million in 2004 - an increase of 10% over 2003 (WTO, 2005). As an example of the growth speed, the Economist reports on the following growth figures in air traffic (The Economist, 2004):

- By 2017 the annual increase in air travel will be greater than total air travel was in 1970
- The air traffic will triple in the next 20 years
- International air travel is growing at 8% a year.

Few other industries grow as fast as tourism. With tourism we refer to the transfer of humans, not goods, between distant physical locations, though these two transfer objects usually are catered for through the same transportation means. For the traveler, tourism is always including an experience element, so it is not a daily routine. So, for example, daily work travel routines do not fit to the definition. However, our concept of tourism also includes traveling done for the sake of working, but to be defined as tourism this work-related traveling should not be a daily routine.

Described with some important expressions, the world's travel industry is huge, growing, and rapidly changing. Currently estimated at \$3.1 trillion, it is forecast to grow to a \$7.1 trillion industry by the year 2007. This huge growth is being driven both by the shifting expectations of the traveler, and by proactive industry initiatives. Increasingly these are both being shaped by innovations in technology. According to (Rae, 1998) change is occurring in four key areas:

- Individual consumer power
People can afford more traveling than before
- Operational optimization processes
Service providers work on their processes and make them more effective and thus more affordable
- End to end journey management
Customers are offered complete traveling solutions including all the services they need during traveling
- Improvements to the travel experience
Traveling is easier and more luxury than before.

On-line reservation systems have had a deep impact on the travel/tourism industry (Burkart & Medlik, 1981; Werthner & Klein, 1999). While modern communication and information technology can be used in many operations in the industry (Bruce, 1991; Buhalis, 1999; Sheldon, 1997), the most dramatic changes have touched upon the reservation systems that are active in the customer interface (Buerley & Ewers, 1996).

Most academic attention to reservation systems has focused on airline reservation systems.

Reasons for this are many:

- The industry is truly global with global reservation systems operating
- The changes introduced by modern ICT have been most dramatic there (Camisón, 2000).
- The industry itself is growing very fast
- The industry has opened itself for academic researchers
- The market leaders in airlines and their reservation systems are very visible
- Airlines have been pioneers in bonus programs.

In almost all aspects, the ferry or shipping industry is different. Markets are local and orchestrated by local companies leading to market fragmentation. Growth is almost non-existent and companies can do well without massive investments in ICT. Market structure is fragmented and offers for example no room for massive bonus programs. As quoted by a industry representative (Harreld, 2001): *"There is no SABRE for the ocean business that allows ... large importers and exporters to do business with multiple service providers."* The two industries are compared in Table 1.

Table 1 Comparison of the ferry and airline industries

| | Airlines | Ferry industry |
|-------------------------------|--|------------------|
| Market scope | Global and local | Local |
| Changes introduced by ICT | Big | Moderate |
| Growth | Big | None or negative |
| Openness to academic research | Big | Modest |
| Market structure | Visible market leaders and fragmentation | Fragmentation |
| Bonus programs | A key business component | Few and modest |

Airline reservation systems were a focus of academic researchers already in the 1980s and 1990s. Classics such as (Christiaanse, 1996; Copeland & McKenney, 1988; Hopper, 1990; Malone, Yates, & Benjamin, 1989; Monteiro & Macdonald, 1996; Segal, 1995b) represent pioneering works. These early contributions showed how electronic reservation systems were mandatory for the successful business of the airlines. In a way, we are now having the same round of discussion in the case of ferry companies.

The second round of discussion on the airline reservation systems focused on the effects of the Internet and e-commerce. Contributions in this category become more fragmented. Issues typically taken up in this round of discussion contained elements such as (some of the references relate to the tourism industry in general):

- The bonus (frequent flyer) programs (Wentink, 2001; Yoshinori, 2003)
- Availability of different extra services through the reservation systems (Dennett, Ineson, Stone, & Colgate, 2000)
- Market failures caused by the ownership of the reservation systems (Segal, 1995a)
- New customer service options (Anckar, 2002; Anckar & Walden, 2001; Gustafsson, 1999)
- Customers inclination to make purchases on-line (Athiyaman, 2002; Card, Chen, & Cole, 2003; Gianforte, 2003; Heung, 2003; Järveläinen & Puhakainen, 2004)
- Different ticketing and pricing options (Klein & Loebbecke, 2003; O'Connor, 2001, 2003; Thompson, 1997)
- Operations and e-commerce integration (Buhalis, 2003; Dennett et al., 2000)
- Problems of multichannel marketing (Schoenbachler & Gordon, 2002).

Contributions from the airline reservation systems are important to our case of cruise shipping also. Most importantly, both industries have a deep activity in consumer commerce. For example, liner shipping is a business-to-business activity with quite different requirements for business.

For the ferry industry literature is more scarce. Terms born in the airline industry (frequent flyer programs, on-line reservation systems) do not have established counterparts in the industry. (Alford, 1998) pays attention the similarity of the airline and shipping industry in reservation systems (even though I do not share his vision as discussed above (Table 1)). (Stopford, 2002) provides a wide survey of the historical developments in the use of ICT in the shipping industry, focusing on liner shipping (not to cruise shipping that is the focus of this article). (Yang, Flynn, & Anderson, 2003) report on the Travelocity web-service and its applications in the cruise industry. (Boyes, 2001) discusses how the first electronic reservation systems for container traffic begin to emerge, as does (Hong Kong Shippers Council, 2000).

3 Setting the Stage

The Ferry Market in the Baltic Sea

The ferry industry in the Baltic Sea has long traditions and is proud of the continued operations in the harsh Nordic environment. For example, our case company has a history of uninterrupted operations for a period of over 100 years. However, the market is not growing. For all industry participants, main route income is typically shared between three sources: passenger ticket income, sales on the ship, and freight income. As a consequence of the keen competition, long-term investments are down: for 15 years the market leaders Luxury Ferries and Sunborn Line have not ordered new ships, mainly because these big investments might be also risky for them to carry. This has not left the customer interest untouched: many feel that we discuss a sunset industry with no innovation and renewal capacity. Customers constantly looking for new experiences do not come to the old ships. In addition, a constant discussion about putting the ships under foreign flags is running. With this threat, the ferry companies have managed to gain small subsidiaries from the Swedish and Finnish states.

There are ferry connections from Finland to Stockholm or Kapellskär, Sweden, to Umeå, Sweden, to Tallinn, Estonia and to Rostock, Germany. In addition, casual cruises to Riga, Latvia, are organized. The market leaders are Luxury Ferries Inc., and Sunborn Line that both are about equally big, and have a tight competence for the market leader position. In addition, some 10 smaller companies located in Estonia, Stockholm and Åland run shorter routes, such as from Maarianhamina/Åland to Stockholm and between Helsinki and Tallinn. A new entrant is a Greek-owned company that runs two ferries from Hanko to Rostock. In addition, there are many freight ships that also carry passengers from Helsinki to Germany. In mainland Finland, traffic is concentrated to Helsinki and Turku, with Vaasa also having daily connections to Sundsvall. The Åland Islands enjoy the stop of all ferries, as this grants the ship a possibility to sell tax-free products. Stops in Åland are Maarianhamina and Långnäs.

4 Case Description

Case selection and method

This case is based on the work of the author as an external expert and researcher in e-commerce business to the company in years 1998-2004. From the university of the author a bigger research team was involved in the company research initiatives. However, they have not taken part in the production of this report. During these years a number of reports both in English and Finnish have been written and partly published of the case. These are not given here in detail in order to maintain the secret company identity. Data collection has involved interviews, literal material, workshops, management briefings, etc. In total, the interaction with the company exceeds four man-months just in the case of the author.

Luxury Ferries Inc. as a company

Luxury Ferries Inc. (Later shortly Luxury Ferries) operates six passenger ships with car-carrying capabilities, and three smaller catamaran ships. It has headquarters in Finland, but has a long active establishment in Sweden too: many ships are under the Swedish flag. Currently the company is owned by an American company.

The concept of combination tonnage, with passenger cabins, public areas and car decks on the same keel, is the kernel of the business idea. However, a big discussion item for the ferry companies is the kind of tonnage they should invest in. Many believe that the future is that of fast catamaran-type ships, which already have a big market share in the short route between Helsinki and Tallinn, and some of which are also operated by Luxury Ferries. However, in the longer routes these ships are not yet seen. The catamarans have the difficulty that they can not negotiate the icy conditions of the Nordic winters: yet uninterrupted traffic is a value by itself for all of the companies in the industry in the area.

Luxury Ferries used to be a Nordic public stock company for over 80 years. However, its majority shares were bought by a big global company in the shipping business in year 1999, and consequently the company was withdrawn from the stock exchange in year 2003.

The key financial figures for Luxury Ferries Inc. for the last five years are in Table 2.

Table 2 Luxury Ferries Inc.'s main financial indicators (from the company's annual report 2003)

INCOME STATEMENT, €m

| | 2003 | 2002 | 2001 | 2000 | 1999 |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|
| Gross revenues | 546 | 523 | 510 | 526 | 540 |
| Net revenues | 517 | 498 | 484 | 503 | 518 |
| Depreciation | -27 | -28 | -35 | -37 | -44 |
| Non-recurring items | | -6 | 4 | 9 | 3 |
| Other operating costs | -462 | -425 | -414 | -451 | -434 |
| Operating result | 27 | 39 | 39 | 23 | 43 |
| Net financial items | -18 | -21 | -27 | -22 | -26 |
| Result after net financial items | 9 | 18 | 12 | 1 | 17 |
| Taxes | 0 | 0 | 0 | 0 | -1 |

Luxury Ferries is known as a rather conservative company that keeps away from fierce price competition and aggressive marketing. Quality of service, with traveler and ship security at the first place, is a key value. Environmental issues have always been a key marketing concept for Luxury Ferries. The company aims at a situation that seen from the environmental point of view (pollution, energy consumption) sailing on its ships should always be the most effective transportation method available. For that purpose, for example, the ships use sulphur-free fuel that adds some costs as compared to normal fuel.

The values of the company are as follows (the company's annual report 2003):

- We excel the expectations of our customers
- We co-operate in a fair way
- We act in high quality
- We make profit
- Security is the basis of our activities and values.

The company has a little over 3 000 employees, out of which some 2 500 work in the ships. The company is known as a good and fair employer that has for example used little of outsourcing.

One of the current business trends is that of flagging out ships to cheaper countries. In the Nordic environment, the Baltic countries are an excellent goal for that. Luxury Ferries has ships under the Swedish, Finnish and Estonian flags.

The flag of the ship however tells little about its crew. A typical solution is that the ship officers come from Sweden or Finland, but that the other staff might be of other nationality. It is being feared that Estonians can not maintain the high Nordic service quality that is already a concept in itself (Gustafsson, 1999). Most of the problems materialize in the language: Estonian and Finnish languages are close to each other, and Estonians think they can manage Finnish without education, which anyway is not the case. The problems materialize themselves as well in air traffic as in the cruise shipping.

The company has also allocated call center services to Estonia because of cost reasons. As the Finnish or Swedish the Estonians speak is not always perfect, many customers are annoyed by this. This is in practice actually a factor driving customers to use Internet-based services.

The Position of Luxury Ferries Inc. on the market

Many kinds of travelers find themselves on the ship. About half of the travelers are really traveling between two points. Another half is just cruising for fun or for job purposes, for example to run a meeting or a small conference on the ship premises. Meetings up to 500 persons can be held on the ships. The usual cruise between Finland and Sweden takes 22 hours, and ships go to Estonia from Helsinki in four hours. Similarly, the customers are quite evenly distributed between those traveling on business and between those traveling in leisure time. A key factor for the efficiency of the company is keeping the ships moving as much as possible. The 22 hour rhythm for the Finnish-Swedish traffic is ideal for that purpose. Another important factor is of course that of load: the ships should be as full of passengers as possible. However, departures are never cancelled because of too few passengers.

The ship income comes from three main sources: freight, ticket income for travelers, and sales on the ship. The sales on the ships are quite evenly distributed between restaurant sales and tax-free sales. Obviously the only sector where sales can be increased without a limit is tax-free sales or sales in general on the ship. Many times it is worthwhile to get passengers on the ship even for free. Getting them spending on the ship is a major goal. Luxury Ferries have not seized price wars and reductions very strongly, but many of its competitors have. However, even Luxury Ferries runs huge price reductions for many customer groups, especially for those journeys that run on less favorable weekdays.

Unfortunately, the total market for ship traveling does not seem very strong. Integration of the EU should mean more traveling and interchange between the different regions, but at the same time many factors speak against the ferry traffic.

Alcohol is expensive in the Nordic countries. A traditional reason to take a ship cruise has been that of buying tax-free alcohol from the ship. As the Nordic governments have been compelled to cut down alcohol taxes, the competitive advantage tax-free sales have enjoyed has eroded a lot.

Europe has been slower than U.S.A. to see low-cost airlines to enter the market, but during the last years they have entered even the Nordic market. As a result, for the traveler it is not clear that the ship would be the cheapest method to travel, specially taking into attention time usage and spending on the ship.

September 28. 1994 was the day that MS Estonia sunk on its route from Tallinn to Stockholm, taking with it to the deep sea over 800 passengers. Still 10 years after the accident the market suffers from this: many Nordic, specially Swedish, people never want to access a ship. After the accident all ships on the region were equipped with three tiers of doors for the car deck, and this of course also meant high costs for the ferry companies.

Because of terrorism fears, for example procedures on the entrance to the ship have been sharpened: no-one is allowed to travel without leaving complete personal identification (which was still possible a few years ago), and security checks as in airports are considered to be taken into use at the entrance to the ships. Needless to say that such activities annoy many travelers.

A cornerstone for the company customer relationship management is that of an own frequent traveler program, comparable to that most airlines run. The relatively small size of the company however leads to the fact that there are relatively few really heavy users of services (comparable to high category members of frequent flyer programs), and that few customers can be persuaded to increase their use of services because of the frequent traveler program. The company has kept away from binding its own frequent traveler program to the offerings of bigger players, such as three big trade concerns in Finland offering their customers frequent buyer programs, or to those of major credit card companies such as Visa or American Express. This has reduced the attractiveness of the frequent traveler program in the eyes of the customers, but at the same time given Luxury Ferries freedom to develop the service without external restrictions.

The market share of the company in the routes it operates has developed as in Table 3 during the last three years.

Table 3 Development of Luxury Ferries' market share in percent

(from the company's annual report 2003)

2003 2002 2001

| | | | |
|------------------------------------|----|----|----|
| Market share of passengers carried | 33 | 31 | 30 |
| Market share of freight units | 32 | 28 | 29 |
| Market share of cars carried | 33 | 29 | 30 |

Information technology in Luxury Ferries Inc.

In information technology, the company runs a rather traditional mode. The heart of the company is its own reservation system run on a mainframe environment. Each ship by itself is a complicated information technology environment. The company has a network of some 1000 personal computers (PCs) in several locations. Continuous 24-hour operation is crucial both for the ships and for the reservation system. It might be said that ICT in Luxury Ferries suffers from a common problem: High value but low status (Avison, Cuthbertson, & Powell, 1999).

The ICT-department is led by Esko Friberg (not real name). He enjoys a strong position in the company. This position is gained through a comprehensive and professional management of the ICT function, and backed by his long career in the company, over 20 years. Mr. Friberg is not strong in the business side, and rather enjoys keeping away from the decision making of the key operative companies and business units running the customer interface.

The ICT-department is run as an independent cost-unit. The company runs no internal charging procedures for IT-services and does very little even cost accounting in that field. Most services are run by the company itself, and the key operative system, the reservation system, is developed and maintained by the company itself. In building interfaces between the electronic reservation system on the web-site and the basic reservation system, the company used an external software house.

Staffing of the ICT-department is in good hands. Middle management is experienced and internal working atmosphere is excellent. New young talents are also growing fast. Access to good workforce is granted, as Turku is a big university city with a lot of ICT education, and however Luxury Ferries is one of the few major Finnish companies having its ICT-operations headquarters in Turku.

One big issue for the company is the introduction of Wireless Local Area Network (WLAN) technologies, both for internal operations and for customer use. The big question is do customers really want and appreciate such services, and if yes, are they willing to pay for those.

Luxury Ferries operates WLAN-services in parts of its four big ships. These services are targeted for customers. These WLAN-connections are offered in the ships public premises, with the following order of importance: conference facilities, commodore class lounges and public restaurants. Wireless connections are not offered in the whole area of the ships, and neither in the cabins, which have no fixed Local Area Network (LAN) connections either. In ships, more WLAN-base-stations are needed than in houses of concrete as metal walls effectively attenuate signals. There are no WLAN-services available in Luxury Ferries' terminals. This is a conscious decision, as it was seen that people spend such a short time in the terminal premises.

WLAN-infrastructure in the ships is operated, maintained and owned by the Nordic teleoperator TeliaSonera, the local market leader, which runs a service called HomeRun. Anyone with a subscription to this service can also use the network in the ships. Luxury Ferries rents pre-configured PC's on the ships for those willing to use the services. These computers contain 24 hours of usage time to TeliaSonera's network. Pre-configured PC's are a prerequisite, since no problems should occur and it is not possible to organize any kind of helpdesk on the ships. The PC's are equipped with a "go back" -function, meaning that they are always totally erased from customer-initiated material and returned to the original state as they are restarted.

In general, Luxury Ferries does not use WLAN-technologies in company's own operations, neither onboard or at land. However, ships have satellite connections which are used to different kinds of data transfer activities. In land operations WLAN-technologies have not been seen necessary, as the company has traditional wired LAN's in operation in all premises. Despite this some employees have mobile computers equipped with WLAN-cards for use in public WLAN-networks. For Luxury Ferries, the expensive part is the satellite connection that the ship's WLAN is using for Internet-connections. Luxury Ferries pays for this connection for all the WLAN-users. The capacity is limited to 1 Megabyte/second, and it is to be shared between all the seven ships. An active Internet-user gets to the physical limits of this connection speed quickly.

In the future there will be more wireless applications in the ships. WLAN-technology is being tested in two promising areas: Firstly, when the ships enter the harbor area, high-capacity data transfer between the ship and the terminal could start already before the docking. Wireless technology allows speeds of 2 Mbit/second even in distances up to 2 kilometers. This would have a deep impact on the actual amount of data that can be transferred during a harbor visit, which is usually just some 1-2 hours. Secondly, there is a need to establish temporary sales points in the ships with normal connections to the main Point-of-Sale –system. This could be done with WLAN-technologies.

If we take a closer look at the architecture of the e-commerce application, the electronic reservation system, we can see that the architecture is rather complicated. The company's old but robust reservation system on a mainframe is the basic backbone of the system. For internal use and for travel agencies other user interfaces that browsers are provided to the system.

The needed interfaces between the reservation system database and the web-application were ordered from an external software house. They work fine according to their specifications, but if new query or reservation possibilities are wanted, they must be programmed separately by the outside vendor.

For the web-site appearance, further an external software house is used. It is important to have a consistent appearance across the company and across the different media (Internet, printed material, tv- and radio commercials, materials on the ships), and so the maintenance of the web-site or of the electronic reservation system can not be left solely to the IT unit.

Needless to say, in such a complicated multivendor environment any changes to the reservation system demand time and effort, even when the technologies as such are of decent modernity and quality.

Of course Mr. Friberg knows that even though the electronic reservation system is good, it is not perfect. The system functionality shortcomings are the following:

- Complicated reservations are not always easy to make. A packet-type cruise is easy, but for example ordering a tour-retour trip in two different journeys would need two reservations.

- If the chain of reservations is not succeeding, you can not electronically cancel reservations.
- Those thousands of special services customers might need on the ship (restaurant, movie, barber shop, sauna etc. reservations) can not be ordered through the system. For example, special rooms for handicapped or pets can not be reserved through the system. Just basic car reservations can be made through the system, all vehicles having special dimensions must be reserved through traditional channels.
- Group reservations are not allowed through the system. A maximum reservation is ten passengers and three cabins and two vehicles.
- The system is weak in simulation. For example, the cabin category the customer is selecting has a deep impact on the price of the trip, and trying out different alternatives is not easy for the customer. The same is true for switching between different sailings, which also can have very different prices. In most cases the customer will have to start from the beginning with the reservation.
- Services between Finland and Germany can not be reserved through the system.
- The system is not the same in each language version. Different countries have different functionalities of the system.
- Even when the system can allocate the reservations to a frequent traveler account, it can not offer any extra benefits for the frequent travelers, such as prefilled fields or preselected alternatives based on the customer profile.

An illustration of the management decision needs in Luxury Ferries Inc. concerning the reservation system

Mr. Esko Friberg is loaded with performance pressures. On one hand, the company management is telling him that he is doing a great job, and that the Finnish ICT unit he is leading might be cultivated to a global competence center of reservation systems for the whole global owner

company. On the other hand, whereas the reservation activities perform well and the basic reservation system is operating effectively, lack of development in the Internet reservations front threatens to cast a shadow over the whole competence of his ICT unit.

Mr. Friberg himself feels that a lot more could be taken out of the system if just a little more marketing support could be gained from inside the company. First, he would like to give the reservation system a clear distinctive name, and start just making PR for the system itself. However, the company marketing department feels that they sell shipping services, not information system solutions. Second, he would like to have clear packages giving extra value for the customer to be available from the web-site, and only from there. The extra value could materialize in lower prices or in some extra services the customer would get. However, again, he feels that the marketing department is unwilling to tailor special offerings for the web-site distribution.

Luxury Ferries entered electronic commerce with its on-line reservation system in August 2000. The system has following technical characteristics:

The hearth of the system, the reservation database based on a relational database management system, is the same that is used by other systems and users than the on-line reservation system. Own staff and travel bureaus have other kinds of user interfaces to the system. However, having just one integrated reservation database is a key success factor for the company.

A lot of the work with of the on-line reservation system has been outsourced. A small external software house made the query and update routines to the reservation database, which were then easy to install to the interface offered for the Internet customers. The company itself felt short of skills in this technology area. The reservation system user interface and general appearance is harmonized by an external media company that maintains the appearance of whole web-site of the company. However, Luxury Ferries Inc. runs the application on its own server.

The limits of the reservation system are often felt in daily operations. For example, customers would like to reserve tables on the ship restaurants. As they are not in the basic reservation systems, but in other, ship-specific systems, connections to them are hard to make, even though for the customer the issue of getting all the reservations at once seems natural and easy-to-perform.

Pressures to adopt on-line reservation systems at Luxury Ferries Inc. cumulated as follows over a long period of time:

- Luxury Ferries aims to be market and quality leader. Not having an on-line reservation system threatened to become a competitive disadvantage. This became painfully evident as the main competitor Sunborn Line opened its on-line reservation possibility earlier. Keeping up with competitors is a popular reason to invest in IT, as already found out by (Hochstrasser & Griffiths, 1991):” *An almost equal number of companies, 15%, feels comfortable with aiming at the same levels of investment as their rivals. The rationale behind this approach is placed on the belief that in uncertain situations, the safest way is to follow the majority.*”
- Luxury Ferries has actively participated in the development of many travel-related concepts in Finland. Not having a proper on-line reservation system would be a image loss to the company.
- The main own distribution channel, call-center based telephone service is heavy loaded. Solutions to off-load burden from there would be needed. This is well in line with traditional IT knowledge: *“Seldom does IT reduce costs. Its main value lies in that it change and organization’s cost configuration, so that the sales or production increases without increasing staff“* (Willcocks, 1994).
- Customer have found Luxury Ferries’ web-site. They eagerly look for new contents. Increasingly more customers also try to contact Luxury Ferries and reserve traveling services through e-mail.

Next we discuss the e-commerce initiative at Luxury Ferries we discuss the following issues taken up in (Kalakota & Whinston, 1996):

- Advertising and segmentation
- Product display and positioning
- Brand and category management
- Pricing
- Promotion and Incentives
- Merchandising and inventory management

- Customer service quality
- Location analyzing and decision making
- Retail organization and human resource management
- Financial dimensions of managing operations.

With the e-commerce initiative we refer to the on-line reservation system. However it would be false to interpret that it is just a question of the web-interface. As the discussion shows, the web-interface needs a lot of support from other business activities to become really operational and accepted by the customers.

Advertising and segmentation

The first phase of the project delivered a reservation interface just for the regular customers. The idea was to test the services with a smaller group, and give the regular customers a feeling of privileges. In April 2001 the storefront was opened for all customers.

Luxury Ferries decided to take a rather low profile in the marketing of the new storefront: the only marketing was in the journal targeted for regular customers, with just a short notification of the new possibility. Should the application not work would there not be also much negative publicity, was the logic. Further, e-commerce should not by any means to lead to price erosion, which might be the expectation of some customers.

A key to Luxury Ferries' profitability is price segmentation. Customers in Sweden, Finland, Estonia, Russia and Germany have to pay different prices. The practical situation is that these different nationalities have very different purchasing powers. Setting up national storefronts for different countries accounted for a lot of conceptual thinking and work, as has been evident in the academic literature too (Zhu, Kraemer, & Xu, 2003). Now the system is such one that from the different countries you have different prices. This of course accounts for customer dissatisfaction as they naturally visit different sites. Specially problematic this is in the case of Finland and Sweden that share partly a joint language, Swedish. This very same problem is very well known in the case of airline ticketing.

Product display and positioning

The first products to be taken into the service were cruises. This was because they are simple: the product packages were already there. Individual journeys are a more complicated issue: the variety of traveling options as it comes to cabin category, timing of the journey, bringing with a car etc. is much bigger. However, for example (Christensen & Tedlow, 2000) point out that the winners in electronic commerce will be those that will be able to add even more complicated products to the offerings of e-commerce. In the first year, the long Helsinki-Rostock journey and the short frequently run Helsinki-Tallinn and Vaasa-Umeå¹ journeys were excluded from the supply through electronic commerce. Through the on-line reservation system, groups up to 10 persons can have reserved their journeys.

Brand and category management

The original conception was that Luxury Ferries' brand is strong enough to carry the service forward. So the major channel to the services would be the web-address web.LuxuryFerries.fi/se/dk/ee/ru. No extra effort was taken to introduce the service to any portals or virtual malls. A lot of effort was put to the user interface design, so that the Luxury Ferries brand would be visible also in the electronic storefront (colors, company symbols, ships, etc.). However, for the new electronic reservation system, no specific name was introduced.

Pricing

Luxury Ferries started with a low-profile pricing strategy. As opposed to the major competitor Sunborn, the electronic storefront would not offer any last-minute bookings with reduced rates. All the prices should be the same as in other marketing channels. In Autumn 2001, special offers were anyway added to the web-storefront, and the number of reservations through that channel grew. Mr. Friberg feels that there should have been much more experiments with pricing in the electronic reservation system, so that knowledge about the price sensitivity of the customers would have accumulated. Now, however, this is not the case. When well managed, the electronic

¹ Shortly thereafter the whole route was sold to a new starting company

reservation system could become a valuable tool for pricing management (Baker, Marn, & Zawada, 2001).

Promotion and Incentives

As said, promotion of the new electronic storefront was next to minimal. At the beginning, no special incentives were given to the reservations made through the web-site. Later however, usage amounts could be increased through offering somewhat cheaper selected trips just through the electronic storefront.

Merchandising and inventory management

As we speak of travel products, no physical inventory for the merchandise is needed. Very precise book-keeping is anyway needed. The electronic storefront is directly connected to the main reservation system of the company at the minicomputer. This interface was made long before the system in other ways started to gain shape. Some additional services that would be highly demanded, for example table reservations to the ship restaurants, can however not be handled through the current system.

A traditional knowledge in the industry is that a few cabins should always be left unsold. In any journey, last-minute customers or customers unsatisfied with their current cabin will come up, and they are willing to pay good prices for the cabins. It must be remembered that on a typical fully booked journey there are about 2 000 passengers with. Keeping a few cabins not sold has very marginal effect on the profitability, should they not get sold.

Customer service quality

Luxury Ferries has invested quite a lot to the usability of the web-reservation system. Should the customers have problems, they can always approach Luxury Ferries by other means, for example through all travel bureaus in Finland and Sweden and through an extensive call center network.

Location analyzing and decision making

Location management is no major problem for travel services. However, Luxury Ferries operates a multi-country multi-language environment. The basic solution was that in Finland services through the web-interface are sold just in Finnish language, and the cruises should start from Finland, and in Sweden, services are just sold in Swedish language, and cruises must start from Sweden. In the long run problems in maintaining this structure will however emerge, specially as Swedish is the second official language in Finland, and traditionally Luxury Ferries has had a lot of Swedish-speaking customers. So far no good solution to this problem has been found.

Retail organization and human resource management

For the electronic commerce initiative, no special personnel was recruited. All performed their work on a project basis. However, together some 10 persons were deeply involved in the development of the prototype electronic storefront.

Financial dimensions of managing operations

No special project account and budget was established to the building of the on-line reservation system. The costs were included to the daily operating costs of the IT unit, which seems to be the way Luxury Ferries usually tends to operate. With this structure, it was easier to get political acceptance to the project in the organization that is cost sensitive, and where many projects wait for their fulfillment. For example, investment on an on-line -reservation system would be at a competitive disadvantage when directly opposed to an investment say on ship safety. In the same line of operations, the system carries no fee to its users: no use commissions are collected from any unit to maintain the system.

5 Current Challenges Facing the Organization

After about one year of operation, some 4-6% of reservations happen through the web-service. With good offerings, top periods have emerged with a share of some 8%. Yearly, some 5,5

million passengers are carried, and some 310 000 passenger cars utilize the ferries. However, one reservation usually contains a large number of passengers and services.

The on-line reservation service application rate could be higher, but this usage frequency already shows that the sales channel is functioning, and that at least a small group of customers has found the web-channel. Most probably, the site has not brought many new customers to Luxury Ferries, but has unloaded other stressed channels, specially the busy telephone call center. Fortunately, Luxury Ferries' position is so strong that the risk of channel conflict of distribution (dissatisfied sales agents) has not realized itself very strongly. Avoiding this channel conflict is a major headache for many companies (Galea, 2000; Tsay & Agrawal, 2004).

There are some speculations on why the electronic reservation system has not become a dominant sales channel, but they are just speculations, the company has performed no detailed market research on the reservation system adoption. Such an effort might anyway be worth the effort (Spiliopoulou, 2000). Some reasons for not adopting the system might be:

- The final reservation might still be too many clicks away (Carr, 2000). Making the reservation just is also complicated. It is easier to order the travel service through a telephone call.
- Customers might suspect that they anyway get a cheaper price through the human operators. As a whole the company's pricing scheme is quite complicated, and implementing it to the Internet even in some form was already a huge challenge. Other companies have seen this as well (Simon & Dolan, 1998).
- Not all reservation services are available at the system. For example, a key service especially for the cruise passengers is to reserve a table from the ship restaurants, and unfortunately this service can yet not be enjoyed through the electronic reservation system.
- Credit cards were not a paying method for the electronic reservation system. This might have inhibited many from using this sales channel. However, it is nowadays possible to pay reservations with major credit cards in the system.

Maybe most importantly, building of the web-based reservation system has had an effect on the overall architecture of the company's marketing mix. Integration and co-operation of the marketing department, the ICT unit and the Call Center has intensified. For example, simultaneously with the introduction of the web-based reservation system, the whole regular customer program was renewed, and the major change was an introduction of three level categories of regular customers, as usual for example in the airline industry. However, these two projects were run independent of each other.

As the market leader, Luxury Ferries has shown its capability to master new media like the Internet. In the assessment of some Finnish trade journals, Luxury Ferries' web-reservation system has done well.

In the literature review, the total fast growth of the tourism industry became very clear. Unfortunately, Luxury Ferries is not having this status of the market. Rather, the company is working hard to stop deterioration of the market volume. On the contrary to the airlines, the bonus program has not become a central marketing issue for the company, due to its too small size to run an own and independent bonus program. In the case of Luxury Ferries, the issues of multichannel marketing and having a rich selection of extra services through the reservation system became very central.

Next we compare the Luxury Ferries' system to typical recommendations given for electronic commerce in literature.

Offer complete product packages for sale

Luxury Ferries started with uncomplicated cruise products, but has since then broadened the scope of offered products. Unfortunately, still the most complicated (and profitable) travel arrangements seem unsuitable for the e-commerce, and Luxury Ferries too is missing many products from its electronic reservation system.

Provide contact points

Luxury Ferries' competitive advantage is that it is a well known brand and brick-and-mortar company with presence in many Finnish and Swedish cities. Telephone services are many and easy to access (toll-free numbers). The customers should have easily other contact means if something goes wrong with Internet-contacting.

Build customer trust

Luxury Ferries believes that its respected brand name in the Nordic countries is enough to build customer trust.

Build a user community

Within Luxury Ferries' site, there are special sites for kids and teenagers with some interactive capabilities. However, for the adult customers there is yet nothing to offer.

Keep the customer alert and informed

Luxury Ferries will send reservation confirmation both through e-mail and traditional mail. However, no other contact will exist between the paid registration and start of the journey.

Update the site constantly

Luxury Ferries' web-page is rich in contents and is updated all the time. For layout reasons, an external marketing agency is used. During the last half a year update frequency has been increased.

Appreciate customer loyalty

Luxury Ferries has an extensive regular customer program. It is however insensitive to the method through which the customer reserves his/her travel. As price reductions have been added to the web-site reservations, the channel has won on the number of made reservations.

Focus on user interface design

Luxury Ferries uses a marketing agency for maintaining its www-site in order to make a professional and coherent appearance. Luxury Ferries pays special attention not to keep the pages simple and to keep the layout spacious, so as a day on the broad sea.

Establish security

Luxury Ferries believes that its brand name will affirm the users of the security of the site. No sensitive data about the customers is either stored or demanded. All payment arrangements run through standard user interfaces offered by the national banks.

Establish entry point to your site

Luxury Ferries has not participated in different kinds of portals. Again, the idea is that people looking for a ferry trip will recognize the site web.LuxuryFerries.fi/se/dk/ee without trouble. In Germany, the web.LuxuryFerries.de is reserved for other use, and the company uses the site web.LuxuryFerries-line.de (the www-site names here not real to hide company identity, but they give the www-site name structure).

Luxury Ferries Inc. has decided to run a low-cost, low-profile strategy with its introduction of on-line reservation system. The company feels that the advantages of this kind of proceeding have been:

- Slow, secure process without major drawbacks or failures: risk avoidance
- Moderate investment
- Little disturbance to other existing business models and delivery channels, low channel conflict
- Avoidance of price competition on the net
- Moderate burden to the personnel.

The selected line of proceeding has of course not been without disadvantages also:

- No decisive relief for the stressed call center
- No major changes in market share
- No major image or brand benefits.

Much of literature on electronic commerce is targeted at dotcom. –enterprises that are first at the early stages of business. In our case we saw that some recommendations given in the literature are not high up in Luxury Ferries' agenda. Issues and priorities for industry entrants are different from those for established companies like Luxury Ferries. Trust, security and a wide variety of contact points to the company are natural characteristics of a company like Luxury Ferries. Neither does the company look for fast profits and speedy business growth, but is rather satisfied with maintaining the current business positions.

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