The Human Side of Information Development: A Case of an Intervention at a British Visitor Attraction

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Information systems (IS) are growing in importance within the tourism industry, where one key application is database marketing. Evidence from the IS domain suggests systems failure may be due, at least in part, to concentration on technical rather than human issues in the development process. Through an empirical study of visitor attractions in the United Kingdom, the need for a more human-centered approach to IS development is supported, and an example of such an approach is outlined. Both in-depth focus group analysis and a broader questionnaire survey are used, and lend weight to the human-centered arguments. From the analysis of a failed tourism database marketing information system, and from evidence of similar successful systems, the value of technology-enabled database marketing within the sector is demonstrated, but its success is seen to rest on participative, human-centered approaches to development.

This paper investigates the use and success of information systems in the tourism industry. As a fairly young, growth-industry, tourism may be able to learn from some of the pitfalls already experienced in other sectors, where “...analysis has been driven by what is technically possible rather than by what is organisationally desirable. The consequences of this include a number of failed investments in information systems, the disenfranchisement of management, and an accepted use of developmental methods that are insensitive to the social and political contexts within which the information systems are to be used” (Lewis, 1994, p.2). This paper suggests that the information systems within tourism may reduce the possibility of failure by the use of the participative and holistic approaches to development which address end user issues through the so-called ‘soft’ or human-centered methods.

The advantages to be gained can be judged from a brief analysis of the value of tourism to the U.K. economy. In 1991, 16.6 million foreign visitors are estimated to have spent £7,168 million within the UK, while domestic tourism accounted for 94.4 million trips and an additional £10,470 million of expenditure (British Tourist Authority, 1994, p.1). In 1995 tourism produced 5% of Gross Domestic Product (1% up on the previous year’s figure) providing £25 billion to the economy (The Times, 1996). The World Travel and Tourism Council (WTTC) state that the industry is a “key economic driver,” and by the end of 1997 they expected it to be generating 11.6% of Britain’s Gross Domestic Product.
(The Times, 1996). In the same article, the WTTC said “travel and tourism is a key to future economic growth” (The Times, 1996, p.12). By any standards, travel and tourism are now major components of the U.K. economy, and information systems play an important role in its future success.

The paper begins with a general review of information systems within tourism, taken from the relevant theoretical and empirical literature. The incidences and causes of information systems failure are then outlined, and are seen to indicate human-centered methods as relevant within this domain. An analysis of human-centered approaches to information systems design, development and implementation, leads to the chosen methodologies for the study, which are strongly participant focused.

The specific area addressed by this paper is visitor attractions: a significant growth segment within the U.K. tourism industry. The empirical study is composed of two components. Firstly, focus group sessions are used at a major visitor attraction which has been the subject of a failed database marketing system. Secondly, a self-administered questionnaire was sent to the top 20 visitor attractions in the U.K., eliciting a 65% response, from which a broader perspective on the use of database marketing within the visitor attraction sector was elicited.

Information Systems and the Tourism Industry

Electronic media are emerging as channels with potential for an important dialogue between buyer and seller, technology permitting information to flow in both directions, between the customer and the company. They help create the feedback loop that integrates the customer into the company, allows the company to own a market, permits customisation, creates a dialogue, and turns a product into a service and a service into a product.

Database marketing is widely used within the tourist industry. It may be defined as “the ability to use the vast potential of today’s computer and telecommunication technology in driving customer-oriented programmes in a personalised, articulate and cost-effective way” (Fletcher, 1995, p.301). With the technology available today, organisations can hold electronic information concerning potential customers, and use it for marketing purposes. Kotler (1991, p.54) defines a marketing database as “…an organised collection of data about individual customers, prospects, or suspects that is accessible and actionable for marketing purposes.” Database marketing provides an edge in finding out more about customers and gives the opportunity to build customer loyalty: “A growing number of marketers are investing heavily in creating databases that enable them to determine who their customers are, to record details of their preferences and behaviours, and to serve them in ways that may create long term loyalty” (Berry, 1996, p.422).

Database marketing uses statistical and modelling techniques both to support the development of cost effective marketing programmes that communicate directly with targeted customers, and to track and evaluate the results of specific promotional efforts. The aim is not simply to sell, but to build up a relationship with existing and potential consumers (Fletcher, 1995). Companies, therefore, need to collect quite detailed information about clients on such a database system. Implicit in this is the need to know customers in a personalised way: each record on the database contains information about the customer’s name address, but also contains information about customers needs, characteristics and previous buying behaviour. According to Fletcher (1995), the features of database marketing are that:

- advertising and selling are combined
- the results are measurable and therefore effectiveness can be tested
- it is selective, assuming a suitable list or customer database is available
- it is flexible, in both timing and objectives, and therefore controllable.

The marketing database is complementary to other elements of the promotional and marketing mix, allowing a planned and integrated campaign, and, as such, it must be part of an information system. An up-to-date database allows for more informed strategic marketing decisions, allowing organisations to be more outward looking, and enabling future marketing strategies to be based on an exact population, reducing the need for ad hoc market research. Selective database marketing has, for example, transformed airline companies: having discovered that 80% of their business was coming from 20% of their customers (the ‘frequent flyers’), airlines developed databases to capture information on individual travellers, offered ‘frequent flyer’ rewards, and thereby developed brand loyalty.

It is evident, therefore, that the tourism industry could benefit from the effective and efficient use of database marketing, which must be part of a reliable information system. However, before developing an approach for the design and implementation of such an information system for application to visitor attractions, the next section first considers information systems in general, and investigates reasons for failure, thereby providing a sound theoretical and practical basis for the study.

Information Systems Failure

An information system can be defined as: “…a system to collect, process, store, transmit and display information” (Avison, 1990, p.3); or: “…any system which assembles, processes and delivers information relevant to an organisation (or to society), in such a way that information is accessible and useful to those who wish to use it, including managers, staff, clients and citizens. An information system is a human activity (social) system which may or may not involve the use of computers” (Buckingham, 1987, quoted in Avison, 1990, p.5).

Information technology is concerned with technical