

PLANNING AND IMPLEMENTATION FROM PERCEPTION: THE CASE OF A START-UP SMALL BUSINESS

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ABSTRACT

This paper explores by case study the IS&T planning methods employed during the creation of a small professional service organisation. Data collection was undertaken via a semi-structured interview with the owners of the organisation and the completion of an open-ended questionnaire by the employees of the organisation. The key areas covered are informal planning of IS&T needs and the development of strategies aimed at defining, validating and implementing IS&T into this small business. The case study demonstrates that IS planning was undertaken and although no formal IS plan was created, IS&T functionality was factored into the start-up strategy. In addition, the case study also found that the owners' previous experience with IS&T was critical to the success of the IS&T implementation. Three hypotheses are tested which provide an insight into the IS&T decision making process that occurred during the creation of this small business.

1. INTRODUCTION

With limited resources and IS&T expertise, a new small business is in a difficult position when determining its IS&T needs and implementing IS&T into the organisation. This paper explores how non IS&T professionals with end user experience created the IS&T environment of a small professional service organisation which offers legal, accounting and training services to the real estate industry. In particular the paper investigates what planning was undertaken, how that plan was formed and the influence of perception of IS&T on the planning process. This case study found that the owners' previous experiences with IS&T were critical in the implementation of IS&T in their new business.

Small medium enterprises (SMEs) can use IS&T to a small or large extent. Carr (2003) comments that IS&T can support an organisation's business operations, unite global supply chains and connect a business to its customers. Duhan et al (2001), Gramignoli et al (1999) and Levy et al (1998) all comment that SMEs primarily use IS&T as a tool to support business operations. In Australia, IBM has screened a series of television ads that promote their e-business services as a means for small businesses to compete in the global market.

The findings presented in this paper are useful in shaping our knowledge of how start-up small businesses might determine their IS&T needs. To date there has been very little research undertaken in this area, particularly in the Australian context and for small professional service organisations.

While the literature discusses planning and implementation of IS&T from the perspective of established organisations there is little in relation to the creation of a new organisation, and the level of IS&T planning undertaken by small businesses. The case study demonstrates that IS planning and strategy development were undertaken although there were no formal IS plans. However IS&T functionality was factored into the overall start-up strategy.

2. IS&T PLANNING

IS strategic planning texts and literature discuss the importance of IS&T strategic planning and its links with business strategy (McKay and Marshall 2004; Ward and

Peppard 2002; Boar 2001; Levy and Powell 2000; Teo and Ang 1999; Henderson and Venkatraman 1999; Earl 1993; Lederer and Sethi 1988). These authors present the IS strategic planning process as an activity that should be undertaken regardless of organisational size. However, for some SME's at start-up, undertaking a formal IS strategic planning exercise may be unrealistic due to many competing priorities that must be considered, for example, finances, staffing needs, office space, and finding customers.

Research has suggested that formal methods should be used for strategic IS planning (Lederer and Sethi 1988; Henderson and Venkatraman 1999). Ward and Peppard (2002) define strategic planning as a systematic, comprehensive analysis leading to the development of a plan of action. Boar (2001) describes a three-step IS&T strategic planning process as follows:

- Assessment - the gaining of a clear understanding of what is required which culminates in the identification of a set of conclusions or directions;
- Strategy - specific objectives to be achieved and the actions required to achieve these objectives and the future state of the organisation; and
- Execution - putting the plan into motion.

Earl (1993) advocates that these formal strategic planning methods alone are not enough and that in order to accomplish the outcomes of the IS strategic planning process the plan must be implemented. But one must question whether all these formal steps necessary for a small start-up business.

However, the concepts presented in the above mentioned texts and literature are more suited to large organisations where formal planning and strategy processes are in place. Literature on IS planning for small organisations is less widely available. Beheshti (2004:p323) noted that 'SMEs should be more proactive in their use of IT in some areas, particularly strategy, development and decision making'. Stonehouse and Pemberton (2002) studied the organisational strategic planning process in SMEs in the UK manufacturing and services sector and found that business planning practices rather than strategic management practices were employed. Levy and Powell (2000) report on the development of an information systems strategy approach for SMEs and identified that SMEs need to take into account organisational issues in conjunction with IS issues when undertaking IS strategic planning. Gramognoli et al (1999) stated that SMEs typically assign low strategic importance to IS&T.

The lack of IS planning in SMEs has been well documented (Hagmann and McCahon 1993; Blili and Raymond 1993; Gramignoli et al 1999; Levy et al 1998). Duhan et al (2001) suggest that SMEs should undertake IS strategic planning as they have much to gain from the strategic use of IS&T. This concurs with the earlier findings of Hagmann and McCahon (1993) and Blili and Raymond (1993) who found that SMEs gave little attention to IS planning.

Most SME focussed literature shows that while SMEs may benefit from IS strategic planning research to date has found that it is not always undertaken. It may well be that

the SMEs concentrate on business planning practices as documented by Stonehouse and Pemberton (2002).

3. PERCEPTION OF IS&T

The perception of IS&T within an organisation is concerned with how IS&T is viewed by the organisation's employees. Hence there may be different views of IS&T in relation to an employee's role and/or position within the organisation. For example, a user may have a good or bad perception of IS&T based on their daily use of IS&T (Lin 2001), whereas a senior executive may have a strategic view of IS&T (Carr 2003).

Ramakrishna and Lin use the phrase "orientation toward IT (OIT)" (1999: p 42) to refer to the different perceptions that IT users and project staff may have toward the perception of IS&T within an organisation. OIT could be expanded in relation to how employees view both the IS&T function and the use of IS&T within an organisation. Elaborating further, OIT could also be seen as a factor when determining the IS&T needs for a start-up organisation.

Lin (2001:3) suggests that individual perceptions of technology depend on how the technology is understood by individuals. She continues by stating that 'perceived usefulness' and 'ease of use' form the basis of an individual's perception of technology. This attention to an individual's perception supports the individual relationships highlighted by Ramakrishna and Lin (1999).

As Lin (2001) suggests, perceptions of IS&T are mostly based on experience, thus forming an orientation towards IS&T. The question to be contemplated is whether an orientation towards IS&T can be applied in start-up small business situation.

4. RESEARCH AGENDA

Of the literature reviewed, little was found in relation to a start-up small business. The IS&T planning literature appears to be scant of information regarding a start-up business. Lin (2001) provides some insight in perceived needs of IS&T with the concepts of 'perceived usefulness' and 'ease of use' as do Ramakrishna and Lin (1999) with their concept of OIT. More research needs to be done in this area especially from the perspective of a start-up small business.

The objective of this research is to examine by case study, the planning and implementation of perceived IS&T needs and how this perception became a reality for the start-up of a small professional service firm offering legal, accounting and training services to the real estate industry. The case study documents the IS&T planning undertaken by the owners of the firm and then describes the implementation of these IS&T needs.

From analysis of the literature several hypotheses have been developed. It is anticipated that examination of these hypotheses may contribute to a greater understanding of the factors affecting the successful planning and implementation of IS&T by a start-up small business. The hypotheses are:

- **Hypothesis 1** – That previous IS&T experience informs and/or determines IS&T planning and implementation in a start-up small business
- **Hypothesis 2** – An orientation towards IS&T is a necessary condition for success.
- **Hypothesis 3** – That a rigorous formal IS&T planning process is not necessarily required when starting a small business.

5. RESEARCH METHODOLOGY

This single case study uses an interpretive approach, as the intention of the research is to understand how the owners (two partners) of the small professional service organisation undertook the planning and implementation of their firms IS&T needs. Yin (2003: p13) describes a case study in the following terms:

A case study is an empirical inquiry that:

- investigates a contemporary phenomenon within its real-life context especially when
- the boundaries between the phenomenon and context are not clearly evident.

Case study research provides rich contextual data obtained from an organisational setting rather than studying the issue from the technical side (Benbasat 1987) and a single case study has the ability to increase our understanding of a particular situation (Yin 2003). Although the findings of a single case study may not be generalisable, it has been argued that it provides a rich and valuable insight of the given context (Duhan et al 2001) and that the findings may be appropriate for someone in a comparable position (Cousin and Jenkins 2001).

The case study used a qualitative approach to the collection of data. In February 2004 the author conducted an on-site semi-structured interview of approximately one hour with the owners of the firm. The interview was recorded in note form and compiled into a detailed account of the semi-structured interview and then validated with both partners. A follow-up phone call was made to the owners of the firm in December 2004 to validate that staff numbers had not changed.

In addition, the employees of the firm completed an open-ended questionnaire based on the questions which guided the semi-structured interview. Each employee was provided with background information on the research and an explanation of the open-ended questionnaire. The questionnaire was sent to each employee by email and completed responses were returned by the same method.

The case study refers to two documents, a business plan and an IS&T scoping document. Of these, the IS&T scoping document was made available for the research and analysis of this document was undertaken to help obtain an accurate picture of the planned IS&T environment.

Results were analysed manually using thematic analysis (Aronson 1994), which allows common themes across a series of data to be identified, by interpreting the detailed account of the semi-structured interview and the completed employee responses to the open-ended questionnaire.

6. THE CASE STUDY

Background

Two partners, a solicitor and an accountant started the small professional service organisation to offer legal, accounting and training services to the real estate industry in early 2002. The two partners operated the organisation in standalone mode for approximately 12 months while working from separate sites within suburban Sydney. Once the solicitor had completed his legal practice training the separate site operation was seen as unworkable. In April 2003 the partners made a decision to lease premises on the fringe of the Sydney Central Business District and this was the first step toward the creation of a combined operation. A business plan was developed for the commencement of operations in the new premises which identified the components that the business would undertake. Following this, the software required to support these business components was identified along with an estimate of the number of users that might be in place within three years.

After this identification process, the partners developed the IS&T scoping document (here after referred to as the scoping document) that covered the requirements for setting up the new office premises. This scoping document was the cornerstone of IS&T planning and was framed from the experiences that both partners had acquired during their previous employment. The process of developing the scoping document can be associated with the business-led approach of strategic information systems planning of Earl (1983) where business plans are analysed to identify IS&T needs.

By February 2004 the organisation had grown to a staff of six and plans are in place to recruit more staff in February 2005. The current staffing profile is:

- The legal partner;
- The accounting partner;
- One graduate solicitor;
- One licensed conveyancer;
- One trainee accountant; and
- A receptionist.

With a workforce of six the firm is a small business in Australia as defined by s761G(12) of the Australian Corporations Act 2001 (Australian Securities & Investments Commission 2004).

Planning for IS&T

While the literature refers to a formal IS&T strategic planning process and the documentation of the final IS&T strategic plan (Ward and Peppard 2002; Boar 2001; Henderson and Venkatraman 1999; Lederer and Sethi 1988), this did not occur in the case study organisation. As the accounting partner stated "*we didn't really create a formal IS&T plan. It was only a short section at the end of our Business Plan and mainly referred to the scoping document*". The process followed by the partners in planning their IS&T needs can be interpreted as:

- Understanding the current state of IS&T (what IS&T is currently in place at the organisation);
- Proposing the future state (what IS&T is required to be in place at the organisation); and
- Executing a transition state (how to move from the current state to the future state).

This process can be compared favourably to the IS&T strategic planning model proposed by Boar (2001), namely assessment, strategy and execution, however, formal documentation was not carried out. The current state of the organisation was deemed to be the standalone mode of operation with the partners working from separate sites.

The Scoping Document

The scoping document is best described as what the partners considered to be the perceived IS&T needs for their company. It is therefore classed as the future state and was based on the previous IS&T experiences of both partners. No IS&T professionals were consulted in the creation of the scoping document. As the legal partner commented *“we had both worked for organisations where good IS&T structure and support systems were in place and also for small organisations where IS&T structure and support systems were non existent”*. This previous experience was the main force behind the creation of the scoping document where the partners documented the perceived IS&T needs for their organisation and this in turn directed the IS&T implementation strategy.

The scoping document detailed the minimum requirements needed to establish the new office and covered six areas deemed important for this process. They were:

- Hardware requirements;
- Server “must haves”;
- Software requirements for initial start up and future needs based on growth (for specific software see below);
- Personal computer needs;
- Methods to determine which hardware to purchase; and
- Methods to determine IT support needs.

These minimum requirements were seen as flexible given that the scoping document identified areas where further investigation was required. Hardware vendors were identified and a list of the minimum standard software requirements was created, i.e. office applications, virus and backup software along with the specific applications to perform the business operations. The specific software applications were:

- Tax software;
- Client Management System;
- MYOB accounting software used for clients and the company; and
- LEAP legal software for precedents.

Other software seen as imperative for the organisation included:

- A file management system;
- Trust accounting; and
- Client Billing.

However, given the start-up size of the organisation, procuring these three systems was not seen as cost effective. It was therefore planned that these three systems would be performed by manual operation with the help of word processing and spreadsheet applications. Support systems, such as spreadsheets, have been identified as a means for capturing and presenting information within SMEs (Levy et al 1998).

An important strategy developed for the scoping document was to outline how the partners proposed to tackle the issues of hardware and software purchases and the implementation of this hardware and software. As the partners understood the need to 'get things right up front', they wanted to engage an IT professional to assist in the sourcing and implementing the IS&T needs. Therefore, this strategy can be classed as the transition state as it would take the organisation to its future mode of operation. This process was based on the partners previous experience and their perception of IS&T. It was an informal process.

Using their network of business contacts they obtained the contact details of various providers of such services. One service provider engaged, on the advice of a business contact, provided the name of an IT support organisation, who were contracted to assist the partners. According to the accounting partner "*the IT support organisation proved most useful in verifying that the hardware and software plans were appropriate to meet the immediate and medium term needs of the business and they also implemented the IS&T environment*". The use of external consultants or contractors to undertake IS&T work in SMEs is documented in the literature. Gramignoli et al (1999) describe 'external technical partners' as those who assist SMEs by identifying solutions with regard to the management of IS&T.

As part of their focus on the future, another aspect identified in the scoping document was that, no matter what systems and technology were purchased, the ability to cater for growth was essential. Growth was seen as coming from two directions: 1) new staff and 2) new areas of business.

The IS&T Implementation

During their planning process the partners identified three criteria to measure the success of the IS&T implementation. These criteria in no particular order are:

1. Perceived usefulness of IS&T choices made;
2. The IS&T environment must cater for organisational growth; and
3. The IS&T environment will always be available when required.

The criteria can be seen as a means to gauge the perceptions of the partners and staff in relation to the IS&T environment. If the criteria were met then the partners and staff would have a positive perception of IS&T and their 'orientation towards IS&T' would be favourable. Conversely, if the criteria were not met then a negative perception of IS&T would indicate a poor 'orientation towards IS&T'.

The organisation's IS&T had a solid foundation due to the partners' emphasis on informal IS&T planning through the creation of the scoping document. The decision to engage 'external technical partners' (Gramignoli et al 1999) to perform the implementation is

also seen as a contributing factor to the success of the IS planning process. The environment has been able to accommodate the growth in employees and clients. Automated processes are in place for system management, backups are taken on a daily and monthly basis and stored off site and virus updates are done in real-time. By having automated processes in place to perform the routine operations the productivity and efficiency of the employees is enhanced. Productivity and efficiency are seen as a major reasons for IS&T adoption in SMEs (Beheshti 2004; Gramignoli et al 1999; Levy et al 1998).

Meeting the Implementation Criteria

An essential requirement when setting up the IS&T environment was that it must be user friendly and complaint free. The accounting partner stated "*the environment must perform at a level that will not hinder or prevent the daily IS&T operations of each staff member*". This meets the first and third criteria. From the interviews with the partners and correspondence with the employees these criteria appear to have been met. The partners and employees are very positive towards the IS&T environment and have commented that it meets both the organisations and their own needs and to quote the legal partner "*the IS&T environment we have in place has greatly exceeded our initial expectations*". This also supports the concepts of 'perceived usefulness' and 'ease of use' presented by Lin (2001).

The IT support organisation has been retained to provide maintenance and support activities under a quarterly service provision contract. They have remote access to the systems and are able to correct most problems encountered via this medium. There are several technicians at the support organisation who provide the IT support needs and as such there is no reliance on any one individual for support. Where support needs are required outside the contract terms, the support organisation is engaged on a time and materials basis and this process is managed and co-ordinated by the accounting partner. This support arrangement takes a considerable load off the partners' shoulders and provides the required level of support when it is needed. This meets the first criterion.

Another documented requirement was that the IS&T environment must cater for company growth. Initially the server capacity was greatly over estimated however given the growth of the organisation within the first year of operation this decision appears cost effective. As the legal partner said "*we have seen no issues in relation to usage volume on any of our systems even though we have attained considerable growth in our first year*". The IS&T environment is seen as being adaptable to the changing needs of the organisation, which is primarily growth in employees and growth in business. This meets the second criterion.

The employees have high expectations of IS&T and the efficiencies that it can bring to their jobs. All employees are high IS&T users and therefore their expectation is that it will always be available. The high availability of the IS&T environment was another element in the scoping document. This meets the third criterion.

IS&T helps to support the business goals of the organisation, namely to provide a valuable and competent service to their clients. In fact, the provision of the accounting

services is completely dependent on IS&T and by having such a dependency, the ability to provide a prompt and efficient service to their clients can only benefit the organisation. One of the employees commented that "*IS&T helps to ensure the business goals are achieved by giving clients fast and effective service and this keeps the clients happy. Therefore we can obtain more clients and our business improves*". This meets the first and second criterion. Beheshti (2004), Duhan et al (2001), Gramignoli et al (1999) and Levy et al (1998) all noted that many SMEs see IS&T as a support tool for business operations.

7. DISCUSSION

The case study has given some valuable insights into the use of informal planning methods for a start-up small business. Generally the hypotheses are supported by the findings from the case study.

Hypothesis 1 – That previous IS&T experience informs and/or determines IS&T planning and implementation in a start-up small business.

Both partners had previously worked for large and small organisations. They had witnessed IS&T environments with good structure and support mechanisms and where structure and support mechanisms were non-existent. Given their previous backgrounds, both partners had definite perceptions of what IS&T could do for an organisation and the benefits to be gained from IS&T.

The partners' previous experience was the main force behind the creation of the scoping document which documented the perceived IS&T needs for their organisation and in turn directed their implementation strategy. They also referred to their network of business contacts to enhance and validate the requirements listed in the scoping document and the decisions to be made regarding IS&T planning and implementation. Previous IS&T experiences would guide the information provided by these business contacts.

The implementation of the IS&T environment can be considered successful. Both the partners and staff are satisfied with the environment and the ease with which it allows them to undertake their daily activities. Again the past IT user experience of both partners is seen as a driving force behind this.

Hypothesis 2 – An orientation towards IS&T is a necessary condition for success.

An OIT is seen as vital to the success of any IS&T initiative. Ramakrishna and Lin (1999) use OIT, to describe the different perceptions that IT users and staff have towards IS&T within an organisation. These perceptions can influence the success or failure of an IS&T initiative and as Ward and Peppard (2002) note the ability of IS&T to provide value to the organisation.

In relation to the case study, both partners had an OIT from the user side. Given the quality of the detail provided in the scoping document and the success of the

implementation, it can be said that a favourable orientation towards IS&T is a necessary condition for success.

The organisation's workforce, consisting of a receptionist and recent graduates, has also played a role in the success of the IS&T environment. While their IS&T experiences may not be extensive, they all believe it is essential and will always be available to enable them to perform their tasks. Again a favourable 'orientation towards IT' is witnessed. IS&T is seen by the employees as a critical component of the daily roles. To quote one employee "*IS&T is invaluable to the organisation's existence*".

Hypothesis 3 – That a rigorous formal IS&T planning process is not necessarily required when starting a small business.

IS strategic planning literature concludes that formal IS strategic planning should be undertaken regardless of organisational size (Ward and Peppard 2002; Boar 2001; Henderson and Venkatraman 1999; Lederer and Sethi 1988). These concepts are more suited to large organisations where formal planning and strategy processes are in place. Earl (1993) suggests a distinct planning process must accompany any formal strategic planning process and to accomplish the outcomes of the IS strategic planning process the plan must be implemented.

Although the process followed by the partners during their IS&T planning had similarities to three-step IS&T strategic planning process proposed by Boar (2001), it cannot be classed as a formal planning process. The use of the current state, future state and transition state model proved to be a simple method to assist the partners in assessing their needs to progress from a standalone operation to a combined operation. While the business plan created by the partners did contain an IS plan (a section which mainly referred to the scoping document) it was not a formal IS plan. Also the scoping document, which outlined the perceived IS&T needs of the organisation and a strategy to implement these needs, was not the product of a formal IS&T planning process.

The case study has shown that a successful IS&T implementation can be achieved without undertaking a formal IS planning exercise. However by following a planning process and documenting the IS&T needs and implementation strategy, a plan was developed and inturn implemented. This aligns with Earl (1993) in that a distinct planning process was undertaken and that the outcome of this process was implemented via the scoping document.

8. CONCLUDING REMARKS

This case study offers an insight into the planning and implementation of IS&T needs by a start-up small business. The case study also found that the owners' previous experience with IS&T was a critical factor to the success the IS&T implementation. This research focussed on several aspects of the implementation of IS&T by a start-up small business. The key areas stressed were the planning of perceived IS&T needs and the development of strategies aimed at defining, validating and implementing IS&T into the small business.

The literature indicated that SMEs are deficient in IS&T planning and IS&T implementation. However, the case study presented in this paper shows that while the selected small business did undertake an IS&T planning exercise, the methods used were not as formal as those suggested in the literature. For example, a business plan was developed to define the requirements for the commencement of operations and contained a section relating to IS&T needs (the IS Plan). The scoping document contained the perceived IS&T needs for the small business. With further development the scoping document became the final IS plan and the strategy for the implementation of IS&T within the small business. The case study has shown that while the scoping document was an informal IS plan, it served its purpose for the small business and provided the foundation for the successful implementation of IS&T.

It could be concluded that a favourable orientation to IS&T has influenced the planning process and the implementation of IS&T within this small business. Comments received from the partners during the interview and the responses received from the employees, indicate that the perceived needs of IS&T as planned by the partners have indeed met the actual needs of the small business at this point in time.

Three hypotheses were presented and supported using a combination of the case study findings. The hypotheses were:

- Previous IS&T experience informs and/or determines IS&T planning and implementation in a start-up small business;
- Orientation towards IS&T is a necessary condition for success; and
- That a rigorous formal IS&T planning process is not necessarily required when starting a small business.

While the findings and hypothesis of this paper may not be applicable to all start-up small businesses, they do provide some insight into the IS&T decision making process that took place during the creation of this small professional service firm. They may potentially be of benefit to others contemplating the move from paid employment to the creation of their own small business.

The findings presented in this paper may be expanded upon by way of a longitudinal study on the subject organisation focussing on the growth of the organisation and its impact on the IS&T implementation. Another area for future research would be to study other new small professional service organisations to further investigate the IS&T planning methods undertaken when creating a small business and for comparison with the findings of this paper.

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