Active Tourism Services outsourcing: a case study

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***Abstract* – In this work we present the case of the implementation of a specific Business Process Outsourcing (BPO) solution for Small and Medium-Sized Enterprises (SMEs) related to the active tourism sector. In addition, we show how too complex Information and Communication Technology (ICT) tasks for this kind of enterprise can be externalized. The specific business task contracted to a third-party service provider is the intelligent planning of tourism packages according to the user preferences and characteristics.**

Index Terms – Data Warehouse, Decision- making, Tourism outsourcing, IT outsourcing,

INTRODUCTION

Business process outsourcing (BPO) is the contracting of a specific business task, such as payroll, to a third-party service provider. Usually, BPO is implemented as a cost-saving measure for tasks that a company requires but does not depend upon to maintain their position in the marketplace. BPO is often divided into two categories: back office outsourcing which includes internal business functions such as billing or purchasing, and front office outsourcing which includes customer-related services such as marketing or tech support [14].

BPO that is contracted outside a company's own country is sometimes called offshore outsourcing. BPO that is contracted to a company's neighboring country is sometimes called nearshore outsourcing, and BPO that is contracted with the company's own county is sometimes called onshore outsourcing.

Conceptually BPO allows an enterprise to focus on its core competency by outsourcing non-core areas that generally consume a substantial amount of an organizational time and energy. Companies are increasingly outsourcing the management of Information and Communication Technology (ICT) services for reasons that include concern for cost, quality, performance, access to world-class technical and application skills.

The earliest form of outsourcing was payroll processing. Today, organizations can outsource two basic types of work:

- explicit functions relevant to the operations of ICT (for example, software development and infrastructure), and
- business operations that have direct impact on ICT systems (for example, customer call centers and manufacturing).

Companies generally outsource ICT to save costs, better focus on their core business, or because they consider the internal ICT function inefficient, ineffective, or incompetent. Outsourcing takes advantage of economies of scale provided by another business specializing in that domain. ICT outsourcing has evolved to the application service provision (ASP) model, in the late 90's to pure services in the beginning of the century [5]. Services, and their major representative web services, are actually the next phase of the movement toward Internet-based componentized software [15].

Tourism managers should review the items to consider:

- the risk to the business of down time or failure
- relative cost reduction in outsourcing (ROI)
- complexity of migrating the function to an outside provider
- competitive advantage provided by the function
- skills to meet business needs
- the organization's ability to manage the vendor and process to meet business needs.

On the other hand, many tourism companies today are becoming increasingly aware of the potential distribution, promotional and interactive marketing advantages that a Web presence offers, and outsourcing is perceived by them to be an option to establish and develop their on-line services. The relative low cost of the on-line tourism market through the Web and the derived simplicity of using ICT to create strategic alliances, are strongly encouraging Small and Medium-Sized Enterprises (SME) to be competitive. Now more than ever, travel agencies can forge alliances in order to develop top and competitive ICT capable of acquiring market share. As an example, reservation systems for new tourism trends, such as rural or adventure tourism, are being offered in a proactive manner by small travel agencies working together in association with the owners of these lodging enterprises. They usually constitute SMEs [2]. However, the growth of the

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on-line tourism market has not been as fast as previously expected [7]. As pointed out by Lexhagen [13], tourism businesses should try to develop more value-added services aimed to support the customer in the post-sale phase. The goal is to build up strong customer relationships and loyalties, which may provide continuous buying behavior. Some examples of ICT value-added services that a tourism enterprise can offer are automatic categorization of user travel preferences in order to match them up with travel options [8], search engine interface metaphors for trip planning [17] and semantic brokering systems. However, none of them can be considered as a post-consumption value-added service. A Decision Support System (DSS, specifically designed to allow end users to perform computer generated analyses of data on their own) for adventure practice recommendation can be offered as a post-consumption value-added service by travel agencies to their customers. Therefore, once a customer makes an on-line reservation, the travel agency can offer advice about adventure practices available in the area that customer may be interested in. Due to the high risk factor accompanying most adventure sports, a regular information system is far from being accurate.

We think that this kind of specialized service is a good candidate to be a BPO. The tourism enterprise sends information about its customer (profile about activity to be done, dates of the trip…) and the external provider schedule the route according to the tourist preferences.

This paper is organized as follows: next section introduces the steps we have follow to develop the project of case study. Third section is revised in short the concept of Data Warehouse. In fourth section is the case of study is presented. Finally, in fifth section the conclusions are presented.

SIX STEP PROCESS

Analyzing the BPO opportunity for your organization means identifying core competencies and determining the most effective way to support high performance in those activities. As many organizations have discovered, an increasingly effective way to support core competencies is by outsourcing noncore functions to third-party providers. We have developed a six-step process for organizations to use to analyze and select BPO opportunities. Each step in the process is designed to help organizations link BPO decision making to overall organizational strategy [15]:

1. Establish a BPO analysis team. The multidisciplinary nature of a BPO initiative requires a multidisciplinary team to adequately assess the opportunity for the organization. In this case, the team were formed by two computer scientist researcher of the university of Granada and the manager of a tourism SME.

2. Conduct a current state analysis. The goal is to develop an understanding of how work flows within the organization. Requirements of tourism SME concentrate on having reliable information about the activities to carry out.

3. Identify core and noncore activities. Company's core competences are processes that the front office, and especially the sales and marketing team, is emphasizing to customers. In our case, the core competences of tourism SME concentrate on management of primary services, like accommodation.

4. Identify BPO opportunities. Where fast action is required, it may be necessary to consider outsourcing key and support functions immediately to a best-in-class provider in a winner-take-all strategy. The analysis team decided that the process to be externalized should be an IT specialized task, e. g. to plan trips for soaring pilots ensuring that the flight will be satisfactory.

5. Model the BPO project. Similar to any other strategic business initiative it is imperative to establish performance metrics before implementation. The case study we detail in this paper has been supported by the Andalucía Research Program. The object of this research program is to transfer technology from universities to enterprises focused in the tourism area.

6. Develop and present the business case. The final step in the BPO opportunity analysis is to develop a business case for decision makers that will include direct recommendations on which, if any, business processes within the organization are suitable for outsourcing. For a SME to be successful, it is essential that the tourism product be diverse and differentiated from that of its competitors. Diversifying tourism products and matching a specific product offering to a specific market are critical for commercial success. The analysis team decided that the IT outsourcing should be focused on a specialized part of trip planning generation, i. e. all possible kind of activities which can be analyzed using a GPS as we will expose in the case study.

Although these steps seem transparent, many organizations overlook opportunities or misunderstand the true value versus risk proposition by skipping steps in the analysis. An organization can also find itself managing confusion if a nonsystematic approach is used. This six-step process is not the only known approach to analyzing the BPO opportunity. However, this proven process can increase the likelihood of success and minimize the risks associated with a BPO initiative.

DATA WAREHOUSE

It is obvious that there is no organization running without data. The data can be viewed as tangible assets of an organization just as any physical asset. So, they need to be stored and made available to those who need them in order to be used at any moment. Since the data by themselves are useless, they must be put together to produce useful information. In turn, information becomes the basis for relational decision making. To facilitate the decision-making process, a new piece of technology more sophisticated than a database system was developed and called Data Warehouse (DW). The DW can be generally described as a decision-support tool that collects its data from operational databases and various external sources,

transforms them into information and makes that information available to
decision-makers (top managers) in a consolidated and consistent manner [10][11]. The persistence of huge amounts of data (possibly distributed and heterogeneous) opens a new perspective for various statistical analysis methods which are essential for strategic decisions in tourism.

Inmon defined a DW as "a subject-oriented, integrated, time-variant, non-volatile collection of data in support of management's decision-making process" [10]. A DW is a database that stores a copy of operational data which structure is optimized for query and analysis. The scope is one of the DW defining issues: it is the entire enterprise. Related to a more reduced scope, a new concept is defined: a data mart (DM) is a highly focused DW which scope is a single department or subject area. The DW and data marts are usually implemented using relational databases [9] defining multidimensional structures. The generic architecture of a DW is illustrated in Figure 1 [6]. Data sources include existing operational databases and flat files (i.e., spreadsheets or text files) in combination with external databases. The data are extracted from the sources and then loaded into the DW using various data loaders and ETL tools [4]. ETL stands for extract, transform and load, the processes that enable companies to move data from multiple sources, reformat and cleanse it, and load it into another database or on another operational system to support a business process. The warehouse is then used to populate the various subject (or process) oriented data marts and OLAP servers. Data marts are subsets of a DW categorized according to functional areas depending on the domain (problem area being addressed) and OLAP servers are software tools that help a user to prepare data for analysis, query processing, reporting and data mining. Thus, a DW coupled with OLAP enables managers to creatively approach, analyze and understand the problems. The OLAP analyzes data using special DW schemas and enables users to view data using any combination of variables.

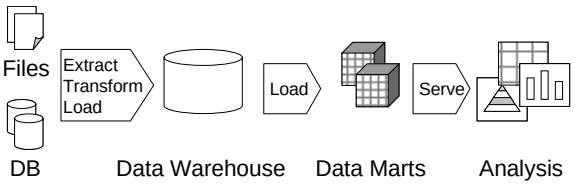

FIGURE 1
A generic Data Warehouse architecture.

To extract this information from a distributed environment, we would need to query multiple data sources and integrate the information at a particular point before presenting the answers to the user. In a DW environment, such queries find their answers in a central place, thus reducing the processing and management costs. After the initial loading, warehouse data must be regularly refreshed. Modifications of operational data since the last DW refreshment must be propagated into the warehouse such that warehouse data reflect the state of the underlying operational systems [3]. To make flight decisions, pilots use all the information they can get, and they need to have in a format they can use easily.

CASE STUDY

BPO is based on the fundamental proposition that organizations should focus on what they do best and outsource everything else. If a company markets and sells sporting goods, it should spend substantially all of its time doing that and as little time as possible managing its accounting, customer service, and employee benefits plans. In theory, the concept makes a great deal of sense. In practice, it still seems to invite a new set of challenges that may cost more than the problems it is supposed to solve [16].

It is critical to point out that BPO is not a technology or a technology system; it is a business strategy. In that regard, to BPO or not to BPO is a question nearly anyone who manages a business process must now confront. As a strategic choice, the BPO option is a live one for anyone with a budget, limited resources, and decision rights over a business unit. For some managers, the decision may even involve the continued existence of their own departments and their jobs. No one is likely to decide to eliminate his or her own job, so managers must learn to understand how BPO may fit into their overall responsibilities and develop the skills to manage the BPO transition and maintain it once it is up and running.

Taking advantage of business process outsourcing will be a challenge for managers in all types of organizations and at all levels within those organizations. As we move into an age of greater accountability among organizational leaders, boards of directors, and others with fiduciary responsibility, it is imperative for those leaders to ask whether the firm could perform better by adopting new business models like BPO. Furthermore, as firms within an industry adopt BPO, others will be forced to consider it as the traditional cost structure of their industry comes under pressure.

Although it is acknowledged that tourism is most successful when the industry is driven by the private sector, the government has an important role to play in terms of influencing investments to achieve certain policy objectives. As the public sector is often the investor, especially in terms of tourism infrastructure, it is essential that such decisions be grounded on a clear understanding of the implications of different investment decisions. The case study we detail in this paper has been supported by the Andalucía Research Program. The object of this research program is to transfer technology from universities to enterprises focused in the tourism area [12].

The DW system is used to provide solutions for gliding problems, since it transforms operational data into strategic decision-making information. The DW stores summarized

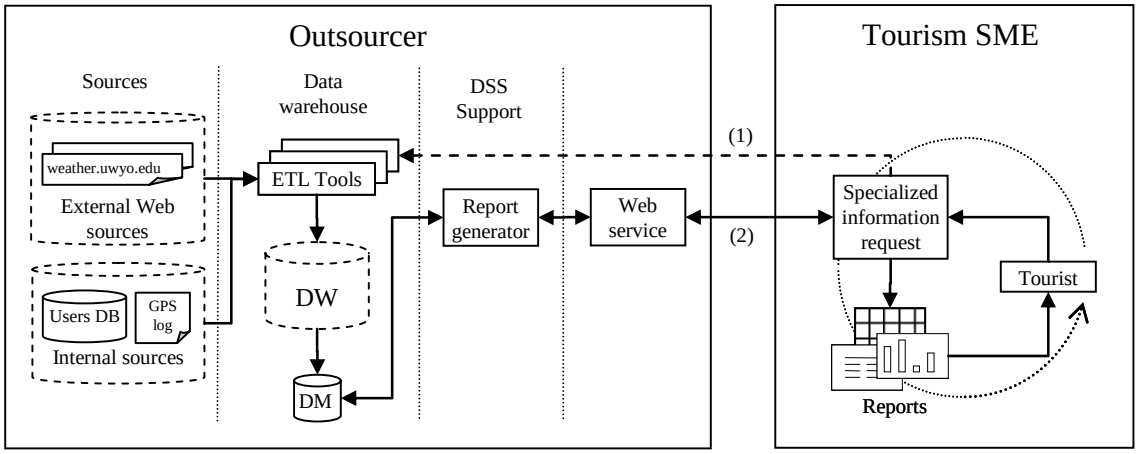

FIGURE 1
Outsourcing architecture.

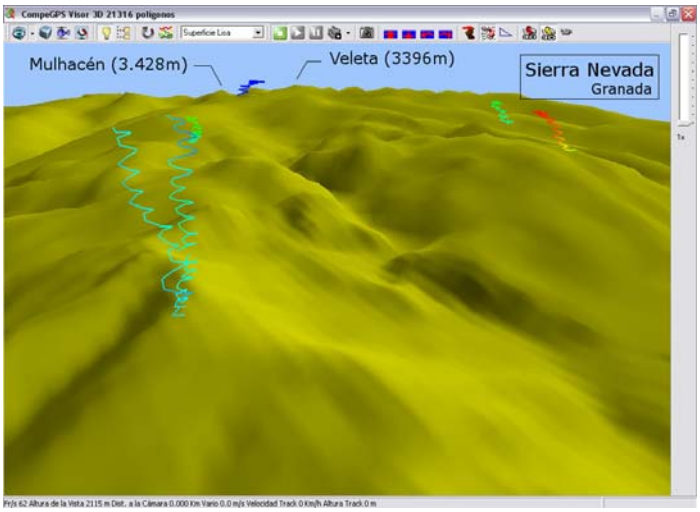

FIGURE 2
Outsourcer query result being analyzed in a 3D application. The curls shown represents the displacements (lifts) generated for a specific user profile.

information instead of operational data. This summarized information is time-variant and provides effective answers to queries such as “Will the air be good for soaring? Will thunderstorms be a factor? Can strong boundary layer winds disrupt the desired vertical column of unstable air and destroy thermal lift?” and so on.

Since 1980, the concept of alternative tourism has received considerable attention. It is the opposite to mass tourism. For example, alternative tourism forms, such as ecotourism developments, are stylised as small-scale and locally owned, with low import leakage and a higher proportion of profits remaining in the local economy.

Soaring is a recreational activity and competitive sport where individuals fly un-powered aircrafts known as gliders. Soaring site selection process depends on a number of factors, resulting in a complex decision-making task. It is common for the decision makers to use their subjective judgment and previous experience when selecting the most appropriate place for soaring.

For non-expert users, such as tour-operators or travel agencies, the output report can be used as filtering information for their on line reservation systems. While logging reservation systems do not need supplementary information as weather forecast, other products in the tourist industry, such as eco-tourism can take a tremendous advantage of last-minute DW, such as the soaring DW or other DW defined for sport activities subject to weather conditions. The system constitutes an enhanced modification of the current InfoTours [1], an on line availability and reservation system of the travel agency Vive-Granada S.L.L. (www.vivegranada.com, www.vivespain.com). It allows to query a last-minute DW and use the output report to filter the on line availability of outdoor activities offered by the on line reservation system. Figure 2

shows the architecture. The tag (1) shows the flow data (tourist's profile and preferences about active tourism) from tourism SME to outsourcer service provider and tag (2) is the flow of data related to the activity planning. In our case this report will show a soaring trip recommendation according to the tourist profile. Figure 3 shows a snapshot of the tri-dimensional view of this output soaring report.

CONCLUSIONS

Soaring is a recreational activity and competitive sport where individuals fly un-powered aircrafts known as gliders. Soaring site selection process depends on a number of factors, resulting in a complex decision-making task. It is common for the decision makers to use their subjective judgment and previous experience when selecting the most appropriate place for soaring. We have presented a DW architecture for solving the difficult issue of generating a soaring trip planning for a given tourist profile (experts, novel…). For tourism SMEs is a complex task to manage this kind of system, so it is a susceptible task for outsourcing.

At present, we have develop a DSS for soaring site recommendation but the system is being extended so support another kind of trips (by walk, bicycle…)

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