



Digital Business Ecosystem

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Task B4 SME Needs and functional requirements

**Use Cases and Requirements
in Leisure Services and Conference Organisation**

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1 Introduction

The Digital Business Ecosystem project aims at delivering an infrastructure for implementing B2B applications for SMEs in a cost-efficient, modular and flexible way. This is especially interesting for industries in which there are established patterns of several SMEs interacting to provide services to a customer. DBE aims at supporting dynamic value chains which adapt to the changing needs of customers. Therefore industries where the value chain constellations change often and heterogeneous demands are made by customers are especially relevant.

This document reports on a series of interviews which was held in the previously identified and related opportunity spaces of “tourism and leisure” and “conferences and conventions”. Wherever possible, SMEs were interviewed who had existing collaboration experience with some of the other interviewed SMEs, so that a complete picture of the mutual expectations and requirements could be created. The interviewed SMEs include both “user SMEs” and “software SMEs” or SMEs delivering IT services. While a dissemination strategy chosen during the course of the project was to concentrate on these latter IT and software SMEs as potential “multipliers” of the project’s results, talking to the “user SMEs” nevertheless provided important insights regarding the perceived needs, issues and barriers.

In two chapters related to the interviews in the Aragon region, Spain and Tampere, Finland, we begin by presenting the characteristics and stated requirements of the SMEs. The following section then describes and analyses collaborative business processes characteristic for the regional opportunity space. The final chapter summarises the requirements and business process characteristics in order to be able to derive necessary features of the DBE infrastructure.

2 Hotels and Tourism in Aragon, Spain

This chapter summarises the information obtained from SMEs during the interviews, which took place in Benasque Valley and Zaragoza (Spain).

The focus of the interviews were SMEs which offer “leisure services”, such as travel agencies, hotels, sport service providers, food and handcraft gifts, etc.

Nº	Type of organisation	Name	Contact
1.	Travel Agency	Viajes Orienta Siete Mares	Javier Lozano Pérez
2.	Hotel	Hospedaria Hospital de Benasque	Fernando Panart
3.	Hotel	Hotel Ciria	José María Ciria
4	Real estate business	Habitat Benasque	Manuel Martín Gimeno
5	Sport service provider	Equipo Barrabés Guías de Montana	Gaby Mur
6	Sport service provider	Radical Snowboard	Jordi Casas
7	Sport service provider	Escuela de Parapente Pirineos	Mariano Ucedo Rufat
8	Food and Handcraft gifts	Sabores de Pueblo	Miguel Chéliz
9	Governmental	Aramón Montanas de Aragón	Christóbal Roldán Ramirez

Table 1: Overview of SMEs interviewed in Aragon region

2.1 Requirement Analysis

This section presents general information about each interviewed SME, a short description of them and about their services and their sub-contracted services. Moreover, the IT infrastructure of the SMEs, and some important information about the IT purchase process of each SME are also presented. Finally, some positive and negative aspects are listed. The positive aspects are related to their expectation of DBE, their IT experiences and their possible future engagement at DBE Project. Consequently, the negative aspects are related to the SMEs problems, which DBE cannot help, and the ones that DBE could help them to solve.

2.1.1 Travel agency - Viajes Orienta Siete Mares

General Information:

Web site	http://www.viajesorienta.com
Contact: person	Javier Lozano Pérez Manager
Industry:	Transportation and Travel
Legal form:	Limited company
Number of employees:	13
Clients:	Spanish companies Most profitable offered service is "Meetings in Nature" Conventions: 90% from Spain 10% International

Description:

Viajes Orienta Siete Mares is a travel agency specialized in customized high-quality trips and tourist services tailored to client demands with a long experience of more than twenty years in tourism. The team of professionals are high qualified that ensures the success of the individual or business trips of the clients. Orienta offers a guaranteed best price service through a comparative budget between the different suppliers. Orienta selects single responsible suppliers with absolute reliability and a high standard of quality.

Services:

Conventions have become an essential tool in the communication between top management and its employees. Its core concept is a "no stressful sessions of work" for the participants, and its newest element is "the stimulus and pride of being a member of a successful group". Orienta help companies to organize its convention on an original and customized form, taking care of all details to assure a unique, motivated and unforgettable event to all guests and participants.

An **Incentive trip** is an excellent investment for companies, since it motivates the employee in his/her activities. Therefore, it is important to trust an agency to guarantee that the participants obtain the greater benefits of the trip.

Big accounts. To optimise the finance account of the companies through:

- Flight tickets. up to 25% off on standard rate
- Hotels: between 10 and 50% off on official tariff.
- Rental car: until 40% off on official prices.

Conventions. Orienta is an active, dynamic and innovating agency in the sector of Professional Convention Organizers (PCO) with 20 years of experience in the sector, which it can ensure the success of the convention through dedicated time to prepare the convention content and to arrange the innumerable technical, lodging and social details of the convention program. A convention is a unique opportunity that demands the aid of professionals of the sector.

Subcontracted services:

- Sports activities
- Catering
- Transportation

IT-Infrastructure:

Connection	3 ADSL connections (Galileo, Amadeus Professional, and Internet)
Technological platform	Windows NT/2000
Database	MS Access
Security	Firewall (but it slowed down the system so they turned off)
Office Software	MS Office Adobe Acrobat Reader
Special Software	OfiViaje (www.ofiJean.com)
Future software purchasing plans	CRM (but price and implementation time is currently too high) WiFi Intranet between Orienta offices Web site in English for foreign customers
Internet applications	E-mail internal and external Information / research Flight and hotel bookings (www.bancotel.es ; www.transhotel.com ; Galileo, Amadeus and Amadeus Pro Systems) Presentation of products and services

Company web site	<p>Information for companies (incentive travel, conferences & conventions; and company account)</p> <p>Information about trips (Safari, Paradise islands, Ecologic sites, and classical trips in Africa, America, Oceania, Middle East, Asia, and Europe) (link to http://www.tandem-tours.com/indexAlta.html)</p> <p>Information about special discounts (link to http://travelofertas.com/index.php).</p> <p>Magazine (www.masdeviajes.com)</p> <p>Bulletin/Forum</p>
Systems with partners: (These systems could avoid costs on telephone calls and speed up the process)	<p>Reverse auction system for hotels rooms.</p> <p>Online system with password for catering services, where Orienta can log in and specify the menu for a specific number of people. The system automatically generates an offer to Orienta based on its demands.</p> <p>"Messenger system" between clients and Orienta</p> <p>"Messenger system" between Orienta and small hotels without booking system</p>

IT purchase process:

Purchase decision by:	Group
Is the person interviewed personally involved	Yes (Mr. Lozano Pérez – Manager)
Expected payback period (ROI)	Not specified
Software selection criteria	Acceptance of the employees Price Product functionality

Difficulties and Expectations:

- Mr. Pérez is an IT enthusiast, he always tries to find a way to save his client's working time during a trip arrangement. He follows the concept -"Time is money", so if a supplier needs 3 days to send him an offer and afterwards more telephone calls to handle price and conditions, it means that he lost time and money. Therefore, he would like to integrate more of the IT with partners and clients to support some activities, such as online reverse auction for reservation rooms. It can help him while he organises a conference/convention, when the demand of rooms is high. Another support could be a kind of "online messenger" between Orienta and its special clients (companies) to solve problem and demands faster than nowadays by phone.
- Language of web site: only Spanish (at time of interview), although they want to increase market area.
- Although he acknowledges the potential of a CRM system. Mr. Pérez has not yet implemented such a system. He still waits for one with a good benefit-to-cost ratio.

2.1.2 Hotel - Hospedaría Hospital de Benasque

General Information:

Web site:	http://www.llanosdelhospital.com
Contact person:	Fernando Panart Manager
Industry:	Hotels and Restaurants
Legal form:	Limited company
Number of employees:	35
Clients:	Spain (Madrid and Levante) 90% direct reservation 5% through travel agencies 5% companies (conventions and meetings)

Description:

Hospital de Benasque is a hotel located in the core of the Natural Park Posets-Maladeta. It was a refuge for walkers, and after eight centuries since its creation by the Hospitalarian monks, it was reconstructed.

Services:

The Services provided by Hospital de Benasque include: Lodging and Restaurant.

The Services provided by Llanos del Hospital Ski station include Ski school and Ski resort.

Other services offered are:

- Rental Nordic skiing equipment
- Conference room
- Swimming pool
- SPA (Wellness)

Subcontracted services:

Hiking, climbing, trekking, paragliding, rafting, horse riding, guide's service, etc..

IT-Infrastructure:

Connection	Radio (credit cards only) Mobile phone Modem
Technological platform	Windows NT/2000
Database	MS Access
Office Software	MS Office

Special Software	Reservation management system (written in Visual Basic) Billing system
Internet	E-mail internal and external Information / research Presentation of products and services Banking transactions
Web-site	Language: English, Spanish, and French Information Rates Maps Photos and films (rooms) Virtual tour (area) Weather Snow conditions Bulletin

IT purchase process:

Purchase decision by	Individual
Is the person interviewed personally involved?	Yes (Mr. Panart – Manager & CIO)
Expected payback period (ROI)	6-12 months
Software selection criteria	Modern software architecture Price Product functionality

Difficulties and Expectations

- Mr. Panart worked as a computer systems analysts in the automotive industry; he is an IT enthusiast, and he knows about its possibilities. And the Benasque community knows about his IT expertise and believes in his judgement. Therefore, Mr. Panart is a possible key partner for DBE. He can influence the others to take part.
- Mr. Panart believes that with “DBE Platform” he can attract other kinds of guests, who stay for longer periods (more than 2 days).
- Due to the difficulties over the control of the purchased and consumed material (specially beverages and cleaning products), Mr. Panart expects to find through DBE Platform an inventory system for his hotel/restaurant.
- Mr. Panart reservation process offers the possibility of a fully automatic reservation process; despite of this he does not want it fully automated. He wants to get in touch with his clients and explain them the hotel conditions (price and accessibility). Mr. Panart also thinks that it is too dangerous to have a fully automated system for subcontracting services.
- The employees responsible for the different services (cleaning, food & drinks, etc.) directly purchase their materials. This decentralized process

has its advantages, but the problem is that Mr. Panart does not have any control over the material purchased and consumed. The stock management of beverages and cleaning material is quite difficult.

- Because of avalanches during the winter, it happens that there is no telephone communication or access on the main road from Llanos de Hospital to Benasque.
- Mr. Panart does not like to work with travel agencies and reservation centres, mainly because they are interested in his hotel only during the high season (winter). But during summer time, when he needs help to get new clients, they just forget him. Another problem is that either the reservation centres dictate the room price or the hotel has to pay a fee to them to take part of their database, consequently the hotel profit margin decreases.

2.1.3 Hotel - Hotel Ciria

General Information:

Web site:	http://www.hotelciria.com
Contact person:	José María Ciria Manager
Sector:	Hotels and Restaurants
Legal form:	Limited company
Number of employees:	27
Outsourced services	Accounting (ACI Group)
Clients:	Spain Winter: 50% Madrid, 20% Catalonia, 30% Astoria, Valencia, etc. 80% Private 20% Travel agencies

Description:

This is a nicely decorated mountain hotel for nature lovers and adventure sports. The hotel offers 44 rooms, distributed in three floors, equipped with full bathroom, air conditioning, heating, hairdryer, mini-bar, satellite TV, telephone with direct dial, radio, video and balcony. All Suites have a Jacuzzi. Facilities available to guests include bar/café, TV room, lounges, garden/terrace, bicycle hire, professional massage, disabled facilities, lift, medical service, and laundry, meeting rooms, money exchange, fax, car park and garage.

The hotel is located 148 km away from Huesca and 212 km away from Jaca in the Benasque Valley.

Services

Hotel: There are double and single rooms at the first and the second floors, with complete bath, hair-dryer and TV-color, and the majority with terrace.

Restaurant: Dionisio Ciria is in “charge of the ovens”, “El Fogaril” is one of the best restaurants in the valley. It is specialized in typical kitchen from Aragon and other native dishes recovered by the traditional culinary of the area (Pyrenees).

Subcontracted services:

Sports activities – special customers → direct contact with Barrabés Equipo
common customers → <http://www.benasque.com/activid.html>

Sports schools – special customers → direct contact with Barrabés Equipo
common customers → <http://www.benasque.com/escuelas.html>

IT-Infrastructure:

Connection	ASDL WiFi
Technological platform	Windows NT/2000
Database	MS Access (data concerning the Hotel management system)
Office Software	MS Office
Special Software	Hotel management system (reservation and billing)
Internet applications used	E-mail Information / research Presentation of products and services
Web site offerings	Information Rates Language: Spanish Maps Photos (rooms) Virtual tour (rooms) Weather forecast (http://www.benasque.com/meteo.html) Sport activities (http://www.benasque.com/activid.html) Sport schools (http://www.benasque.com/escuelas.html)

IT purchase process:

Purchase decision by	Individual
Is the interviewed person personally involved?	Yes (Mr. Ciria – Manager & Owner)
Software selection criteria	All software is obtained via a consultancy service (Barrabés Business Solutions - http://www.barrabesinternet.com/homebs.asp)

Difficulties and Expectations:

- Mr. Ciria is interested in the project.
- Mr. Ciria does not like to offer sub-contracted services such as sport activities, because it means more responsibilities, but he offers special services, such as accompany service to British Ornithologists to observe the bird species of the area. He already has a network of service providers whom he contacts by telephone.
- Mr. Ciria offers events to his clients, such as special weekends and complete packages, which he needs to contact his network of service providers for this extra activities, such as Barrabés, tour guides for Ornithologists, etc..
- The Hotel Management System satisfies Mr. Ciria expectations, it manages all reservation, client expenses, material inventory and generates the client's bill/ receipt.
- Language of the web site: only Spanish, although they want to get more foreigner customers.

2.1.4 Real Estate Business - Habitat Benasque*General Information:*

Web site:	www.habitatbenasque.com
Contact:	Manuel Martín Gimeno Manager
Sector:	Real estate business
Position in the Supply chain:	OEM
Business status:	Limited company
Number of employees:	8
Clients:	Spain (Cataluna, Valencia, Madrid, and Euskadi) Private and travel agencies, but no groups. 76% clients are loyal High amount of regular clients

Description:

Habitat Benasque is a company located in the valley of Benasque, it works as a real estate business and has been renting apartments since 1992. It offers to its clients an ample supply of apartments, where they can enjoy their leisure time. At the web site of Habitat Benasque there are also information about existing services in the Valley. If a client wishes to acquire a second house, he/she only needs to ask Habitat Benasque professional team to find the apartment.

Services:

Rental apartments: Offers for rental apartments for vacation in Benasque, Cerler and Eriste. The rental service includes only the apartment (lodging). The client must rent an apartment for at least 7 days.

Summer 2004: Apartments at Habitat Benasque-Cerler, Residencial Linsoles, and Residencial Ribagorza. The types of apartments are: Type A (dinner room, 1 sleeping room, sofa bed, kitchen and bathroom), Type B (dinner room, 2 sleeping rooms, sofa bed, kitchen and bathroom), and Type C (dinner room, 3 sleeping rooms, kitchen and 1 or 2 bathrooms). The rates are divided into low, medium and high season; and the apartments types.

Sales: Information about the apartment, such as

Location: For example: Apartments with 2,3 or 4 rooms, located in the heart of Benasque village in the Valley of the same name. They are close to the Natural Park Posets-Maladeta, the alpine ski resort of Cerler and to Nordic ski resort of Llanos del Hospital. The building is constructed in natural stone and old wood, taking part of a tourist residential complex that by its quality and services is unique in the Pyrenean area. Its architectonic style is absolutely integrated with the nature.

Structural condition: Here, there is a description about some structural conditions of the building, such as: facade, floor, heating, telecommunication facilities, garage, etc.

Plan/Layout: The client can see the architectonic plans of the offered apartment.

Photos: The client can see the photos from the building.

Second hand apartments: Offers of relatively new apartments, with an antiquity mainly between 3 and 7 years. It is also offered businesses, lands, and old houses to reform, stables and/or barns. Contact by telephone, fax or e-mail.

Subcontracted services:

Sport activities for very special guests: direct contact with Barrabes.

IT Infrastructure:

Connection	ADSL
Technological platform	Windows NT/2000
Database	MS Access (client data)
Office Software	MS Office
Extra Software	
Internet applications used	Information Presentation of products and services E-mail external (clients) Merchandise through "El Corte Inglés"
Web site offerings	Information Spanish Maps Rates (summer and winter)

IT purchase process:

Purchase decision by	Individual
Personally involved	Yes (Mr. Jimeno - Manager)
Software vendor selection criteria	No Application Service Providing Consultancy from Grupo7 (http://www.grupo7.com/)

Difficulties and Expectations:

- Mr. Gimeno invests in advertising in many specific magazines, press and El Corte Inglés (department store in Spain).
- Accounting and billing done computer-based, but not integrated with all other systems and client database.
- A table with all confirmations (rent apartments) is done in the end of each month. This is a handmade table and Mr. Gimeno does not want to automate it.
- Language of web site: only Spanish.
- About the DBE Project, Mr. Gimeno thinks it will be like all other projects (it will not be as successful as expected), it will be like any reservation centre system.

2.1.5 Sport Service Provider - Equipo Barrabés Guías de Montaña*General Information:*

Web site:	www.barrabes.com/equipo/portada.asp
Contact:	Mr. Gaby Mur (Manager)
Industry:	Sports and Leisure
Legal form:	Limited company

Number of employees:	2-23
Outsourced service:	Accounting (Barrabes)
Clients:	Spain 70% private 10% retailers 10% wholesalers Relationship based on tradition

Description:

The Equipo Barrabés Guías de Montaña is a group of professionals, whose objective is to supply all clients with a very customized treatment, assuming to transmit with rigor and high quality the techniques guaranteeing security and fun.

The Equipo Barrabés is divided into two departments, the Equipo Barrabés Guías de Montaña and Equipo Barrabés School of Ski and Snowboard

The Equipo Barrabés Guías de Montaña works in the Pyrenees, but offers also courses in the Alps and trips to the Andes.

At the moment, its office is in the store Barrabés Esquí y Montaña dedicated to the Ski and Mountain equipment. It is also possible to get information by E-mail equipo@barrabes.com, by phone or under www.barrabes.com

The Equipo Barrabés Guías de Montaña has vehicles to offer its clients a complete service, transportation to the area of activity by vehicles 4x4 or trips to other courses sites in Spain or abroad.

Services:

- Winter: skiing school, mountain guides
- Summer: mountain guides, cliffs, trekking, mountain bike tour, etc.

Subcontracted services:

- Rafting*
- Climbing*
- Paraglide
- Snowboard
- Kayak
- Lodging (reservation made only for special clients)
- Mountain refuge: reservation made by phone at least 3 days in advance.

IT-Infrastructure:

Connection	ADSL (from Barrabés Equipment Store)
Technological platform	Windows NT/2000

Database	MS Access
Office Software	MS Office
Special Software	All software from Barrabés store (full integration) Coming soon: Online Reservation System (Filemaker)
Internet applications used	General Information Presentation of products and services E-mail external (clients) Weather forecast
Web site offerings	Information Booking Form (but not saved in any database) Spanish only Maps Rates

IT purchase process:

Purchase decision by	Individual
Personally involved	No (Barrabés – IT Manager)
Software selection	Through consultancy service (Barrabés Business Solutions)

Difficulties and Expectations:

- Mr. Mur has a good informal network, and he can influence other active sport companies to take part in DBE.
- He plans to get in touch with travel agencies, which are not familiar with his company's activities. It can open to his company a great market.
- An expected advantage is to connect his company with sport clubs and travel agencies.
- Mr. Mur advertises the Equipo Barrabés in fairs, catalogues and magazines specialized on the tourism sector.
- The group Barrabés is a pioneer using IT in Spain; it was the first company to sell through Internet (www.barrabes.com). Consequently, it was founded another company specialized in IT and e-Business (Barrabés Business Solutions - <http://www.barrabesinternet.com/homebs.asp>).
- Most of the booking process for outsourced activities (sub-contractors) and mountain cottages are done by telephone and in most of the cases is constrained by weather conditions, guider availability, etc.
- Difficulty to standardize a billing system, due to different types of charge, such as guides by hour, rafting by period, long trips by day.

2.1.6 Sport Service Provider - Radical Snowboard*General Information:*

Web site:	http://www.radicalsnowboard.com
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Contact:	Mr. Jordi Casas (Manager – Owner)
Sector:	Sports and Leisure
Legal form:	Limited company
Number of employees:	14 (18 during winter)
Outsourced service	Accounting
Clients:	Spain, Holland, and Portugal 60% private (Groups) 40% travel agencies (group of school-children from Barcelona – about 1770 hours of classes)

Description:

Company specialized in winter sports especially snowboard activities.

Services:

Snowboard school: A 10 years old dedicated snowboard school, which offers private classes and snowboard courses. There are also special classes for: freestyle and free riding, preparation for specific exams (Los Bloques), and other techniques. Specialized instructors in teaching children up to 5 years.

Back country (Free ride snowboard trips): This service is offered to all snowboarders, who like free ride and nature contact. A pre-evaluation of the snowboarder level is required, though it is accessible to all levels.

Trips take place anywhere in the Pyrenees, specially by Cerler ski station (Cibollés, Caranosa, Canal Amplia, Sarrau, Gallinero_south, La Olla, etc.) or Llanos del Hospital (possibility of free ride through different summits of the Posets-Maladeta natural park)

Radical Sleds (Snowmobile/Sleds): A new service offered to reach hidden places of Cerler station full of new sensations. The client is introduced to this fascinating circuit in Ampriu area.

Snow works: Maintenance of TV repeaters, mobile phone network antennas and other equipment which can only be reached by Quads and snowmobiles.

Freeski: Courses and private classes of radical (extreme) snowboarding.

Other services:

- Clothing store
- Rental equipment
- Repair shop
- Internet café at “La Cabana”

IT-Infrastructure:

Connection	ADSL
Technological platform	Windows NT/2000
Database	Access Excel (sales and teachers' payments)
Office Software	MS Office Excell (sales and instructors' payment)
Special Software	AM Táctil y Tecnidata
Future acquisitions	Web site in English for foreign customers Online registration
Internet applications used	E-mail external Information / research Purchase equipment Outsourced: http://www.linza.net/html/inicio.html
Web site offerings	Language: Spanish Presentation of products and services Information to clients about free ride trips, snowboard school, special work on snow, Rates Bulletin / Forum News Link to weather forecast (http://www.cerler.com/asp/partenieve.asp)

IT purchase process:

Purchase decision by:	Group
Is the interviewed personally involved?	Yes (Mr. Casas – Manager)
Software selection criteria	Price Recommendation (friend/family)

Difficulties and Expectations:

- Mr. Casas would like to have the booking process completely automated and all systems integrated.
- Mr. Casas never used any ASP system but he could not have problems to use hosted systems.
- Mr. Casas invests on advertisement in many specific magazines and brochures.
- Mr. Casas works together with hotels offering vacation packages. Now he offers also these packages through other web sites.
- Mr. Casas expectations are high in relation with DBE Project, specifically concerning reliable cost-benefit of automated solutions for his needs.

- Language of web site: only Spanish, although they want to increase market area.
- Spanish ski school has a monopoly on the slopes to sell courses and classes.

2.1.7 Sport Service Provider - Escuela de Parapente Pirineos

General Information:

Web site:	www.parapentepirineos.com
Contact person:	Mr. Mariano Ucedo Rufat (Manager – Owner)
Sector:	Sports and Leisure
Legal form:	Limited company
Number of employees:	2 (+8 instructors, +1 chauffeur, +1 cameraman)
Outsourced service	Accounting
Clients	Spain Madrid, Barcelona, and Valencia Courses (1 week): 75% Initiation; 25% Advanced 15% and increasing every year the participants of double flights (trial) Private (few travel agencies); students (University or Schools) 90% regular customers 60% friends recommendation

Description:

This paragliding school has been established in 1985 in Castejón de Sos, more than two thousand students received lessons and more than forty thousand flights took place under its supervision. Today “Parapente Pirineos” offers a complete, progressive and customized education, with the best and the most modern material and in the best zone of flight - The Castejón de Sos, in the heart of Pyrenean (Aragon). The school is recognised by the Spanish Aeronautical Federation.

Services:

- Beginners & Advanced paragliding courses
- High yield cross (for totally independent pilots, with an instructor flying with or in front of the participant, communicating by radio)
- Solo flights
- Double flights (two-seats paraglide flight with instructor)
- Competitions (e.g. the “XI Paraglide Pyrenean Cup”)

Other services:

- Sales of equipment
- Rent of equipment

- Repair shop
- Organisation of competition

IT-Infrastructure:

Connection	Analogue communication channel (RTB- Red Telefónica Básica) Coming soon: ADSL + WiFi
Technological platform	Windows NT/2000
Database	MS Access, MS Excel
Office Software	MS Office Excel (Billing)
Special Software	None.
Future acquisitions	Web site in English for foreigner customers
Internet applications used	E-mail external Information / research
Web site offerings	Language: Spanish Information to clients about paraglide flights, courses, competitions, events, licences Online Booking Rates

IT purchase process:

Purchase decision by:	Individual
Is the interviewed person personally involved?	Yes (Mr. Ucedo Rufat – Manager)
Software selection criteria	Price Recommendation (friend/family)

Difficulties and Expectations:

- Mr. Ucedo Rufat is an IT enthusiast, given that he has an Access DB with his clients historical data. He saves the data of all sub-contracting services in- and outsourced services (given and received) in Excel tables.
- Mr. Ucedo Rufat sends advertisements and discount rates of all courses to the current students every year .
- Language of web site: only Spanish, although they want to increase market area. This translation service can be easily offered through DBE Platform.
- Despite of advantages from a complete automated booking process, Mr. Rufat is quite sceptical about it. It will be necessary an intensive teamwork between DBE partners and Mr. Rufat to encrease his enthusiasm.

2.1.8 Food and Handcraft Gift Shop - Sabores de pueblo

General Information:

Web site:	www.saboresdepueblo.com
Contact person:	Mr. Miguel Chéliz (Manager)
Sector:	Food
Legal form:	Limited company
Outsourced service:	Accounting
Clients:	Spain

Description:

Angela Sierco founded the store Sabores de pueblo in 1972 in Ainsa, a beautiful tourist town of the Pyrenean (Huesca). Since its foundation it is a family owned company, commercialising general high quality aliments of the region (Aragon). In 1997 and 1998 the descendants of Mrs. Angela Sierco (Mr. Miguel and Mrs. Chéliz) opened two other stores in Ainsa and Benasque for handcraft, bio/ecological products of the region.

Since 2002 there is also an online shop with all products available at the 3 stores. A client can order online and in about 24hours the order is delivered at his/her address in Spain. An international delivery is also available, but requires a special delivery channel, customs duty rules and taxes, which the client needs to agree to this extra payment.

Services:

- Direct purchase (3 stores)
- Bulletin (<http://www.saboresdepueblo.com/boletin/suscripcion.asp>)
- Explanation about the purchasing process: legal aspects, general information, how to buy (http://www.saboresdepueblo.com/tienda/proceso_compra.asp)
- Special baskets for companies or hotels: contact info@saboresdepueblo.com or call +34 974-500062
- Online purchase

Subcontracted services:

- Delivery: national and international (DHL)

IT-Infrastructure:

Connection	ADSL & Modem
Technological platform	Windows NT/2000
Database	SQL (web site)
Office Software	MS Office (Excel for Billing)
Special Software	Barcode (outcome from store) Inventory: outcome control from storage

Future acquisitions	Inventory: income control to storage
Internet applications used:	E-mail external Information / research
Web site offerings:	Language: Spanish Information to clients about products, receipts, and the online purchasing process Online Purchasing Prices

IT purchase process:

Purchase decision by:	Group
Is the interviewed person personally involved	Yes (Mr. Chéliz- Manager)
Software selection criteria	Price Recommendation (friend/family)

Difficulties and Expectations:

- Mr. Chéliz knows the importance of the inventory management, but it would be quite expensive to track the incoming material; therefore the control of the sold products through barcodes was implemented.
- Mr. Chéliz manages the stocks of online products apart from the products sold in the stores. When an online product is out of stock, it disappears automatically from the web site.
- Language of web site: only Spanish, although it is written on the web site that they can send all products to all countries in Europe.
- Although the shipping company offers the possibility to track the delivery process, Mr. Chéliz does not offer this functionality to his clients, because the products sold online are sent within 24hours. If a client wants to know the current position of his/her order, Mr. Chéliz calls the shipping company and asks them, then informs his client by e-mail.

2.1.9 Governmental Association – Aramón Montañas de Aragón*General Information:*

Web site:	www.aramon.es
Contact:	Mr. Cristóbal Roldán Ramírez (Sub director)
Sector:	Government services
Legal form:	Limited company
Clients	Spain Portugal (increasing) Holland (decreasing) North Europe Morocco and Argentina

Description:

Aramón, Mountains of Aragón, first Spanish holding of the winter activities, was founded as a result of a joint venture from Government of Aragón and Ibercaja to explore the winter sport business in Aragon. The major shareholders belong to the Government of Aragón and Ibercaja.

It was founded in November 2001 and administers the ski station of Cerler, Formigal, Panticosa, Javalambre and Valdelinares, which is the largest skiing area in Spain about 20% of the total area. This way, Aramón offers the possibility to its clients to acquire just one single ski-card to its five stations and their 155,5 kilometres of slope.

Services:

- Administration the ski resorts in the area
- Sales of the ski passes to all five ski stations

Subcontracted services:

- WiFi network for the Cerler ski station
- Escuela Española de Esquí: (ski and snowboard courses)

Difficulties and Expectations:

- Language of web site: only Spanish, although they want to increase market area.
- Mr. Ramírez hopes that DBE could improve the summer tourism of the resorts.

2.2 Private travel use cases

We will now look at some scenarios as they are performed using the current ICT infrastructure, with comments on potential improvements using something like the DBE infrastructure.

2.2.1 Hotel: Hospedaría Hospital de Benasque:

An “old client” – Mr. X (private or a travel agency) wants to book a vacation for his whole family (2 adults and 2 children) at the Hospedería Hospital de Benasque. First of all, he looks at the web site (www.llanosdelhospital.com) and checks the rates, the sport activities offered and the weather forecast. Since online booking is not possible, he decides to call and book a double room with living room for his whole family.

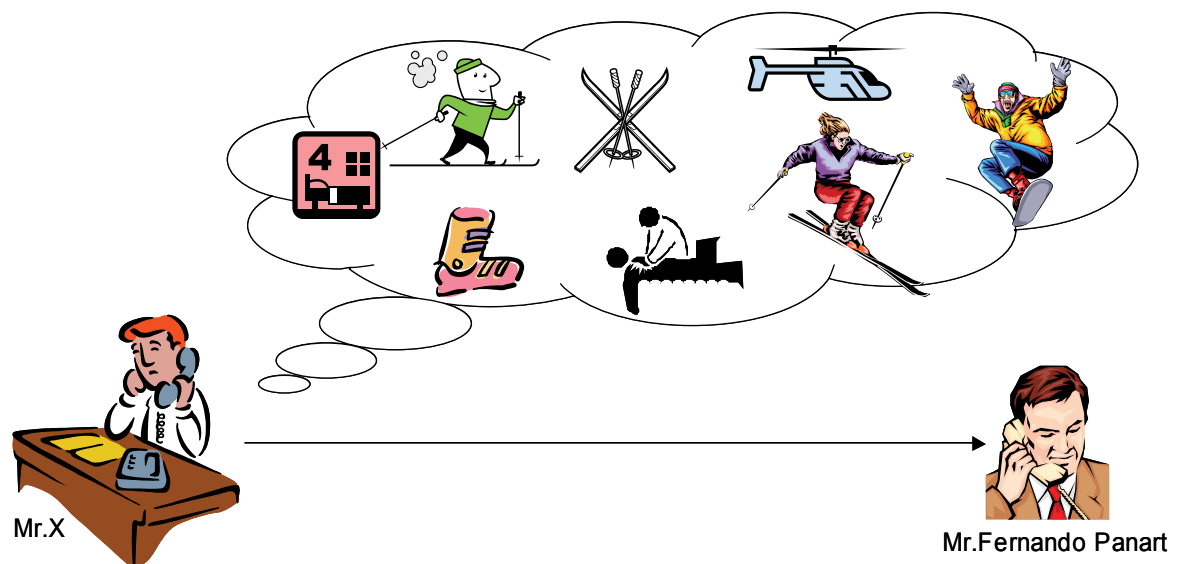


Figure 1: Contact channel

Mr. Fernando Panart (Manager) explains to Mr. X the current situation and instructions to arrive there. The current situation is, because of heavy snowfall from the previous night, it is not easy to arrive. Mr. X also wants to book some cross-country ski classes for the children, and to rent the entire ski equipment for the whole family. As a surprise to his wife he gets information about their wellness activities. Mr. X's would like to do Heli-skiing, and his son would like to take some private snowboarding classes.

Mr. Fernando (Manager) enters the information about Mr. X's reservation into the hotel's Reservation Management System (RMS) and gives him the client reference number (CRN) generated by the system. He tells Mr. X that his reservation will be confirmed upon receipt of payment. Furthermore, the client gets the Hotel's bank account number and asks for a confirmation by e-mail or telephone.

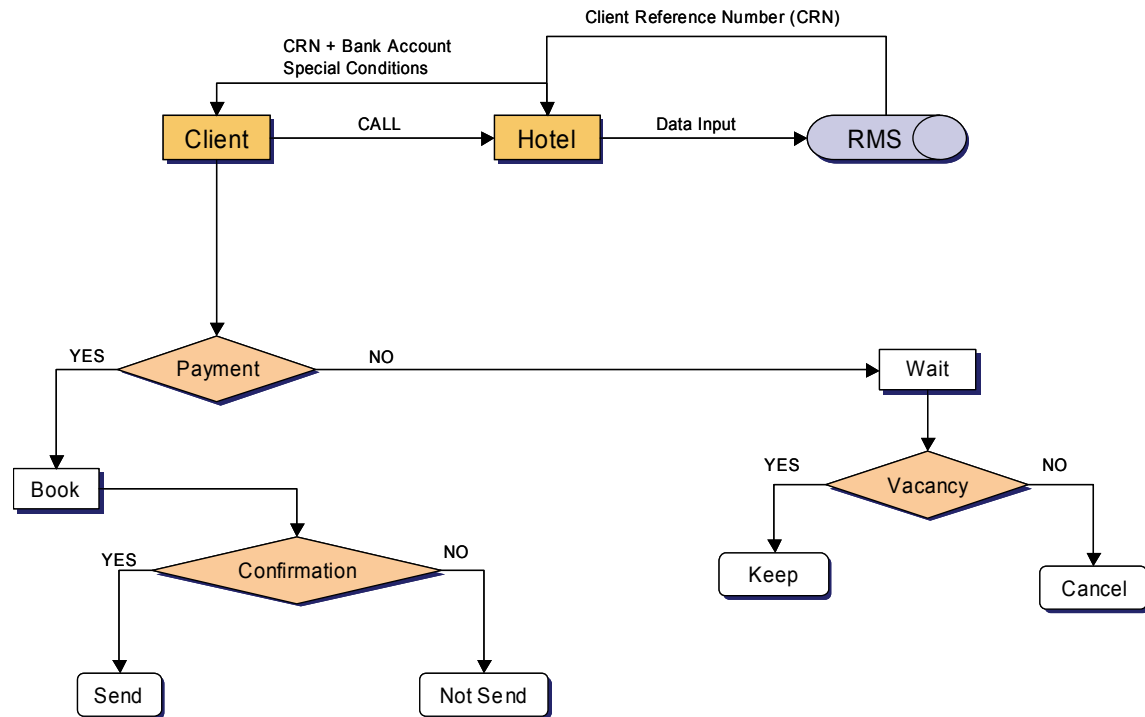


Figure 2: Reservation Process - Hospedaria Hospital de Benasque (Hotel)

Although some of the activities are not being offered by the hotel itself, Mr. Fernando will book them for Mr. X, because he wants his clients to be extremely satisfied. So, Mr. Fernando calls Mr. Gaby Mur, the manager of Equipo Barra-bes, and tells him about the Heli-ski and snowboarding requests. Although he knows that Mr. Gaby does not offer any of these activities himself, he knows that Mr. Gaby can arrange everything for him. Therefore, Mr. Gaby calls Mr. Jodi Casas, the manager of Radical Snowboard, and tells him to arrange the snowboard private classes for Mr. X's son. And he manages to book the Heliski for Mr. X.

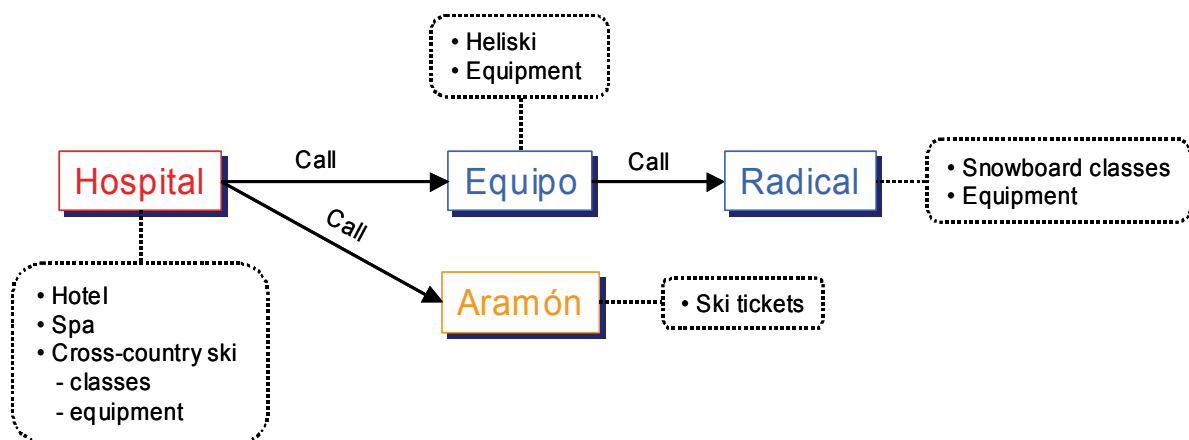


Figure 3: Booking channels: Square boxes show companies, dotted round boxes show activities

After Mr. X arrives at the hotel, an account is opened where all his family's expenses will be booked. This account gets the same CRN-number as for the reservation. When Mr. X leaves the hotel, it is only necessary to close the RMS account and the bill will be generated automatically. Mr. X can pay the bill in cash, by credit card, or by check.

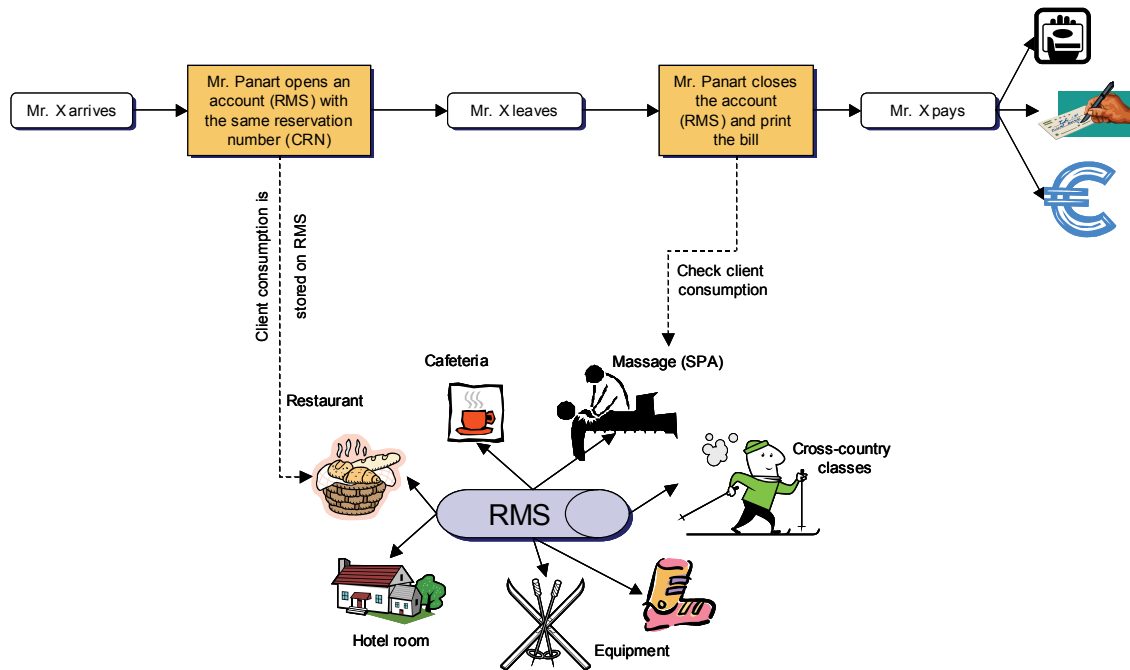


Figure 4: Client expenses payment process

The non-hotel expenses of Mr. X will be paid directly to the service providers. It can be done in two different ways; first, Mr. X can pay directly both service providers (Equipo Barrabés and Radical Snowboard) or Mr. X can pay all services to Equipo Barrabés who then pays Radical Snowboard.

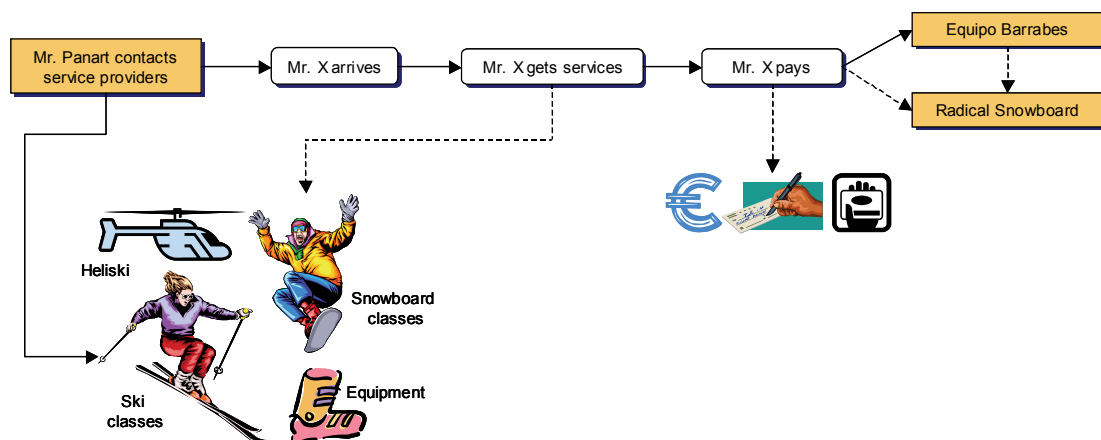


Figure 5: Extra expenses payment process

2.2.2 Hotel Ciria

A client calls Hotel Ciria to book a room for his family. The attendant asks his name, and checks the system if Mr. X is a regular client or not. At the same time the attendant checks if Mr. X reservation is during the high season. Depending on the answer to these questions, the attendant requests from Mr. X a deposit, and Mr. X requests a confirmation. The attendant tells Mr. X the hotel bank account and the amount to be deposited, and asks some personal information (full name, address, city, number of guests). After Mr. X's payment, the attendant sends a confirmation by e-mail or by phone.

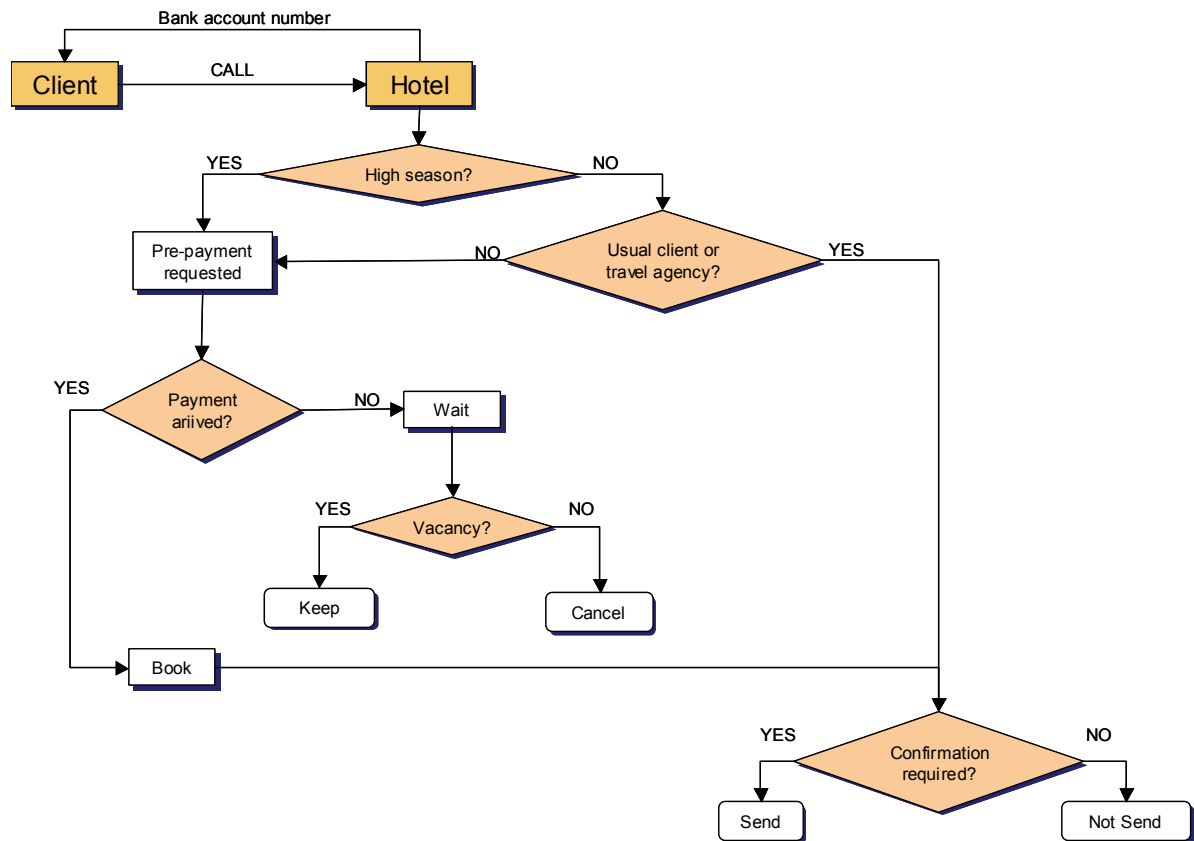


Figure 6: Reservation process - Hotel Ciria (Hotel)

Mr. X asks also for some special services, such as a bird-watching guide for his wife, some trekking and climbing activities for his son and himself, and for his daughter he asks for some rappelling and rafting activities. Because Mr. X is a regular client and Mr. Ciria knows that he is a "good client" (high fidelity level) he will arrange these extra activities.

Mr. Ciria does not have any problem to arrange an ornithologist for Mr. X's wife. For all other activities he will contact Equipo Barrabés to arrange these extra activities. He has a good relationship with Mr. Gaby from Equipo Barrabés and he knows that, although some of the services are not offered by Equipo Barrabés, Mr. Gaby knows another company (Radical Snowboard) who can provide these services.

The non-hotel expenses from Mr. X are assembled on the hotel account inside the RMS, and will be paid in either of two ways, as described in the previous scenario.

2.2.3 Condominium: Habitat Benasque:

Mr. X (client) contacts Mr. Gimano to make an apartment reservation for one week. Mr. Gimano check if this apartment is available, if it still available, he asks for a deposit and gives the Habitat's bank account number. If the apartment is not available anymore, he suggests another one. If the client accepts his suggestion, he asks for a deposit and gives the Habitat's bank account number.

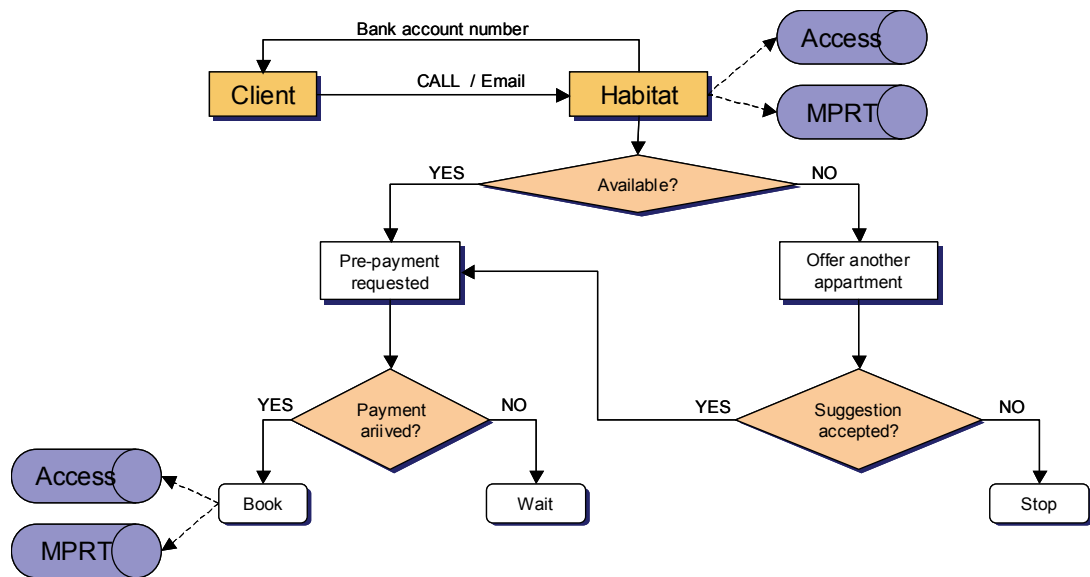


Figure 7: Reservation process - Habitat Benasque (Real Estate Business)

After the first contact with Mr. X, Mr. Gimano includes this reservation on the monthly planning reservation table (MPRT), which currently is not computer-based. After Mr. Gimano receives the deposit, he saves all data on his computer (Excel table) and updates his paper-based MPRT.

When the client arrives in Benasque, he needs to pick up the keys at Habitat's office.

2.2.4 Sports service provider: Equipo Barrabés:

Mr. X (client) contacts Mr. Mur from Equipo Barrabés to arrange a 5 days trekking trip through the Pyrenees with accommodation in cottages in the mountains for him and 3 other friends. First of all, Mr. Mur needs to analyse in detail this request, to verify the trekking route and the possibilities to accommodation. After designing the 5-day trip, he sends to Mr. X a document with a detailed description of the service and the technical aspects of this trip. Besides, a list of the necessary equipment and the bank account number for a deposit of 25% are also sent. If Mr. X does not have all the necessary equipment, he has the possibility to buy or rent the equipment at Barrabés Esquí & Montaña. Mr. Mur suggests a first meeting to get to know each other, to talk about the required physical conditions and to explain the risks.

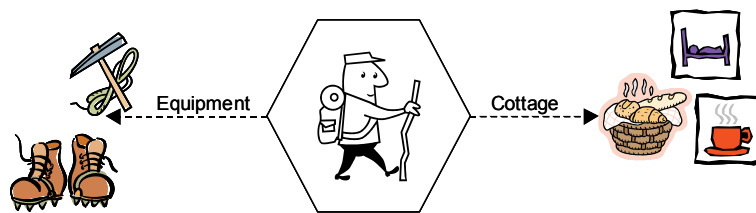


Figure 8: Client needs

Meanwhile, Mr. Mur calls mountain cottages and makes the reservation for 5 persons (bed and food - breakfast and dinner). The payment of the cottages services is done normally in cash. Close to the departure date, Mr. Mur checks the weather forecast, the cottage reservations and the rented equipment.

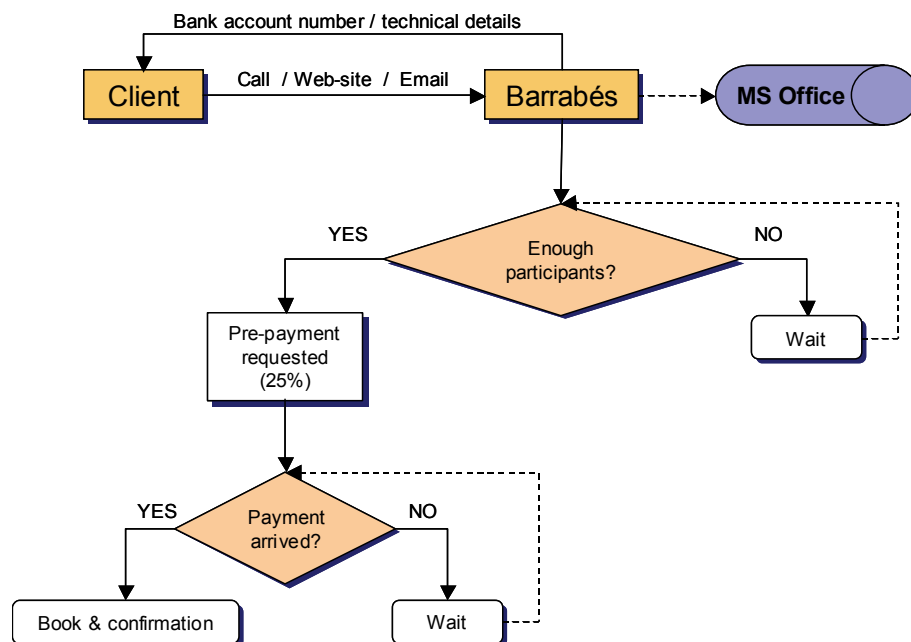


Figure 9: Reservation process - Equipo Barrabés (Sport service provider)

If Mr. X (alone – without his friends) contacts Equipo Barrabés and wants to book a standard hiking trip offered by Equipo Barrabés, he will need to wait

until a minimum group of participants apply for the same trip. Normally, a group of at least 4 people is needed for a hiking trip to take place. After a group of 4 or 5 is registered, Mr. Mur contacts all participants by phone or E-mail and gives them Barrabés' bank account number, asking them to deposit 25% of the whole price. Besides, a list of the obligatory equipment and the technical description of the trip are also sent. If any one of the participants does not have all necessary equipment, Mr. Mur explains the possibility to buy or rent the equipment at Barrabés Esquí & Montaña. Mr. Mur suggests a first meeting to get to know each other, to talk about the required physical conditions and to explain the risks.

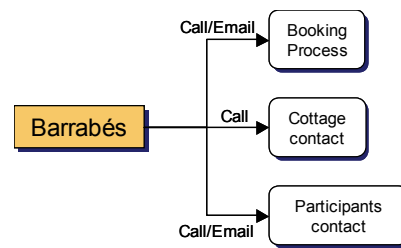


Figure 10: Booking channels

Meanwhile, Mr. Mur calls the mountain cottages and makes the reservation for all participants (bed and food - breakfast and dinner).

2.2.5 Sports Service Provider: Radical Snowboard:

Mr. X (client) contacts Mr. Casas from Radical Snowboard to arrange a special course (Free style snowboard off slope with sleds) for him and his 4 friends. First of all Mr. Casas needs to analyse the details regarding this request, to verify the trekking route and the sleds availability. After, designing this special private course, he sends to Mr. X a document with a detailed description of the service and the bank account number to the deposit are also sent. If Mr. X does not have all these obligatory equipment, he can rent from Radical Snowboard.

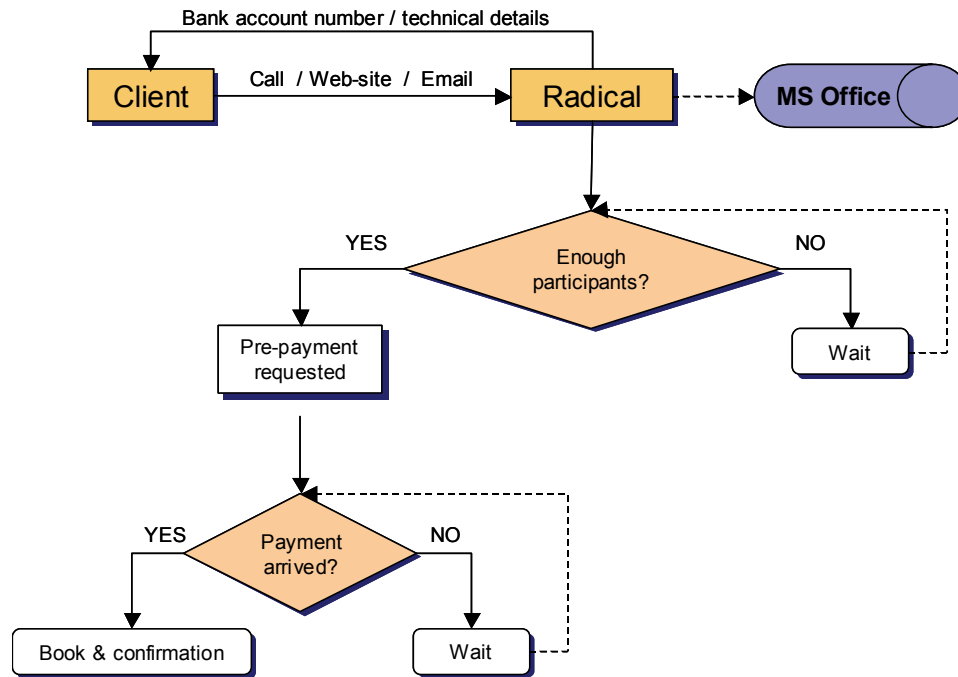


Figure 11: Reservation process – Radical Snowboard (Sport service provider)

If Mr. X (alone – without his friends) contacts Radical Snowboard and wants to book a standard course (Free style snowboard off slope), he will need to wait until a minimum group of participants apply for the course. Normally, it is necessary a group of at least 4 persons for a course to take place. After a group of 4 or 5 is registered, Mr. Casas contacts all participants by phone or E-mail and gives them Radical's bank account number and asks them to make a deposit. Besides, a list of the necessary equipment and the technical description of the trip are also sent. If any one of the participants does not have all necessary equipment, Mr. Casas explains about the possibility to buy or rent the equipment at Radical Snowboard.

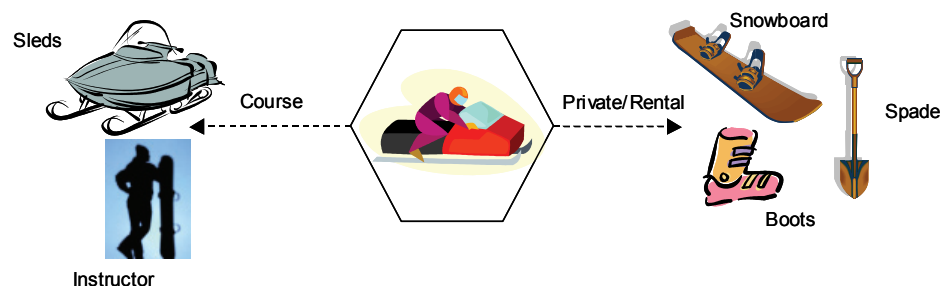


Figure 12: Client needs

2.2.6 Sports Service Provider : Escuela de Parapente Pirineos:

Mr. X (client) wants to participate in beginners' course. To do so, he needs just to fill in the questionnaire at the web site¹. If there are enough participants, Mr. Ucedo Rufat asks the participants to send a deposit (120€) by check or mail or-

¹ <http://www.parapentepirineos.com/inscripcion.htm>

der (money). If not Mr. Ucedo Rufat waits until a group of minimum 4 participants are registered and then asks them to make the deposit. The rest will be paid one day before the beginning of the classes.

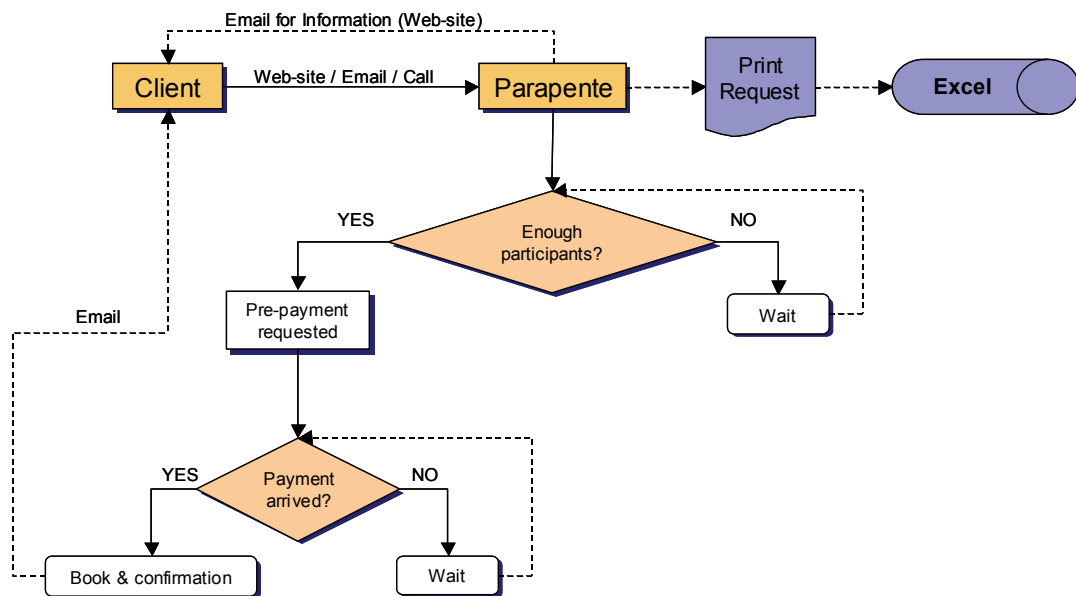


Figure 13: Reservation process - Escuela de Parapente Pirineos (Sport Service Provider)

The courses can be cancelled if there is not a minimum of 4 students; the notification of cancellation is sent one week before the course beginning and the advanced payment is given back.

Mr. Ucedo Rufat contacts all participants by E-mail and gives them a list of the obligatory equipment and the technical description of the course. If any of the participants does not have all obligatory equipment, Mr. Ucedo Rufat explains about the possibility to buy or rent the equipment at Escuela de Parapente Pirineos.

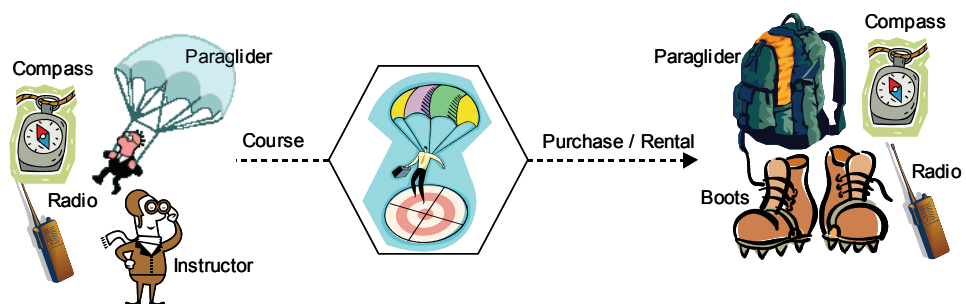


Figure 14: Client needs

2.2.7 Food and Handcraft Gift Shop: Sabores de pueblo

Mr. Panart, the manager of Hospedería Hospital de Benasque calls Mr. Chéliz to order special baskets with handcraft and bio/ecological products from the region (Aragon) to offer to his guests during Christmas time.

Mr. Chéliz analyses this order and sends back an offer to Mr. Panart. His offer contains the amount of each product and its price (marmalade, chocolate, wine, cheese, ham, etc.), the basket suggestions and their prices.

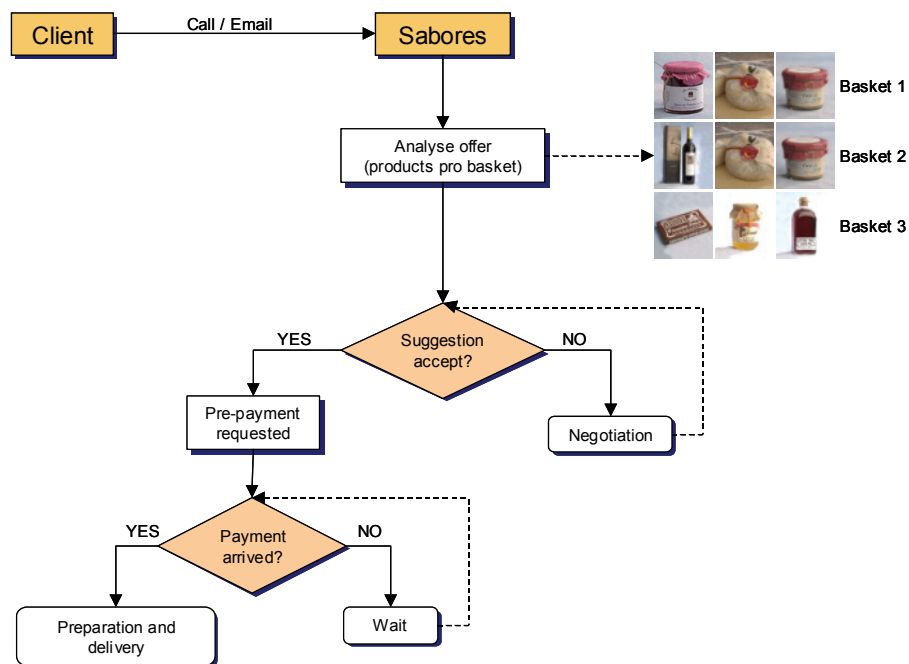


Figure 15: Purchase process - Sabores de pueblo (Food and Handcraft Gift Shop)

2.2.8 Governmental Association: Aramón Montañas de Aragón

Mr. X wants to spend some days in Benasque and go skiing in the Cerler ski resort, but he wants to avoid queuing to buy his ski pass every time. He lives in Zaragoza and read at the Aramón web site about the possibility to recharge his ski pass directly online. Before that he needs to acquire an “Aramón 5 station” card, so he goes to Aramón office in Zaragoza. There he buys his new card, which he can use in all ski resorts that belong to Aramón. Meanwhile, he decides also to charge his card for 7 consecutive days.

For the registration process, Mr. X gives some private information to Aramón, which assures to use these information only as statistical data and to acknowledge its clients.

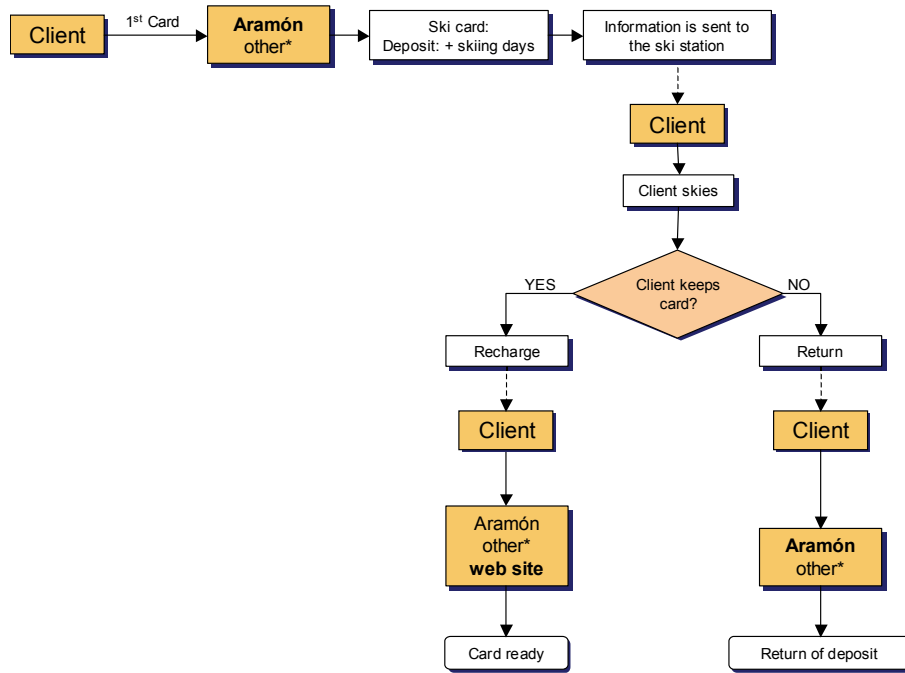


Figure 16: Card purchase process

After these vacation days, Mr. X decides to recharge his “Aramón 5 station” card to 5 more non-consecutive days during the winter season. So, he charges it online through Aramón web site.

2.3 Corporate and incentive travel

2.3.1 Travel Agency: Viajes Orienta Siete Mares, Big convention

Company Y is a multinational corporation, with sales and marketing departments in different countries and regions. In order to improve the communication between these departments on an international level, and to reward employees for a highly successful year, the company's CEO wants to arrange a convention with both "work" and "play" parts. The CEO's secretary contacts Mr. Lozano Pérez (Orienta Manager) for the organisation of this convention.

For this organisation, Mr. Lozano Pérez needs to collect some information about the company's culture, its needs and demands. So, he asks the company to fill in a standard questionnaire developed by Orienta. After that, he sends a proposal to the CEO. After some negotiations, the contract is signed.

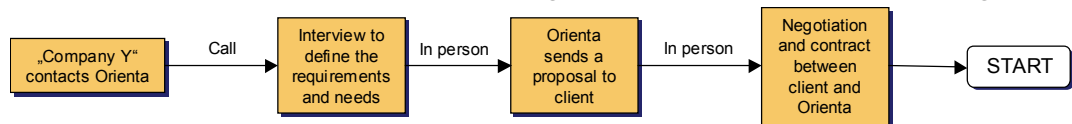


Figure 17: Contact process

Company Y's demands are:

- The convention should take place in two months in Zaragoza at a 4 or 5 stars hotel, with about 100 participants from 5 different sites from Europe.
- The participants will be able to travel with their spouses.
- Flights need to be arranged for all participants and their spouses from their countries to Zaragoza,
- as well as Transfer from the airport and the main train station to the Hotel for all participants and partners.
- The speakers should hold their presentations in English (official company's language) and the convention would take 3 full days.
- All participants and their spouses should have the option to spend the weekend in Zaragoza.
- During the day, the company employees will take place in team-building activities and discussions.
- The CEO and the heads of sales and marketing departments from each site will participate in order to encourage their employees to exchange information and to increase the identification with the group
- Some of the participants will travel with their spouses, consequently some extra activities during the day should be offered, such as sightseeing, museum visits, shopping, or sports.
- After dinner, all participants and their spouses will have the possibility to take part in social games to better get to know each other.
- The program on Friday night should be a composed of a theatre play and then a typical dinner at a local restaurant.

To fulfil the company's wishes, Mr. Lozano Pérez checks Orienta's database, built up during the organization of similar events in Zaragoza:

- Hotels: There are 3 five stars hotel, and 4 four stars hotels, where the convention could take place.
- Catering: There are 4 potential catering providers, each of them can cater to up to 1000 people.
- Transportation: There are 4 or 5 companies, but normally Orienta contracts always the same one ("Transport Q").
- Flight: There is the possibility for private jets for the domestic flights, which normally is cheaper.
- Social activities and day activities for spouses: If the company is a regular customer, this information can be found at the Orienta's database. If not it is possible to check other companies' social activities for ideas.

The information about clients' profiles and accounts can be found at the Orienta's database.

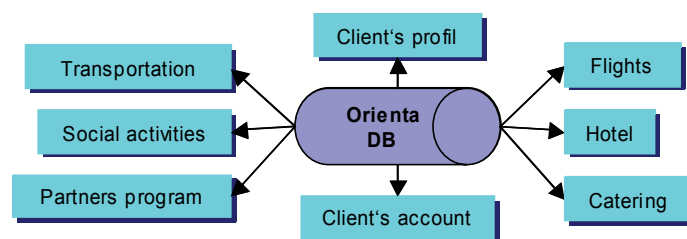


Figure 18:Orienta Database

Mr. Lozano Pérez or his employee will contact by telephone with the possible suppliers:

- Hotels: They will be contacted based on the Company Y's specification, like 4 or 5 star hotels, conference room to 150 participants, 150 available double rooms, recreation room during nights (family games), easy accessibility to museums, shopping malls, theatre, etc. (partner program and social activities).
- Transportation: If the company "Transport Q" will not be able to supply the demand from "Company Y", another company will be contract. The activities are transfer (airport-hotel-airport; main train station-hotel- main train station), social activities at night, and partner program.
- Catering: If the hotel does not offer this service a company will be contract.
- Flights: The flights are booked through Galileo or Amadeus Professional Systems. A private jet company can do the domestic flights to Zaragoza, because there are not so many international flights to the Zaragoza airport, it can be cheaper then the commercial domestic flights, and it is seen as a benefit to the client as a personalized service.
- Social activities: A theatre piece will be booked to Friday night. Some restaurants will be contact to send an offer to a dinner to about 312 people (150 participants, the 5 chief of sales and marketing and the CEO and their spouses). A sub-contracted company ("Transport Q" or another) will do the transportation of all participants.

Spouse program: Some activities will be arranged during the day for the participants' spouses, such as sightseeing, shopping, museum visiting, etc. Transportation needs to be arranged to support all these activities.

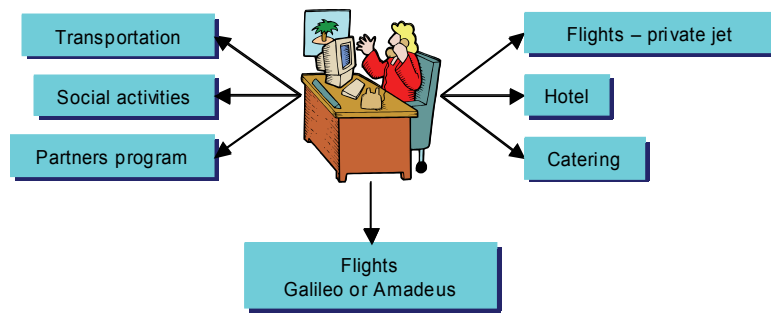


Figure 19: Booking channels

This is an expensive and long process, because the suppliers take about 2 days to send by fax or e-mail an offer to Orienta, and then there is always a telephone negotiation.

If any problem occurs during the negotiation or if Mr. Lozano Pérez does not get the price previously estimated, he contacts his client and handles this problem. It means that he needs at least one extra call; normally it will be more than 2 calls.

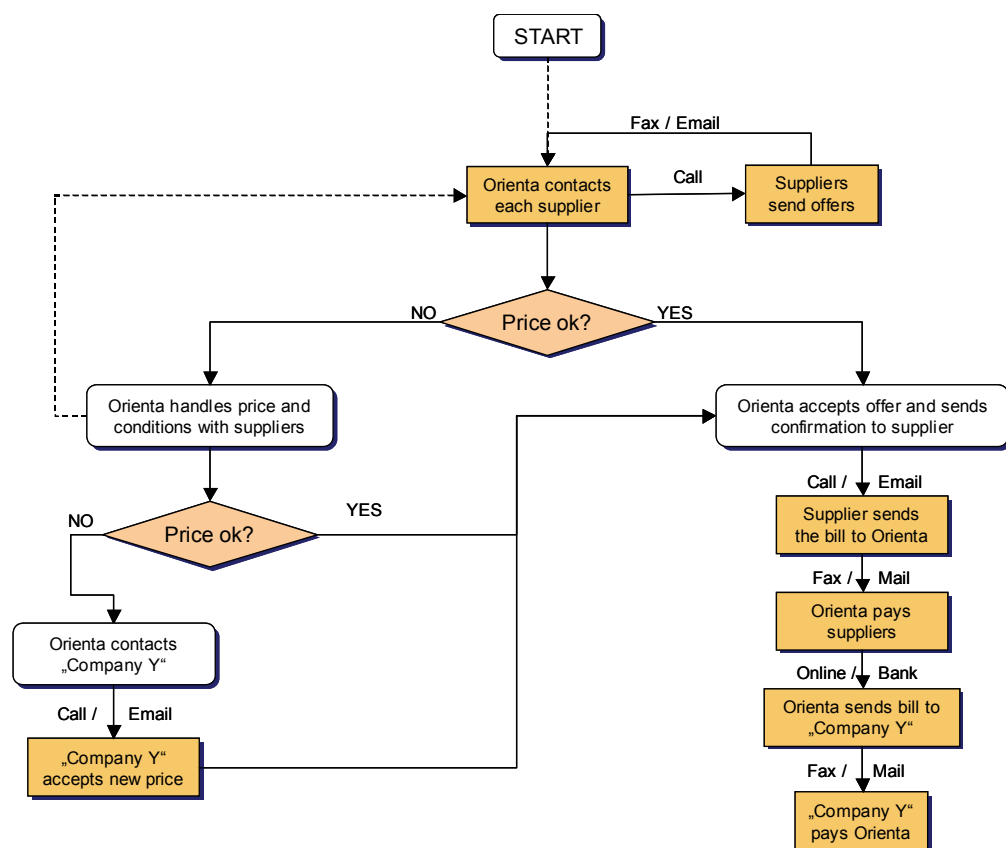


Figure 20: Orienta's convention process

2.3.2 Incentive travel

Mr. X (client) contacts the Company Orienta (Mr. Javier Lozano Pérez) to arrange an incentive week (7 days) with workshop to a group of employees. The client specifies also that this workshop should take place close to the mountains, such as Benasque Valley. Due to the wish of some of the participants to

get some ski and/or snowboard classes during these days. Furthermore, the participants are going to rent the skiing equipment, and the tickets for the ski station should be available at the hotel to the participants. The hotel should offer also some other activities such as swimming pool, and wellness (spa). Orienta should arrange also a small gift to each participant with typical food from the valley, such as jelly, sweets, etc.

The conference room should contain a beamer, a white board, and seat places for about 30 people. In addition, 3 other small rooms should be available to the participants to develop parallel activities, and they should be close to the main workshop room.

The restaurant and the catering service should offer vegetarian food for 5 participants; all participants are going to have their main meals (breakfast, lunch and dinner) together at the main restaurant room. The coffee breaks should be served on a room close to the workshop room 3 times a day.

The participants are going to fly from Madrid to Zaragoza and then they are going to travel together by train, or by bus to their final destination. Orienta should arrange all transportation from Madrid to Benasque.



Figure 21: Client requirements

2.3.3 Indirect contact process: Service providers and Aggregators

After the client specifies everything, Mr. Perez (Orientas' manager) starts organising the incentive week itinerary. First of all, he looks at the website (<http://www.benasque.com/>) for possible hotels and service providers. But he knows from past experiences, for example, that the Hospital and the Hotel Ciria are possible candidates, because both hotels could offer a conference room, a good restaurant, and good accommodation to all 30 participants. The differ-

ences between them are that the Hotel Ciria is located in Town and there is no swimming pool, and the Hospital is far from the centre with difficult access but with swimming pool and wellness (spa). So, he needs to check with his client, which of these hotels is the best choice to this incentive week.

Then, he contacts them by phone to check availability and prices.

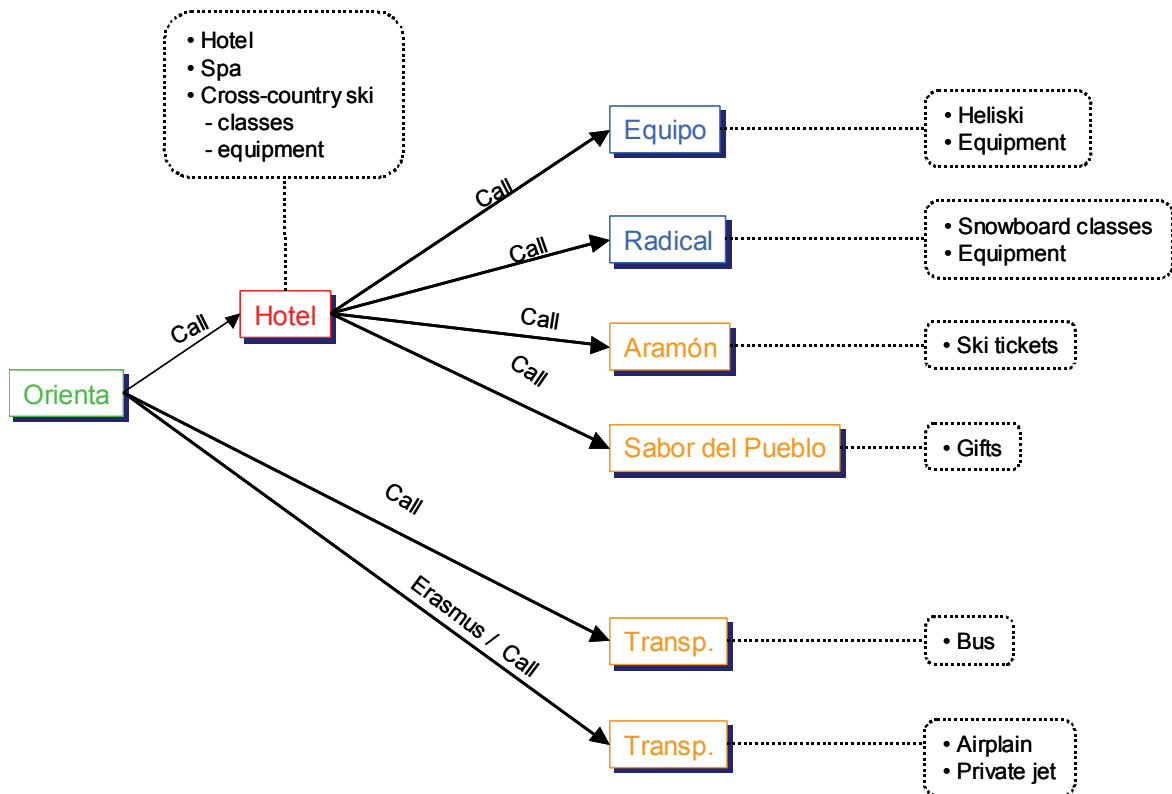


Figure 22: Indirect reservation channels

First of all, he contacts (phone) the Hotels to check availability of rooms to all participants. The hotels offer the catering service as an extra service, and the possibility to have all meals at the hotel restaurant. A special menu to this event can also be arranged. They also offered to book the required sporting activities to Mr. Javier, it means the hotels contact different service providers to get different offers to the specific sports activities, such as snowboard, heliski, and their necessary rental equipment. Another extra service offered from the hotels is to arrange the required gifts from Sabores del pueblo store, and the ski tickets ("Aramón 5 station" card).

Mr. Pérez still needs to call the transportation companies, and to book the flights. Although he works normally with a specific transportation company in Zaragoza, he calls the other ones (5 in Zaragoza). The transportation from Madrid to Zaragoza can be done in two different ways; by commercial airlines, or by private jets, which normally is cheaper. So, he checks both possibilities.

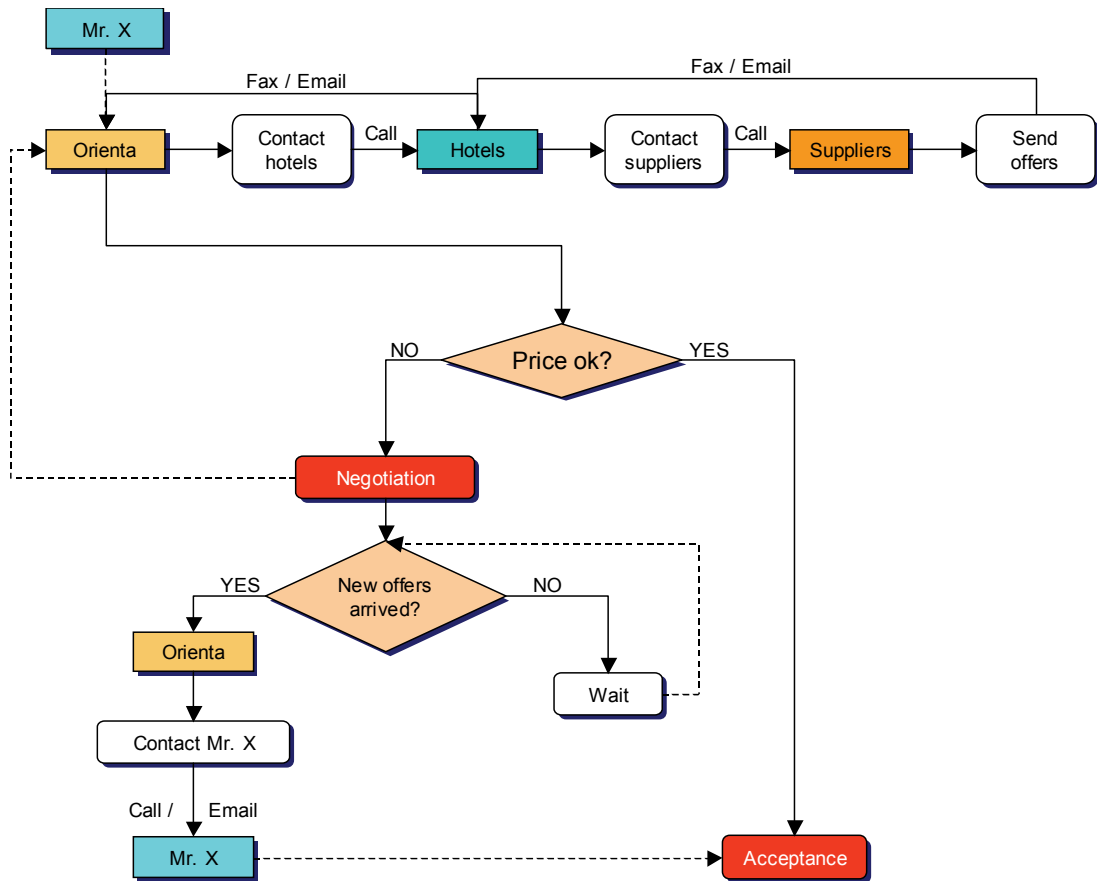


Figure 23: Reservation process and channels

The hotel managers after contacting all service providers (basically by phone) send their offers to Mr. Pérez by fax. Mr. Pérez analyses the offers and discusses with Mr. X (client) to get his acceptance of some possible differences between requirements and offers. After Mr. X agreement, Mr. Pérez confirms (by phone) the services to the winner (hotel).

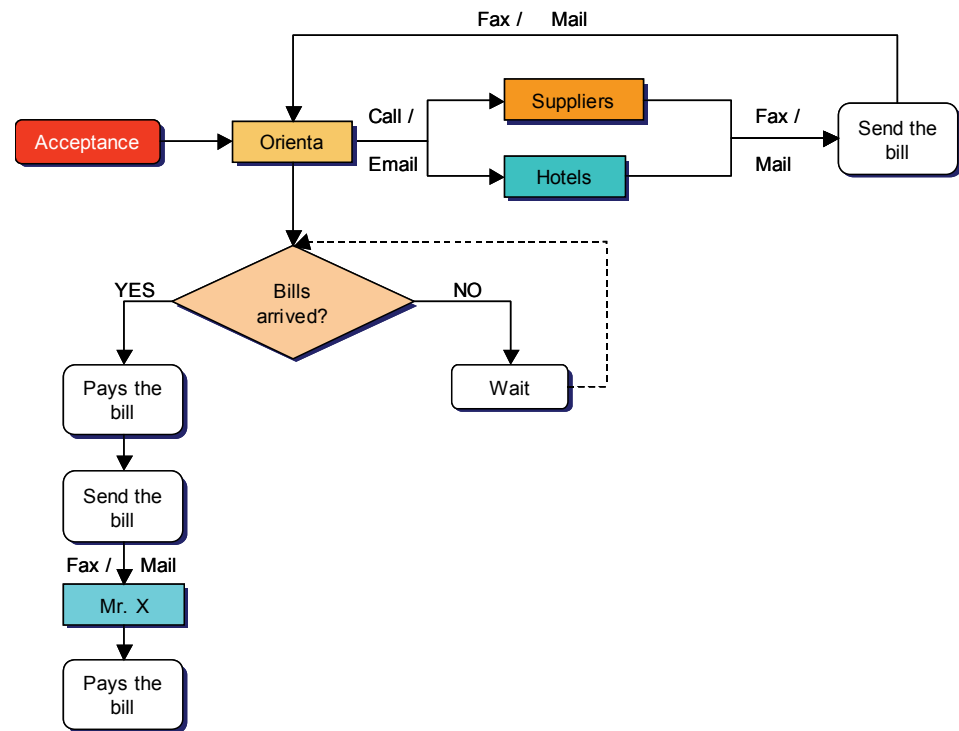


Figure 24: Acceptance process and channels

If Mr. X does not agree with any point of the offers, Mr. Pérez needs to handle with the winner hotel manager or directly with the service provider (by phone).

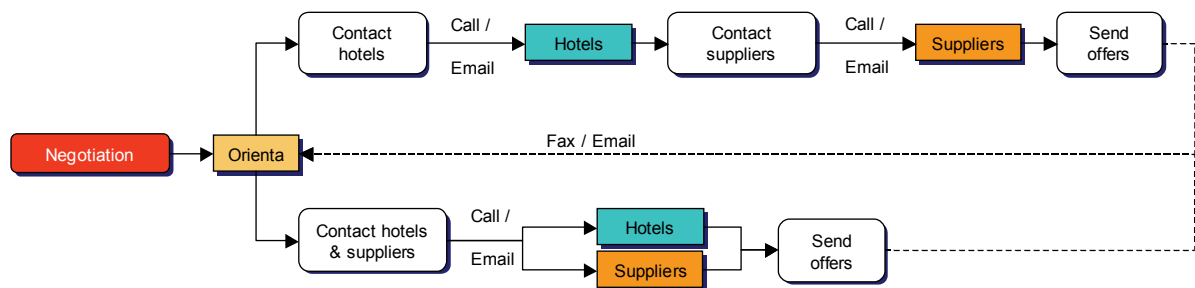


Figure 25: Negotiation process and channels

2.3.4 Direct contact process: Service providers and Aggregators

After the client specifies everything, Mr. Perez (Orientas' manager) starts organising the incentive week itinerary. First of all, he looks at the website (<http://www.benasque.com/>) for possible hotels and service providers. But he knows from old experiences, for example, that the Hospital and the Hotel Ciria are possible candidates, because both hotels could offer a conference room, a good restaurant, and good accommodation to all 30 participants. The differences between them are that the Hotel Ciria is located in Town and there is no swimming pool, and the Hospital is far from the centre with difficult access but with swimming pool and wellness (spa). So, he needs to check with his client, which of these hotels is the best choice to this incentive week.

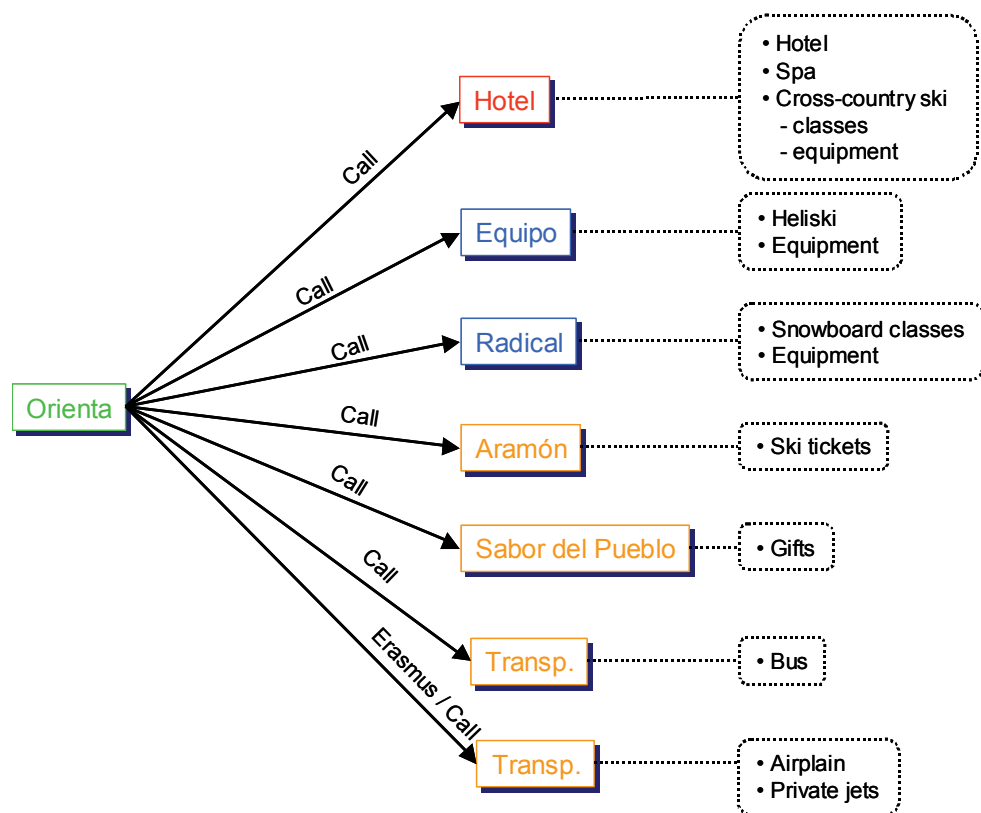


Figure 26: Direct reservation channels

First the contacts the hotels by phone to check availability and prices. On this case, the hotel managers don't offer to arrange the extra activities required, such as sport activities, gifts, and ski tickets. So, Mr. Pérez needs to contact all service providers.

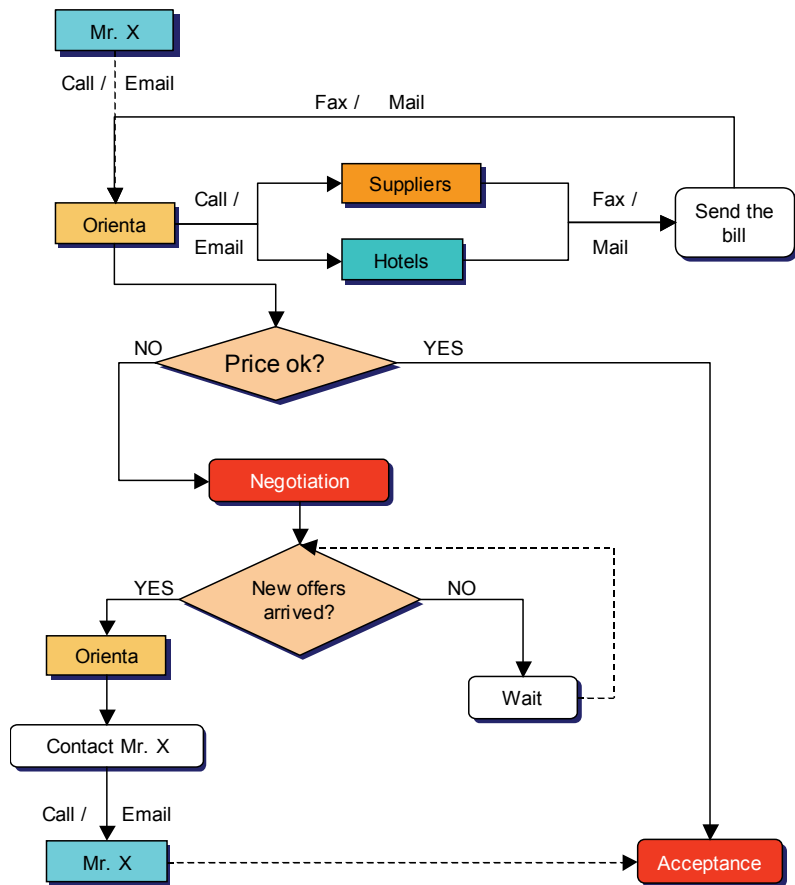


Figure 27: Reservation process and channels

The service providers send their offers to Mr. Pérez by fax. Mr. Pérez analyses them and discusses with Mr. X (client) to get his acceptance of some possible differences between requirements and offers. After Mr. X agrees Mr. Pérez confirms (by phone) the services to the winners (hotel and service providers).

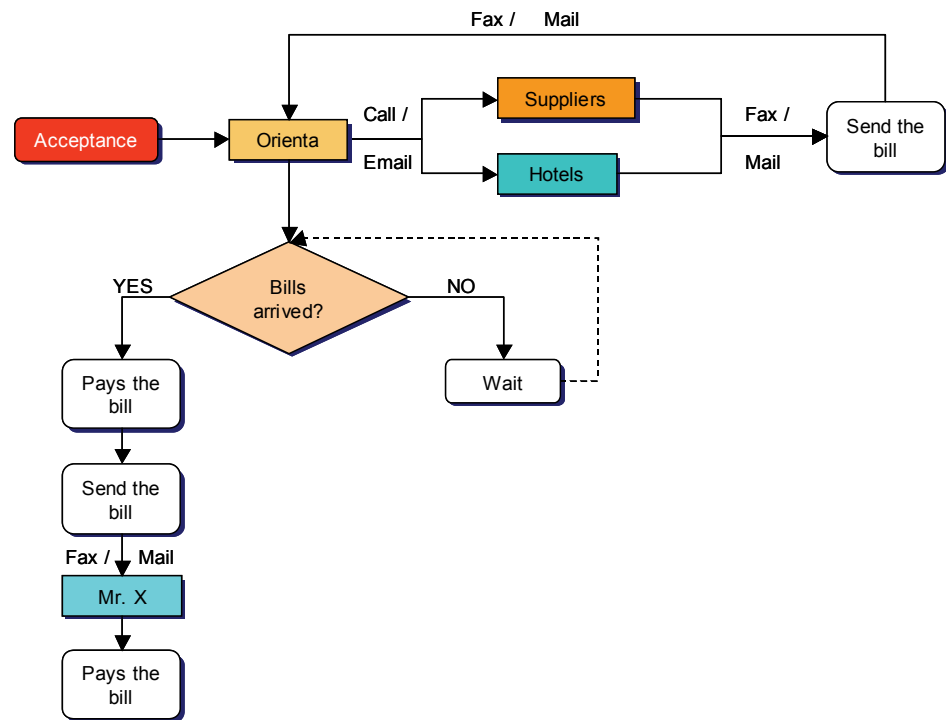


Figure 28: Acceptance process and channels

If Mr. X does not agree with any point of the offers, Mr. Pérez needs to handle with the suppliers (hotel and service providers) by phone.

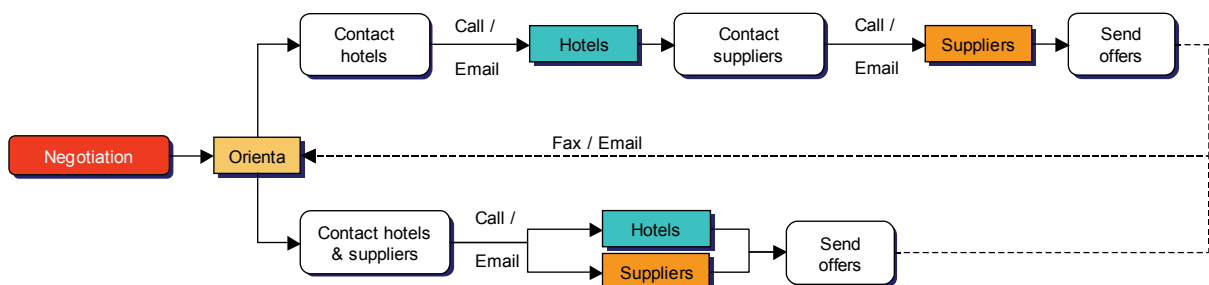


Figure 29: Negotiation process and channels

3 Conference Organisers in Tampere, Finland

This chapter summarises the information obtained from SMEs during interviews in Tampere (Finland).

The focus of the interviews were SMEs, which organise conferences and/or deliver a software, which support a conference organisation. Ines Alves de Queiroz and Dieter Hertweck interviewed the following organizations:

Nº	Type of organisations	Name	Contact
1.	e-Business Researcher	eBRC	Ms. Hanna Martin
2.	Science Park Administrator	Technology Centre Hermia	Ms. Johanna Salomaa-Valkama
3.	Conference Manager	SuviSoft	

Table 2: Companies interviewed in Tampere, Finland

3.1 Requirement Analysis

This section introduces the organizations interviewed by general information, a short description and by the provided services. Thereafter, the current IT-Infrastructure and IT purchase process are described. Finally, the negative and positive aspects are mentioned. The positive aspects mean in how fare IT-technologies or combined systems with other partners are already established and in which way the DBE projects can benefit from these experiences. On the other hand, the negative aspects are the ones, which inhibit the implementation of Conference Management Systems or the growth of the organisations.

3.1.1 e-Business Researcher - eBRC

General Information:

Web site:	www.ebrc.info
Contact:	Ms. Hanna Martin, Project Manager
Industry:	e-Business Research
Legal form:	Project of two universities
Number of employees:	9
Outsourced service	The entire internet system
Clients	Other Universities; several business partner

Description:

eBRC, one of the six subprograms of eTampere, is aimed at turning e-business related research and development ideas into new knowledge. eTampere aims to enhance the humanly sustainable information society development by creating new knowledge, new business, and new public online services.

eBRC is co-founded by two different universities: The Tampere University of Technology and the University of Tampere. As such, eBRC is a “border-crossing partnership” – a joint venture born to create value to a multitude of partners, rather than a single parent. This is reflected in eBRC’s organization, values, and way to operate.

The mission of eBRC is to generate relevant new knowledge on selected business phenomena related to the e-business. The new knowledge will be utilized in the education and research activity by the partner universities and in the business practise by the businesses participating in the underlying research projects. The objective of eBRC is to become one of Europe’s leading e-business researchers by 2006. (Quote from the Homepage of the eBRC)

Services:

- Organisation of scientific conferences (eBRF) in the context of the project eBRC (eTampere)

Subcontracted services:

- SuviSoft (Conference Management System Provider)
- Response® Audience Response System²

IT-Infrastructure:

Technological platform	MS Windows
Office Software	MS Office
Special Software	None (except outsourced software)
Future acquisitions	A flexible conference management system (CMS), where all needed reports could be generated.
Internet applications used	E-mail internal and external Information / Research

² Each participant will receive a portable handset for voting/answering, which enables each presenter to receive instant response from his/her audience.

Web site offerings:	<p>Languages: Finish, English</p> <p>Information about projects from the Tampere University of Technology and the University of Tampere</p> <p>Publications</p> <p>Links to conferences about eBusiness</p> <p>Links to "Call for papers" of Journals</p> <p>Conference eBRF</p> <p>Languages: Finish, English</p> <p>Information</p> <p>Fee</p> <p>Registration</p> <p>Review process</p>
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IT purchase process:

Purchase (CMS) decision by:	Group
Is the interviewed person personally involved?	Yes (Ms. Hanna Martin)
Software (CMS) selection criteria	<p>Price (normally they pay a symbolic fee to use the software)</p> <p>Warranty</p> <p>Maintenance</p> <p>Payment modes</p> <p>Product functionality</p> <p>Product stability and usability (easy to use)</p>

Difficulties and Expectations:

- Ms. Hanna Martin knows the advantages of a good Conference Management System. She has many ideas to improve the system of SuviSoft.
- The program eBRF is together with the main program eTampere limited to five years

3.1.2 Science Park Administrator - Technology Centre Hermia

General Information:

Web site:	http://www3.hermia.fi/english/
Contact:	Johanna Salomaa-Valkama, Communications Manager
Industry:	Real estate, consulting, expertise
Legal status:	Limited Company
Number of employees:	About 35 (one half is employed in several projects)
Sales per year (€):	5,3 mill
Profit per year (€):	38,800
Outsourced service	Extranet and applications, like the registration system
Clients	New technology companies

Description:

Tampere Technology Centre Ltd was established in November 1990 as a development and administration company for Technology Centre Hermia. It had been divided into three business units: Hermia Premises Services, Hermia Business Development and the Centre of Expertise. Since the first of June 2004 the business activities of the Tampere Technology were divided in two new companies the Technology Centre Hermia Ltd and the Hermia Premises Services Ltd. The company's project and development activities will continue under the company Technology Centre Hermia Ltd, and the real estate business activities under the company Hermia Premises Services Ltd. In autumn 2004 the Hermia Premises Service Ltd will merge with to other companies to the Tampere Science Park Ltd.

Services:

Tampere Technology Centre Hermia offers companies an operational environment in which they have the opportunity to grow and develop without caring about the office needs. The entire office space comes to over 100.000 square metres. The companies can define the office space they need: from 6,5 square meters for start-up and small companies to 1500 square metres for bigger companies. About 150 companies and research units have their offices in one of the Hermia Science Park buildings.

Additional to the office premises the Hermia Business Incubator also operates in Hermia's small business centre, giving advice and tailored training for start-up incubator companies.

Subcontracted services:

- Optinet (Extranet Provider)

IT-Infrastructure:

Connection	Intranet WLAN
Future acquisitions	Automated invoice system Perhaps professional conference tool

Web site offerings:	Company TTC: Languages: Finish, English Information about the Company Brochures and Publications Pictures of the offices and environment Conference Tampere Crossing Languages: Finish Information Fees Registration
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IT purchase process:

Software (CMS) selection criteria:	<ul style="list-style-type: none"> ▪ Warranty ▪ Maintenance ▪ Payment modes Note: related to product and not to vendor.
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Difficulties and Expectations:

- Ms. Johanna Salomaa-Valkama has experience with a System that was not made for conference purpose. Nevertheless or even therefore she has good ideas what a professional Conference Management System had to automate.
- The Conference “Tampere Crossing” will be transferred into an international conference in the next years.

3.1.3 Conference Organizer IT services provider - SuviSoft

General Information:

Web site:	http://www.suvisoft.fi
Industry:	Conference organization IT services
Legal form:	Limited company
Number of employees:	11

Description:

SuviSoft Oy Ltd is a Finnish service provider specialized in online management solutions. It hosted the first conference web server in September 2000. By now the service of SuviSoft are used by more than 30,000 users from all over the world in nearly twenty countries.

Services:

SuviSoft provides several modules which can combined and modified to the customers' need: handling of conference submissions, registration, hotel booking, proceedings publishing, online payment, travel service, mobile service and graphic design. These services have been used in several business areas, namely

conference management, exhibition management and association membership management. The online services offer state of the art technology tools to event organizers allowing them to save time and effort while keeping full control of the event.

Subcontracted services:

- Book printing
- Server hosting (external servers at the nearby universities)

IT-Infrastructure:

Technological platform	Linux, Microsoft Windows
Database	MySQL
Security	SSL
Office Software	Microsoft Office
Special Software	HeiTML (similar to HTML) for website CSV (Comma Separated values)-interface
Future acquisitions	New interfaces
Web site offerings:	Language: English Information about service Possibility to give feedback References, involved events

IT purchase process:

Software selection criteria	Warranty Maintenance Payment modes
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Difficulties and Expectations:

- SuviSoft is a worldwide operating Conference and Exhibition Software Provider as well as Organizer with much experience.
- SuviSoft will be developed to a full Event Organizer with all services under one umbrella.
- Hanna Martin from eBRC had problems with some of the modules of SuviSoft. I.e. she hold the generation of reports for inflexible in use.

3.2 Conference organisation use cases

This section describes the conference organization processes of each interviewed organization. The figures illustrate some important sub processes and decisions.

3.2.1 e-Business Researcher - eBRC

The Organizing Committee (lead by Ms. Martin) decides to start the organization of the next eBRF Conference. First of all, she needs a Conference Management System (CMS), so she contacts the System Provider (SuviSoft), who supplied the CMS for the previous eBRF Conference. Ms. Martin tells them the needs and some improvements suggestions for the current year. Meanwhile, Ms. Martin contacts also the other suppliers, such as Convention Centre, Restaurants, Hotels, etc.

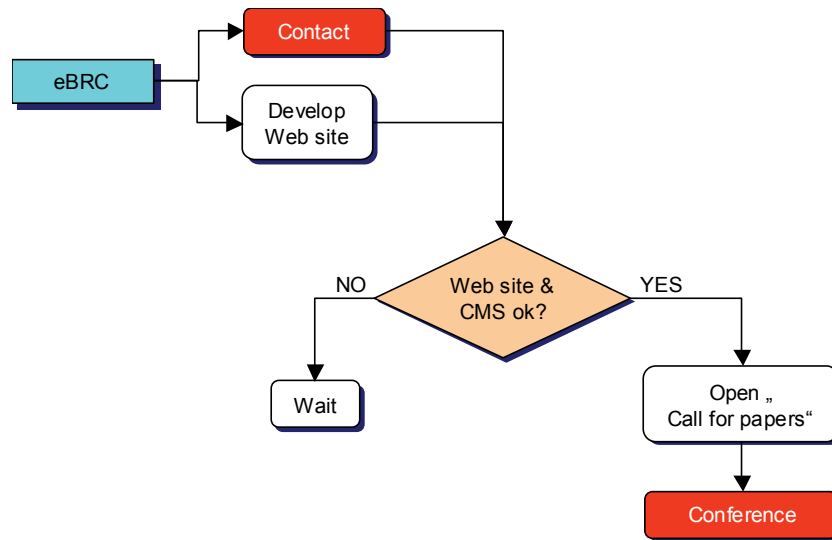


Figure 30: Conference management process

When the CMS is already live on the eBRF Web site, the Organizing Committee publishes the “call for papers” on the web page, and sends e-mails to all participants from the last editions. The conference process is divided into 4 sub-processes: submission, review and registration.



Figure 31: Conference sub-processes

The researchers who want to present their “working papers” just need to create an account (ID and password) on the conference web site and upload their abstracts to one of the 3 possible tracks. The abstracts should not be longer than 3 pages.

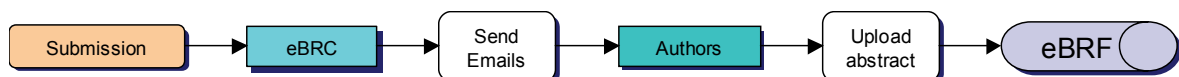


Figure 32: Submission sub-process

After the deadline of the paper submission process, the review process begins. First, each track chair (two professors and one PhD) checks the content of the abstracts to verify if they were correctly uploaded to the proper topic.

Then, the reviewers log in with their own passwords at the CMS and rate the abstracts directly online. The criteria are technical content, originality, clarity of presentation, and relevance to the conference, the abstracts are evaluated based on these 5 criteria through a “blind review process”. Each abstract receives two grades (1-5) from two “blind reviewers”.

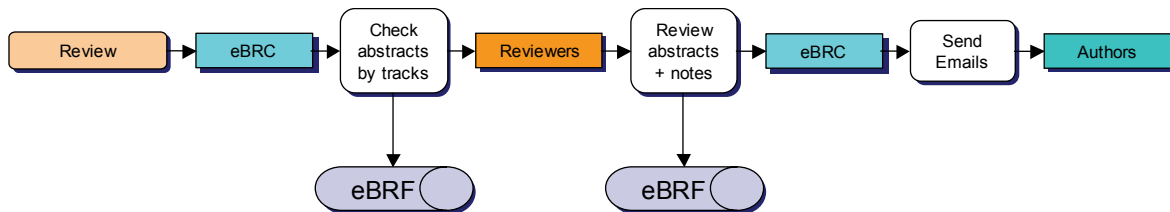


Figure 33: Review sub-process

During the review process, the Organizing Committee arranges the venues, the evening programs, and the catering as well as the keynote speaker.

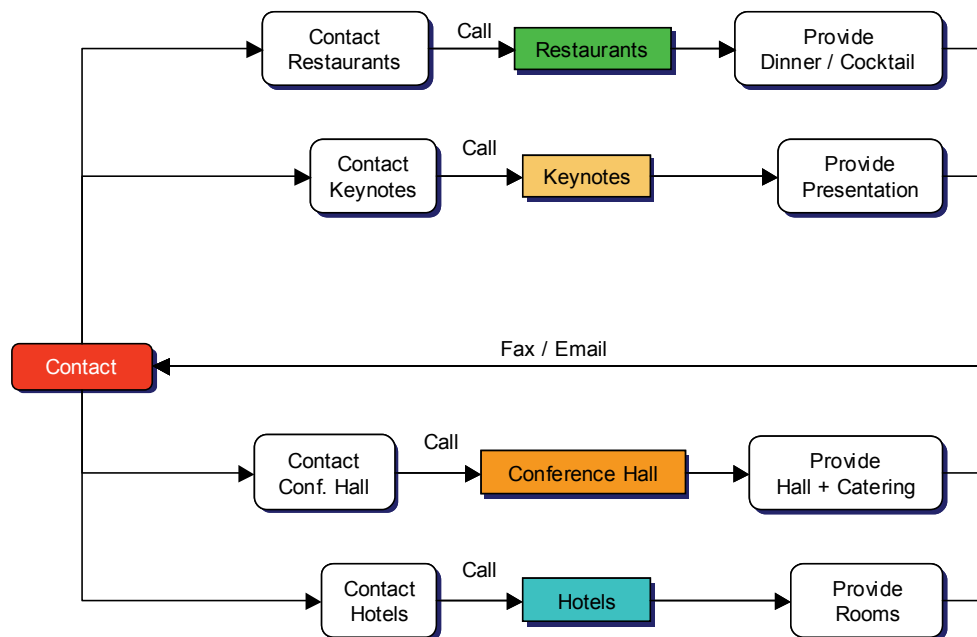


Figure 34: Contact sub-process

At the end of the review process, the system generates a “scaled down” list with all papers. If an abstract receives “one rejection and one acceptance”, a 3rd reviewer is asked to go over the special cases. Finally, the Organizing Committee sends by E-mail the information about acceptance or rejection of the abstracts to the authors. The authors of the accepted abstracts receive also a “paper number”, which they need to enter on the registration form. Moreover, the authors are invited to make their registration, at least one author per abstract needs to attend the conference to get the paper published in the proceedings.

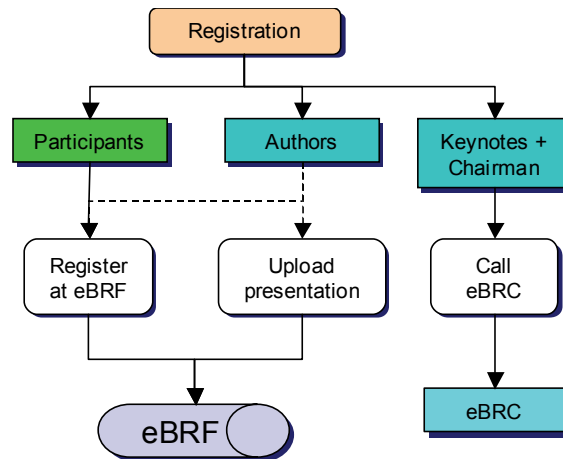


Figure 35: Registration sub-process

Meanwhile, the registration system is already connected to the eBRF web page; the conference program and registration conditions are already online. So, the registration process starts and the interested people can register for the conference. The registration form consists on 5 parts: personal information, accompanying guest, social events, payment, and hotel reservation. In case of doubts, the participants can get into contact with one of the two contact persons, which answer all questions by phone or E-mail.

Personal Information	
* First Name:	<input type="text"/>
* Last Name:	<input type="text"/>
* Gender:	<input type="radio"/> Male <input type="radio"/> Female
* Position:	<input type="text"/>
* Company/Organization:	<input type="text"/>
* Address:	<input type="text"/>
* Postal Code:	<input type="text"/>
* City:	<input type="text"/>
* Country:	<input type="text" value="Afghanistan"/> <input type="text" value="Albania"/> <input type="text" value="Algeria"/>
* Email:	<input type="text"/>
URL:	<input type="text"/>
Tel.:	<input type="text"/>
Fax:	<input type="text"/>
Paper Number (if you're a presenter):	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Special diet:	<input type="text"/>
Accompanying Guest	
* First Name:	<input type="text"/>
* Last Name:	<input type="text"/>
* Gender:	<input type="radio"/> Male <input type="radio"/> Female
Special diet:	<input type="text"/>

Figure 36: Registration form I

<p>Social Events</p> <p>Participant : EUR 400 (Inc. VAT 22 %)</p> <p><input type="checkbox"/> Day 1 - Reception (Included)</p> <p><input type="checkbox"/> Day 2 - Conference dinner (Included)</p> <p><input type="checkbox"/> Day 3 - Sauna evening by the lake (EUR 30.00)</p> <p>Accompanying Guest - if necessary : EUR 60 (Inc. VAT 22 %)</p> <p><input type="checkbox"/> Day 1 - Reception - Accompanying Guest (Included)</p> <p><input type="checkbox"/> Day 2 - Conference dinner - Accompanying Guest (Included)</p> <p><input type="checkbox"/> Day 3 - Sauna evening by the lake - Accompanying Guest (EUR 30.00)</p>
<p>Payment</p> <ul style="list-style-type: none"> The registration will not be valid before we have received your payment in full. The payment has to be made by bank transfer to the following account: Account holder: Tampere University of Technology VAT: FI02459034 Bank: Nordea Account number: 166030 - 104011 Swift code: NDEAFIHH IBAN: FI1216603000104011 The account number and your personal reference number will be sent to you by e-mail "eBRF 2004-Registration" after submitting the registration form.
<p>Hotel Reservation</p> <ul style="list-style-type: none"> All participants are requested to make their own hotel reservation for the conference. More information at the conference web site http://www.ebrf.fi/conference2004/

Figure 37: Registration form II

After the registration, the authors need to send their presentation (as a Power-Point file). The ID and password are the same used at the abstract submission process. After the registration process is over, the conference can start.

Two months after the conference take places; the authors send their final paper, uploading at the web site as they did during the presentation submission process.

3.2.2 Science Park Administrator - Technology Centre Hermia

The conference "Tampere Crossing" was developed by ten people of different Organizations in Tampere. They wanted to combine the presentation of general "nice to know"-knowledge and specific knowledge in several subjects. Therefore all participants take part in two plenary sessions as well as in three special sessions. In the plenary sessions the keynote speakers talk about current trends of research and development. In each of the three special sessions the participant can choose one of 7 tracks where specific knowledge regarding one subject is presented.

Tampere Crossing

D A Y 1	9:00	Reception						
	10:00	Plenary Session I (Keynotes)						
	12:00	Lunch Break						
	13:00	1	2	3	4	5	6	7
	14:45	Coffee Break						
	15:15	1	2	3	4	5	6	7
	17:00	Conference Dinner						
	23:00							
D A Y 2	9:00	Coffee						
	10:00	1	2	3	4	5	6	7
	12:00	Lunch Break						
	13:00	Plenary Session II (Keynotes)						
	14:30							
	15:15	Coffee Break						
	16:30	Farewell Speeches						

Figure 38: Schedule of the conference

“Tampere Crossing” is a non-profit conference. All profit from fees is given to a welfare organization. The speakers, including the keynote speakers, are not paid, and the conference web site and registration system are provided for free.

At the beginning of the previous (and first) organization of the “Tampere Crossing” conference, an initial meeting took place. At this meeting all parties fixed the date for the conference. At the same time it was checked if the venue “Tampere Hall” is free at this date and the venue were reserved. The further organization was divided in three teams, the Advisory Group, the Organizer Group and the Conference Organization Team.

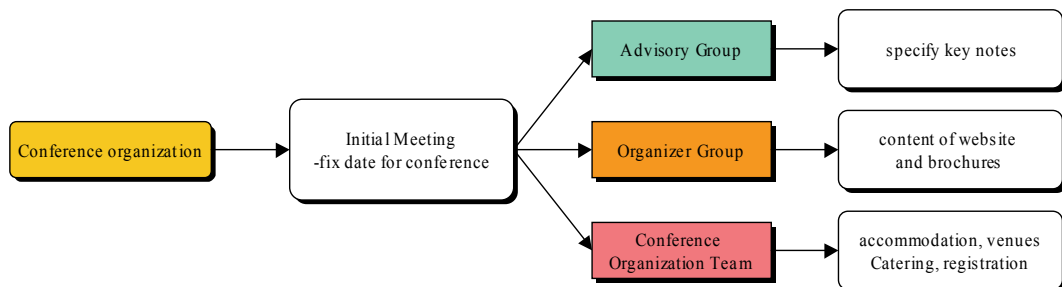


Figure 39: Conference Organization

The Advisory Group consisted of twenty representatives from the city and the university who specified the keynotes. They took care that current development in research are reflected the topics of the plenary sessions.

The Organizer Group took care of the general marketing of the conference and the general program. Each sub session had an its own marketing and contacted

their interest group itself. The Organizer Group combined all sub programs to one program.

Three people (later five) formed the Conference Organization Team which did the remaining work like the website, the registration of the participants the venues, the catering, and accommodations.

The first important step in the organization was to define the keynote sessions and the basic content of the sub sessions. The Advisory and the Organizer Group took care of this. Meanwhile the Conference Organization Team contacted the Extranet Provider ("Optinet"). They developed the needed system together. Although the system had not initially been built for conferences, it worked well after few improvements. After the website was ready to go online, a first introduction was published. Interested parties could sign up to a newsletter. In this case 80 people signed up to this list.

Then the Conference Organization System had to organize the venues and accommodation. The venue for the conference was already reserved from the beginning on because a lot of space was needed. So they just had to engage the local caterer there and for handling the technical support they had to hire five IT-specialists from the "Tampere Hall".

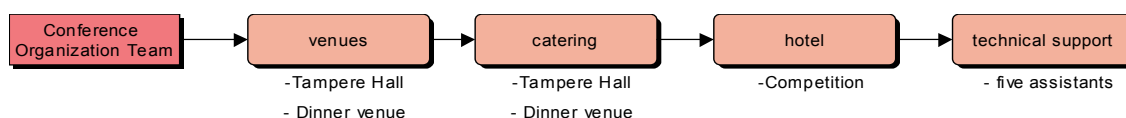


Figure 40: Tasks of the Conference Organization Team

For the conference dinner, which was included in the conference fee, they chose a cultural centre as venue.

To find inexpensive and good accommodation for the participants there was competitive bidding between the hotels. One of the Conference Organization Team rang all hotels that came into question to receive a bid. The cheapest hotel was taken. The person responsible for the hotel booking administered the data about the hotel rooms and the reservation in an Excel sheet. Just one problem appeared. Two weeks before the conference there were no rooms left, so additional hotel rooms had to be rented. All in all the hotels had no interest in connecting their IT systems to the Conference Management System, because it is easier for them just to allocate a number of rooms and let the conference organizer do the rest with the reservation.

When the accommodation and conference tracks were organised, registration started. During registration, a hotel room could be booked and the sessions had to be chosen. And there was a text field for special wishes like vegetarian food or an additional guest. For asking question the participants could call the Organization Team, who had a telephone number and the e-mail addresses at the website.

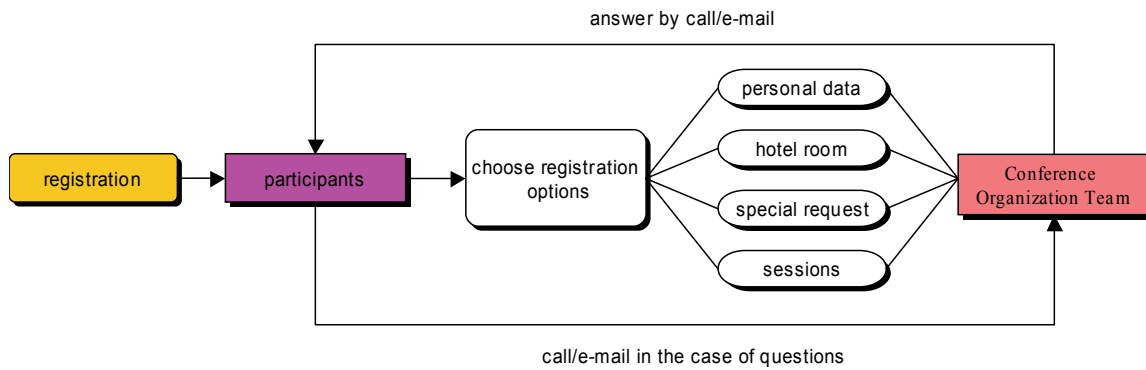


Figure 41: Registration Process

After the registration of the participants, invoices were printed by the Conference Management System and sent to the participants with a customer identification number. The participants had to transfer the conference fee (250 €) to a company account. The Conference Organisation Team had to check manually with the name and ID number who had paid. Ms. Johanna Salomaa-Valkama would like to automate this process in the future.

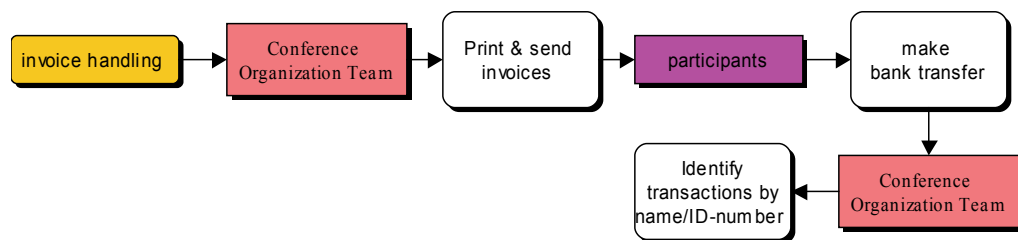


Figure 42: Invoice Handling

Reports with the information from the database cannot be generated directly from the system, but they could export the data to excel and then generate all wanted reports. Just for the future when the conference is growing they want also automate the report generating. Perhaps they also implement even a Conference Management System in the Future.

The Conference started with a reception in the morning. Every morning, the participants were sent an SMS message with the daily program and the room numbers. Participants who had an MMS mobile phone could get a map where to go. But this service was used little because of the lack of MMS phones. For using these services everybody had to give the mobile phone numbers during registration.

For presentations, the speakers fed their PowerPoint files via CD or USB memory stick into the main presentation station. Few speakers connected their own laptop to the projector. From the main presentation station, the speakers could hold their presentation in any room.

To make the PowerPoint files available for the participants, about 50 % of the files were also published at the website. The other 50 % of the speakers did not want their files to be published.

Over Wifi or an e-mail room, every participant had the possibility to go online during the whole conference.

In the end the Conference Organization Team asked for feedback from the participants. This will be done at every conference in order to improve the organisation.

3.2.3 Professional Conference Organizer - SuviSoft

The Organization Process of SuviSoft will be described based on the ISSPS 2003 conference, one of the conferences SuviSoft organized nearly completely.

The “Laboratoire de Traitement et Transport de l'Information” (L2TI) and the “Laboratoire de Traitement du Signal et des Images de l'ENST-Paris” (TSI), in association with the SPRC at QUT (Brisbane), decided to host the ISSPS 3003 in Paris. They contacted SuviSoft to organize this conference. They defined which modules from the basic structure SuviSoft provide are important and how they should be customized. SuviSoft offered a contract according to their needs.

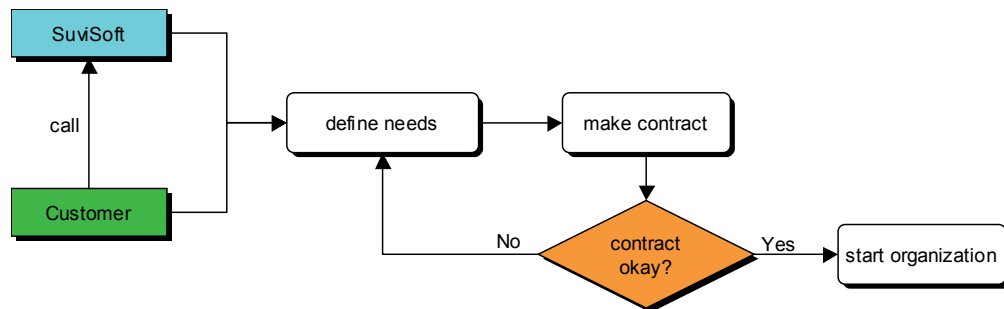


Figure 43: Completion of the contract

After the completion of the contract SuviSoft began with the realization. The submission & review handling was divided in 4 sub processes.



Figure 44: Submission & review handling sub processes

The three organizations had formed a Conference Committee that selected reviewers together with the Program Chairs. Information about the reviewers was sent to SuviSoft. SuviSoft then collected the necessary information about the reviewer and installed their accounts.

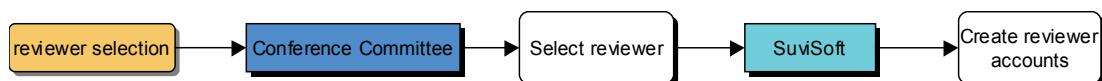


Figure 45: Selection of the reviewer

Thereafter the call for papers was published and the submission process started. Each author who was interested in submitting an abstract created an account with SuviSoft. Then the authors loaded their abstracts up by “copy paste” and filled out a submission report where information about the abstracts

had to be given. The content of the submission form were among others the topic of the abstract. Every author had to allocate his abstract to one of twenty different topic tracks. In the end 600 papers had been submitted.



Figure 46: Submission sub-process

On the basis of the track number that the author had selected, the Conference Committee allocated the abstracts to the different Program Chairmen who then allocated the abstracts to their reviewers. The reviewers could enter their account, see the abstracts, and review them directly through the website, save the abstracts to their computer or print them. After the review they filled out a review report, developed by the Conference Committee to choose the authors. The review form contained different grading, recommendations and comments directed to the authors. The Chairmen could supervise the whole review process, they could for example log in with their master password and do a review themselves, if a reviewer was too late. Finally the Conference Committee decided with the help of the review form who they want to admit to the conference.

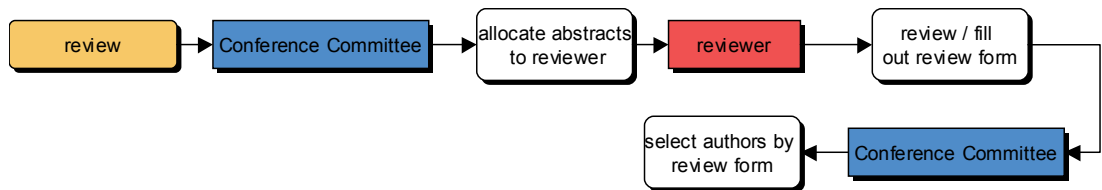


Figure 47: Review process

The admissions were entered into the system. The system automatically generated e-mails to the authors including the reviewers' comments. In these e-Mails also the comments the reviewer wanted to give to the authors were published. Then the authors who were accepted could start with the registration. Unfortunately, they had to get a new password for this.

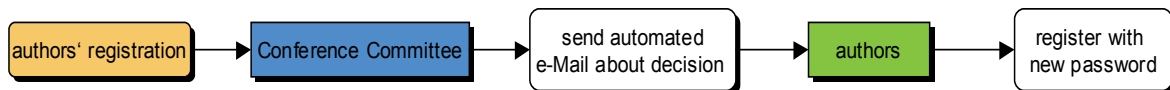


Figure 48: Authors' registration

After the program was planned by the Conference Committee, the registration for the participants could open at the website. The conference website was linked directly with the server of SuviSoft so that the information about the participants were hosted by SuviSoft. The participants had to select which events (tutorials, sessions, evening program) they wanted to attend, and if they had special wishes concerning lunch, like vegetarian food, in which hotel room they wanted to stay, if there is a partner or guest and could add other special re-

quests. After submitting, the system generated an invoice, which was send to the participant and could be printed out.

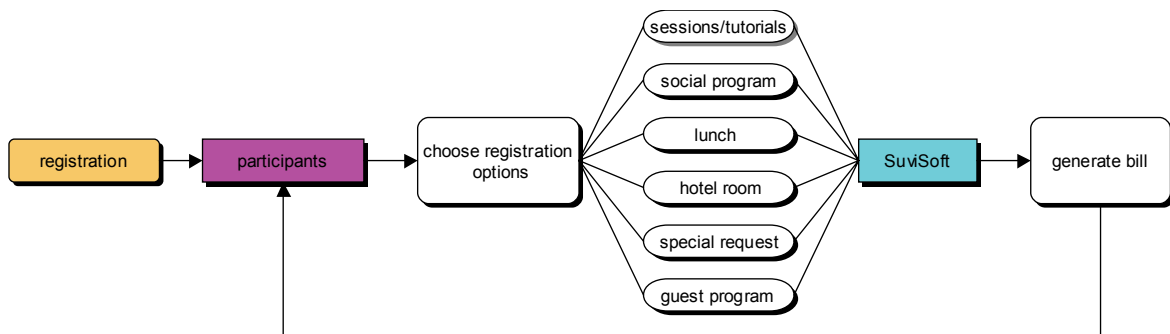


Figure 49: Participants' registration

For this conference, the hotel booking came late. Most participants already had registered at the time when the hotel booking system was installed on the web site. Therefore at that time the participants informed SuviSoft by e-mail which hotel they wanted. Normally SuviSoft would ask hotels for free rooms. The hotels would provide a number of rooms that SuviSoft could offer on the conference web site. The system counts down when a participant books a room. After a deadline SuviSoft would give the names of participants to the hotels. However most hotels would rather prefer booking by fax, because of the signature.

SuviSoft opened a conference account to which the participants transfer the conference fee. Also credit card payment was made possible. The Conference Committee had online invoice control to see who has paid which amount and could decide how often they want to have the money transferred to their account.

After the conference SuviSoft finally had to organize the printing of the proceedings. The authors uploaded their final papers to their account. SuviSoft transformed all formats to PDF, and an internal designer created a common style. Sequential page numbering was added, and then the pages were stored at the SuviSoft server. The print shop downloaded them by FTP and produced the final proceedings in one to two weeks.



Figure 50: Printing the proceedings

4 Summary of Requirements

4.1 Strategic level

We shall look at the strategic characteristics and challenges both from an industry perspective and from the perspective of companies' business models. Thirdly, we shall look at the strategic characteristics of the mentioned business relationships. Throughout, we shall look for opportunities and threats brought about by an E-Business platform such as DBE, resulting in strategic requirements to such a platform.

4.1.1 Leisure services and conventions – characteristics and challenges

Leisure services and conventions appear as one fairly strongly connected “opportunity space” in our analysis. Holidays and conventions have a few things in common: Hotels are a major service provider, the customers are *mobile*, there is a *mix of prior planning* of each day's activities and *spontaneous requests*. Consumers may have a very different behaviour than at home; the excitement of being on the road may make them more likely to *try out new products and services*. They may have to spend some idle time waiting for the next event or transport facility (such as waiting in line for the next cable car in a ski resort) which makes their *attention available* for watching commercials or for other time-killing activities. They are in a situation where they are surrounded by strangers and may want to quickly *find other people with similar interests*.

Many conventions, as shown, include entertainment – and therefore leisure aspects – at evening events.

B2B solutions have been implemented in this opportunity space for a long time. The most prominent are the big four *Global Distribution Systems (GDS)*, used for the planning and reservation process which takes place before the event or stay. These four are *Sabre*, *Galileo*, *Amadeus*, and *Worldspan* (cf. Das 2002). They were established by large airlines, and today link travel agencies to all types of tourism service providers, including hotels (mainly large hotels and chains). The travel agency interviewed in Aragon, *Viajes Orienta Siete Mares*, connects to Amadeus and Galileo, which are the two systems with the strongest European focus.

Recently, the planning and reservation process has benefited immensely from the Internet revolution. End customers become directly connected, often *bypassing the role of the travel agent*, and providing a new source of information to other customers by themselves through evaluations and forum opinions. Newly available information sources are integrated or have the potential to be integrated, like all kinds of *geographically related information (GIS)*. Customers today have the possibility to compare hotels based on the proximity and availability

of public transportation to places they want or have to go during their stay. Many services in the tourism and leisure area are *experience goods* and therefore pictures and multimedia are important in communicating the quality of hotels, museums and other providers to the end customer.

For the established GDS, the Internet has been both an opportunity and a threat. An *opportunity* because their established backend functionality and service provider base are important assets in building online services for end customers. They have all built their own travel portals such as Expedia and Opodo, thereby disintermediating travel agencies. A *threat* because their established technology was not designed with the Internet in mind, and new entrants with new technology can be more flexible. The Internet also enables service providers to get in contact with customers directly, disintermediating the GDS themselves – for example airlines like Ryanair or hotels through a hotel web site.

In addition, a lot of potential remains for the processes taking place during the event or stay itself. A fairly simple example is the *joint billing and payment service* which the hotels offer to the sports service providers. This service is already supported by standard accounting software used by hotels, but there is no standardised electronic communication between the business partners involved.

4.1.2 Business models

From a strategic point of view inspired by fellow project member Neil Rathbone's SME codes proposal³, Hotels belong to the category of capital-intensive service businesses. The service is sold at a specific place, and based on reservations for a certain period in time. It is a seasonal business, hence prices may systematically vary throughout the year in addition to the price variations based on the unpredictable fluctuations of demand.

*Yield management*⁴ means using all available information about demand and supply (free rooms) in the same geographical area in order to determine optimal prices. Many larger hotels have this function integrated into their hotel management system.⁵ However, a common electronic booking service as implemented on top of the DBE has the potential to deliver much more precise and timely information, thereby improving profits and occupancy. If (almost) every hotel in a given city uses such a system, it would even become possible to react to the booking policies of other hotels, e.g. raise prices when other hotels declare that they are full. This example shows how the introduction of such a service can have far-reaching consequences, not only by providing information that was not available previously (hotels will hardly start publishing the actual

³ An overview of his concepts is given at <http://www.daventryhouse.com>, but no publications are available.

⁴ Cf. Baker and Collier (1999), and Badinelli and Olson (1990)

⁵ One example is Optims.RMS offered by the above-mentioned Amadeus

number of free rooms they have), but even by just making the existing information accessible more conveniently.

Conference organizing, on the other hand, could be seen as an example of an *on demand* service, where a lot of resource capacity is needed for only a short time, and all clients (participants) go through the same stages (submission, registration, etc.) at the same time. Some of the resources (such as the conference web site software, conference rooms) are quite specific to the business, while other resources (such as hotel rooms) can be shared with non-conference activities.

As a consequence, resource efficiency in conference organizing means creating sufficient scale (many conferences) and distributing events throughout the year so that the resources are used evenly. Where this scale cannot be created, resources must be outsourced or otherwise shared with other providers.

The example shows how most of the necessary resources (web site, venue) are provided by sub contractors, and, in the case of hotel rooms, short-term excess demand must be filled by additional providers. For large events, like the example, resources must be reserved very early on (sometimes a full year before the event), and the entire planning is quite complex. Providers will often seek a mix of large and small events, in addition to special events during otherwise slow periods.

Information technology can help finding spare resources especially if they are not bound to one location. It can provide a shared representation of the planned event to a distributed organising team. There are opportunities to extend the existing IT services provided by SuviSoft in order to cover the full process in preparation of, during and after such an event.

All this can be applied also to other businesses with “on demand” characteristics, such as industry fairs, cultural festivals or disaster response.

4.1.3 Business relationships

We can observe that the majority of business relationships in these scenarios are long-term relationships. One example is that between the Hotel Benasque and the Sports shop Equipo Barrabés. Hotel Benasque relies on Equipo Barrabés for the arrangements of sports activities to a high degree: To the customer, it appears initially as if the hotel is responsible for these activities, so the hotel must have confidence in the quality of the sports shop and its subcontractors (such as Radical Snowboard). On the other hand, Equipo Barrabés relies on the hotel to manage the customer relationship, including notification if the customer does not “show up”, and including payment.

However, we can also see that the relationship is asymmetrical in one respect: Equipo Barrabés is the only (or the only stable) provider of this kind of service to the Hotel Benasque. But Hotel Benasque is only one of several hotels having this kind of relationship with Equipo Barrabés. This could lead to the conclu-

sion that the sports shop is the dominant partner. But there are several factors which balance out the relationship:

- The hotels own the initial contacts with customers, and the customer relationship during their stay. This is because customers are used to looking for accommodation first. If Equipo Barrabés loses the relationship with Hotel Benasque, it loses all those customers (at least all those who book their sports activities beforehand).
- Hotels are businesses with a capacity which is fixed in the short to medium term, with considerable investments necessary to expand it. A sports shop can more easily expand its own services – selling more items, hiring more tour guides, etc. Even if it somehow manages to attract more customers by itself, these customers have to stay somewhere. So it can only expand by keeping all existing relationships with hotels in the vicinity, and either adding more hotels to them or increasing the sports intensity of tourism in the area.

In short, if Equipo Barrabés decides not to work with some hotel, it likely hurts itself much more than it hurts the hotel.

The question remains why the hotel chooses to exclusively work with one sports shop. There are several potential reasons:

- Equipo Barrabés could be the only sports shop in town. This could in turn be explained by the fact that there are fixed costs and/or economies of scale associated with operating a sports shop (like having a certain minimal inventory).
- Equipo Barrabés uses legal, but effectively anti-competitive tactics (like certain discount schemes) to encourage hotels to work exclusively with it or to discourage the creation of any competing shops.
- There are other shops and it would be economically advantageous for the hotel to work with several instead of just one, but Mr. Panart, the Hotel's manager, avoids the time and mental energy necessary to manage several relationships (he does not behave as a fully rational economic agent).
- There are certain costs (transaction costs) associated with each business relationship, for example supervising the quality of the service, integrating the IT systems in order to enable the centralized payment.

Only the last two reasons would potentially be affected by the availability of something like the DBE, and the relationship could become more ad-hoc.

A pattern that may be identified in the scenarios above is that businesses will often rely on established relationships when demands have to be met quickly; new suppliers are contacted more often when there is enough time to evaluate them, and perhaps also involve them in some low-risk small-scale activity which serves as a test.

Any B2B platform like DBE must make a conscious decision whether to focus on ad-hoc relationships or long-term relationships, or provide support for both. The currently implemented infrastructure concentrates on ad-hoc relationships: The Business Modelling Language currently describes businesses mainly for the

purposes of discovery in the Semantic Registry. However, the service-oriented architecture implemented by the execution environment would allow implementing services which cater to long-term relationships in the future.

This supposed prevalence of rather complex long-term relationships poses a challenge to all those services of DBE which rely on a more or less complete representation of an SME's business relationships (e.g. automatically identifying new needs, suggest new business partners, etc.) – since there is little incentive to take the time to document these relationships, elicit and formalise the factors and client needs that led to their creation, etc.

4.2 Business process level

This section highlights some of the more unexpected characteristics of the business processes described, which can provide input to a discussion about features which may be needed for the B2B platform. The rather well-known functions or features of B2B exchange are:

- Supplier directory (who delivers what)
- Catalogue management (exchange of product and service catalogue)
- Product classification (shared numbering, classification and attribute schemes)
- Product configuration
- Ordering, Delivery, Billing, Payment
- Request for Proposal (RfP), Request for Quotation (RfQ) – see the conference organiser case, for example
- Product returns and reimbursements
- Rebates

It goes without saying that the SMEs interviewed and SMEs in general have not even implemented these well-known functions where applicable, and offering them a cost-efficient, easy to configure solution adapted to their industry even only for these functions would bring great benefits.

4.2.1 Service aggregation requirements

Several of the service providers mentioned perform service aggregating functions. For the travel agency, this is the core of its business, for the hotel and sports shop, it is just an added service.

The aggregation involves several activities, such as

- Informing about the existence of or even recommending the added services
- Booking added services
- Informing the other service providers about the client's characteristics
- Collecting payments on behalf of the other service providers

All these activities can be made more efficient through IT networks.

4.2.2 Demand aggregation requirements

The hiking trips organised by Equipo Barrabés and the ski courses offered by Radical Snowboard show the need for *demand aggregation*. These events can only take place if they have a minimum number of participants, and when an individual client contact does not book enough people, these service providers look for other participants and try to find a convenient date for everybody. Needless to say, this process can be complex and time-consuming, and could benefit from being accessible to all participants through a web page (however, this kind of B2C function is out of scope for DBE).

4.2.3 Shared client records or profiles?

Both the service aggregation and demand aggregation needs could possibly be met with the help of a shared client record or profile. In the case of service aggregation, it would avoid having to enter the client's name, address and other characteristics several times (into the backend systems of each service provider). In the demand aggregation case, there could be a centrally managed calendar of all events during the client's stay; it would also be easier for the client to access all information concerning the entire stay through one interface. The concept could be carried further towards "collaborative CRM", where several service providers collaborate in managing the client relationship. However, this kind of sharing might not be legal under some consumer privacy legislations, or be rejected by clients if they are given a choice.

4.3 Conclusion

Our study leisure services and conference organisation has revealed interesting use cases of collaboration between different SMEs and other organisations, with complex planning processes, needs to spontaneously respond to customer requests or other events, and even the need to coordinate or match several customers with each other.

B2B solutions in this area must certainly start by supporting the core E-Commerce processes of *product and service directories, ordering, fulfilment, billing and payment*. This core area is well-understood and already implemented by current providers. On the Internet, customer reviews are also already established. There remains a lot of potential innovation towards mobile services, Geographical information services, on-demand services, and supporting social interactions between customers.

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