

A Conceptual Framework to Support the Development of Government Sponsored Community-Portal Regional Electronic Marketplaces for SMEs: A Stage Approach

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Abstract

Small and medium enterprises (SMEs) are important to most economies. To improve e-commerce uptake and often motivated by regional economic and community development issues, some governments are creating Internet-based e-marketplaces for SMEs. Given the complexities involved in creating such e-marketplaces, a conceptual framework to support their development needs to be considered. The proposed framework uses a staged approach to advise the development of government-sponsored community-portal regional e-marketplaces (CP-REMs) for SMEs. Data from an ongoing case study is used to examine the framework constructs. Findings indicate that the staged approach allows CP-REMs to develop in tandem with e-commerce sophistication of SMEs.

Keywords

Regional Electronic Marketplaces, SMEs, regional government, stage approach, case study

INTRODUCTION

SMEs play an important role in economies worldwide. In Australia, 95% of companies are SMEs (www.noie.gov.au), while in the United States SMEs account for 51% of private non-farm GDP (USSBA, 2001, p. 57). The 19 million SMEs in the European Union comprise over 99% of businesses in its member states (EBPG, 2002). The Internet and e-commerce are viewed as a way for SMEs to compete with their larger counterparts in accessing global markets by overcoming distance and size. It is not surprising therefore that much research has gone into the uptake of Internet e-commerce by SMEs (Daniel, Wilson, & Myers, 2002; Poon & Swatman, 1997; Walczuch, Van Braven, & Lundgren, 2000). While these and other studies indicate growing levels of awareness and enthusiasm for e-commerce adoption by SMEs, they also show that only a small proportion of SMEs are realising substantial benefits from the Internet. Some studies show that the majority of SMEs use the Internet mainly for communication and research, and that e-commerce is not integrated with their business processes (Stansfield & Grant, 2003; Walczuch et al., 2000). A number of the major challenges faced by SMEs in adopting e-commerce stem from a lack of technological expertise and uncertainty about the benefits offered by e-commerce.

Apart from broad-based initiatives like addressing access, infrastructure and regulatory issues, some governments at the federal and central levels are providing specific support to improve SME uptake of e-commerce. The support includes web sites and programs offering advice to SMEs on the requirements for and benefits of moving to an e-commerce environment, examples of successful SME e-commerce ventures and funding for selected projects. However, despite these initiatives, e-commerce uptake by SMEs appears to still lag behind that of their larger counterparts, prompting government intervention at state or regional levels. In some countries, government authorities at the state and regional levels are taking a direct role by developing electronic marketplaces (e-marketplaces) designed specifically to increase SME participation in e-commerce.

This paper examines the development of one model of government-sponsored e-marketplace, viz. a community-portal regional e-marketplace (CP-REM), in Western Australia. This type of e-marketplace can be found on a portal serving the needs of both the general and business communities in a region. The purpose of this study is to provide a conceptual framework to support CP-REM development. The proposed framework draws upon the Information Systems literature on IS implementation, e-commerce and e-marketplaces. An on-going case study of a CP-REM is used to assess the significance and relevance of the components of the framework. The findings from this research are examined in order to contribute to the theoretical development of the area and to inform other regional authorities that may be developing or considering similar models.

THEORETICAL FOUNDATIONS

Research on SME Participation in E-Marketplaces

An e-marketplace can be defined as 'an inter-organisational information system that allows the participating buyers and sellers in some market to exchange information about prices and product offerings' (Bakos, 1997). This definition of e-marketplace carries the connotation of a system or an entity whose boundaries in space are delineated according to the provision of common mechanisms by which buyers and sellers can be brought together and exchange can be facilitated. It allows for the presence of markets (for example buyers and sellers of particular types of goods and services) within the marketplace. E-Marketplaces have the potential to play an important role in the uptake of e-commerce by SMEs.

The potential benefits to SMEs of trading in e-marketplaces include reduced costs (estimated by Lucking-Reiley & Spulber (2000) to be by a 'factor of five or ten or more') typically in procurement, communication, inventory holding and search activities. E-marketplace participation can also result in improved customer service, better quality goods and services through transparency, value-added information and new levels of innovation arising from network externalities and knowledge sharing (Braun, 2002; Brunn, Jensen, & Skovgaard, 2002; Le, 2002; Raish, 2001). However, in the last few years the profusion of e-marketplace models with various ownership structures and the resulting shake-up and contraction has left SMEs with a confused picture of e-marketplace participation. Although there is some published literature on classification of e-marketplaces, they do little to assist SMEs to decide on whether to trade in e-marketplaces and what type of e-marketplace is best for them.

To a large extent, traditional trading partners or major industry players, who often may be the owners or operators of the e-marketplaces, determine SME choice of participation. Such e-marketplaces tend to be biased towards the owners and if their focus is towards large companies, it is likely that they may not have the required support and advisory services necessary to encourage SME participation. SMEs also lack an understanding about the benefits that they can derive from e-marketplace participation and how they can function within the larger supply chain of Internet e-commerce. This could see them losing out to large firms in e-marketplaces.

The type of e-marketplace that would therefore stimulate SME participation would be one that is owned by a neutral source and which would provide the training, skills and advice for SMEs to successfully incorporate e-commerce into their business processes. Given the above and the need for low cost entry and low technological compliance requirements necessary to encourage SME participation, some evidence suggests that the e-marketplace owner should be either a government source or a business association (EBPG, 2002). However, there is a gap in the current literature on the issues associated with developing and operating such e-marketplaces, even though some governments and authorities are forging ahead with them (www.albanygateway.com.au, www.SMECentral.com, www.go4gain.co.uk, www.mysouthwest.com.au).

Stage Theory and CP-REM Development

Gibson & Nolan's (1974) stages of growth theory to describe the process by which IS/IT evolves in an organisation has been criticised as lacking an empirical basis (Benbasat, Dexter, Drury, & Goldstein, 1984). Nevertheless, variations of the stage model have been developed and continue to be used to explain the growth of technology adoption (Drazin & Kazanjian, 1990), information systems planning (King & Teo, 1997) and the internationalisation of SMEs (Gankema, Snuif, & Zwart, 2000).

In recent times, the stage approach has proved a popular framework to chart the phases that companies go through to reach e-commerce maturity (DTI, 2001; McKay, Prananto, & Marshall, 2000; Prananto, Marshall, & McKay, 2002). There is also evidence to suggest that SMEs are adopting e-commerce in stages and that their progression along the e-commerce maturity curve can be characterised according to distinct phases or levels (Daniel et al., 2002; Poon & Swatman, 1997; Prananto, Marshall, & McKay, 2003; Subba Rao, Metts, & Mora Monge, 2003). These studies identify certain characteristics that are typically found in organisations at different stages of e-commerce maturity and provide some empirical validation for the stages of growth theory. Prananto et al. (2003) also showed in their study that SMEs which have adopted e-commerce could actually describe this adoption as progressing in stages.

A major criticism levelled at these and other stage models is that adoption need not be evolutionary or necessarily progress in hierarchical steps. In other words, not every organisation has to pass through each lower stage sequentially to reach a particular adoption level higher up on the maturity curve and adoption can therefore start at any level. In practice, some SMEs may be required to take this step, for example by larger trading partners procuring on-line via auctions. The question remains whether SMEs in such circumstances can reap the full benefits of e-commerce from being forced into an on-line environment without the chance to fully appreciate or evaluate the costs and benefits of engaging in e-commerce.

Furthermore, each stage in the SME e-commerce staged-adoption models identified so far can be characterised by a set of specific benchmark variables. In the majority of cases, these benchmark variables are cumulative. Using the DTI e-adoption model as an example, the first two stages of adoption are using the Internet for messaging and on-line marketing. If SMEs have the necessary motivation and resources, they can theoretically move straight into the stage of selling on-line. However it is unlikely that at this stage they would not be using the Internet for messaging and on-line marketing as well, especially if they intend to operate in open markets and not in extranet-style arrangements with only selected trading partners.

Raish (2001) describes e-marketplace activity as evolutionary, evolving in phases from early matchmaking models to inter-connected value trust networks. However, no research is currently available to validate this hypothesis. An underlying assumption of e-marketplace participation is that it opens up new markets, especially for SMEs who can now overcome distance and size barriers. With e-marketplace participation, SMEs are thought to be able to access international markets, which were previously closed to them. While this may be the case, SMEs still need to understand about the legal and trust implications of international trading. In a longitudinal study of 144 firms in Europe, Gankema et al. (2000), found that stage theory was still valid to describe the internationalisation of SMEs.

The stage approach therefore remains an attractive framework to support the development of a government-sponsored CP-REM for SMEs, in view of the evidence pointing to staged adoption of e-commerce by small firms as well as the relative newness of the e-marketplace concept to both SMEs and regional governments. Developing and operating this type of REM can be viewed as implementing and managing a large imprecise inter-organisational information system ie a novel application where there is little or no previous experience to draw on. From a systems analysis perspective, the recommended way to develop and implement such systems is an evolutionary or staged/phased approach, learning as development progresses and being able to modify plans if there are unexpected outcomes at each stage.

RESEARCH DESIGN

The purpose of this research is to provide a conceptual framework to support CP-REM development. The study involves the use of qualitative data collection techniques and approaches. It is part of an ongoing in-depth longitudinal case study of a CP-REM for SMEs sponsored by two local governments in Western Australia.

A review of the literature in the areas of e-marketplaces, SME adoption of e-commerce and IS implementation was conducted to identify both the various issues to be considered in developing CP-REMS and the critical successful factors (CSFs) for e-marketplaces and SME adoption of e-commerce. The data collected from the literature review was analysed to form the components of the framework, which uses a staged approach to CP-REM development.

Data from the case study was collected over a two-year period from official documents and reports, through face-to-face discussions, e-mail correspondence and attendance at meetings with the e-marketplace sponsors and developers, and from the official web site of the organisation. The data was used to analyse the development of this particular CP-REM to date and was then mapped against the components of the framework to assess their significance and relevance. The findings from this research are then examined in order to contribute to the theoretical development of the area and to inform other regional authorities developing or considering CP-REMS as a strategy to promote e-commerce uptake by SMEs.

GOVERNMENT-SPONSORED 'COMMUNITY-PORTAL' REGIONAL E-MARKETPLACE (CP-REM)

Case Study

TwinTowns.com (actual names have been suppressed for reasons of confidentiality) is a community web portal incorporating community content, a business directory and a REM set up by two neighbouring towns in Western Australia. It is intended to be an electronic gateway to access and interact with local players in the area. Registered users of the REM pay an annual fee of A\$199 and an additional fee of A\$99 for a business flyer page. Community groups can have content hosted free of charge on the TwinTowns.com portal.

The idea of the portal was first conceived in 1999 with the main objective of developing the area into a 'smart region' by using the Internet to network local government, businesses, communities and individuals within the region. For the purposes of funding and bargaining power, the stakeholder group of the portal was widened to include the local councils and business associations of the two towns, Edith Cowan University (ECU) and two other local higher education institutes (HEIs)

In 2000, a small seed-funding grant from the Western Australian State government allowed for the creation of a demonstration site, which was used to promote the project and obtain further funding. A not for profit organisation was formed to 'own' the project, its founding members comprising representatives of the stakeholder groups. Further funding was subsequently obtained from two federal and state government bodies and a consortium of the two towns, their business associations and ECU. It was intended that after the initial funding for the project was exhausted, TwinTowns.com would pay for itself using income from participation fees, advertising fees and sponsorship. Planning and specifications for the portal continued in 2000/2001 and in early 2002, the development of the portal was outsourced. The plan involved launching the various components of the portal simultaneously and in December 2002, the portal went live with a 'soft-launch'.

The TwinTowns.com portal supports the following types of e-relationships: Consumer to Consumer (C2C), Government to Consumer (G2C), Business to Government (B2G), Business to Consumer (B2C) and Business to Business (B2B). The presence of the REM within the portal is intended to spearhead regional economic activity by providing SMEs in the region with a low cost, low technology-compliance introduction into an e-marketplace. The business directory in the REM will allow consumers to source products from local suppliers. The REM also provides an e-procurement mechanism for registered buyers (within and outside the region) to request for and receive quotations from registered SME suppliers operating in the region and to place orders with them. SMEs are able to receive requests and orders, and send quotations through the REM via e-mail, Fax or SMS. The REM "streamlines the process of issuing request for quotations (RFQ), Quotations and Orders between purchasers and suppliers with the primary goal of channelling discretionary spending from major buyers in the region into local suppliers". The REM is thus one way of implementing a 'buy local' policy. TwinTowns.com has obtained agreement from the two local councils, ECU and a couple of other major buyers in the region to use the REM as part of their procurement activities.

The key motivations for development of the REM are increasing e-commerce adoption by SMEs, improving business efficiency and increasing trade within the locality, expansion into new markets and development of the region generally.

Preliminary Findings from the Case Study

To date, TwinTowns.com has a total of 100 registered REM participants and 37 community groups. A single staff who acts as project manager and business development manager currently staffs it. The project has been plagued with problems mainly due to poor project management in the early stages and a huge underestimation of the resources required to develop and operate a CP-REM. A business plan that anticipated funding from state and federal government authorities that did not materialise caused some of the problems. This meant scaling back certain areas of operation.

Portal development was outsourced and technical problems during the development stage caused not only a six-month delay in the portal completion but also detracted from valuable business development and marketing activities. This caused a further drain on the limited budget, leading to a change in business plans requiring additional funding from the two councils.

The low level of awareness-raising and marketing activities has been thought to contribute to the disappointing response of local businesses to the REM since its soft launch in December 2002. Although the business associations have approached TwinTowns.com to place more than 1000 businesses on the REM directory, the conversion rate into registered participants remains low. A mail-out in April 2003 to suppliers of the stakeholders informing them of the stakeholders' intentions to use the REM for procurement and offering a free two month trial resulted in a response rate of less than 3%. It became obvious that a more direct approach involving possible repeated visits was needed to convert these suppliers into REM participants. However, TwinTowns.com in its existing state did not have the necessary resources to carry this out approach. Various options are now being examined to determine the way forward.

A CONCEPTUAL FRAMEWORK TO SUPPORT THE DEVELOPMENT OF GOVERNMENT-SPONSORED CP-REMS

Figure 1 illustrates the proposed framework developed by the authors for government-sponsored CP-REMs.

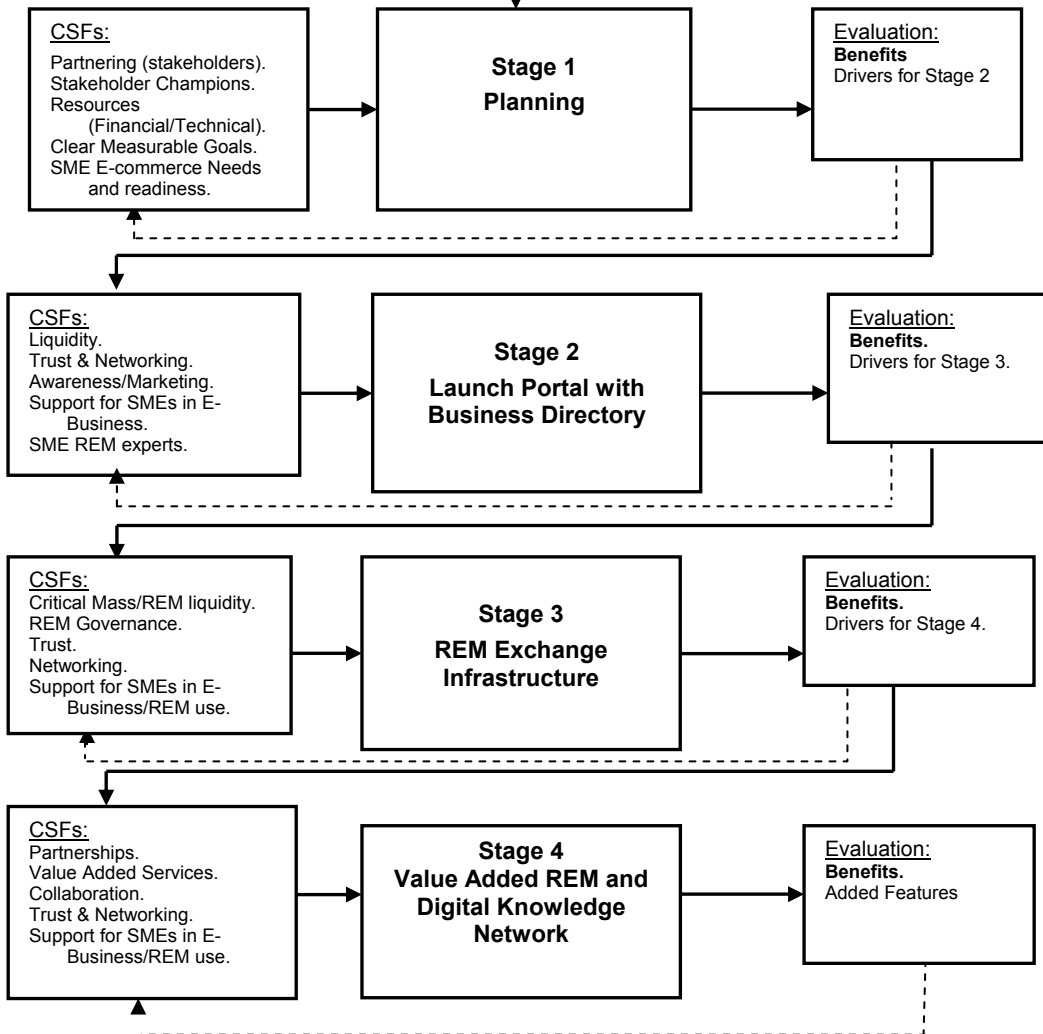
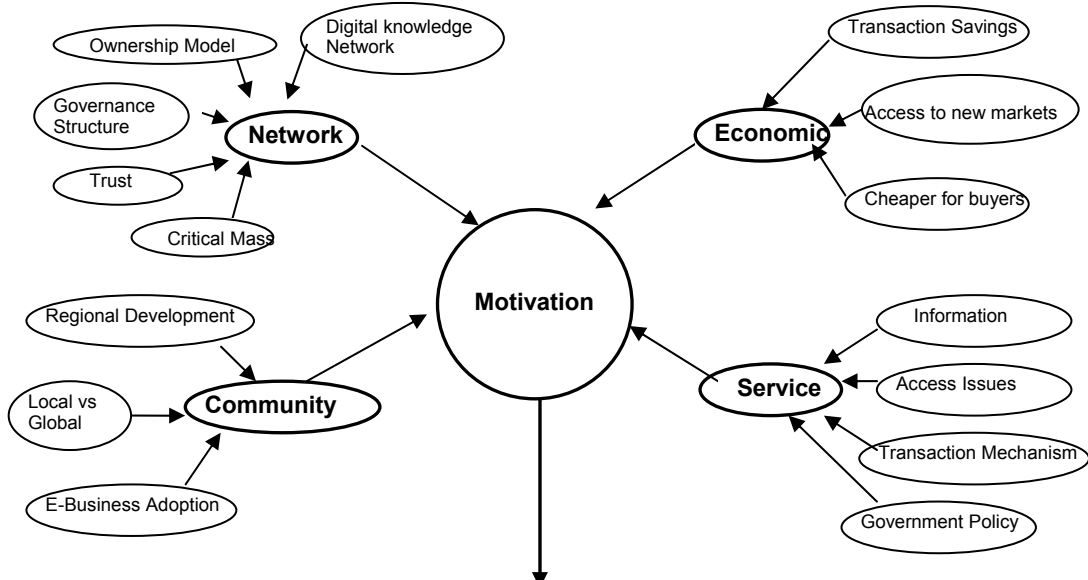


Figure 1. Conceptual framework for staged development of a Government-Sponsored Community-Portal Regional E-Marketplace

A staged approach is used incorporating the principles of managing the development and implementation of large imprecise systems. Theory and best practice research on IS implementation, e-commerce, e-marketplaces and SME uptake of e-commerce are used at every stage of the framework to validate its constructs and test its reliability. The framework also allows for a structured approach to realistic goal setting and the development of evaluation frameworks to determine quantitative and qualitative benefits of CP-REMs for all stakeholders. The following sections discuss some of the benchmark variables of each stage of the proposed framework and how TwinTowns.com compares.

Stage 1 - Planning and Initial Development

Motivation of Owner and Ownership structure

Regional governments first need to consider the motivations for creating, owning and managing the e-marketplace, determine if there is any conflict of motives and how to resolve it. Motivations for e-marketplace ownership can be determined according to whether they produce economic, network, service or community advantages. Economic advantages of e-marketplaces are: lower transaction costs and ability to pool markets for buyers; lower selling and transaction costs and access to wider markets for sellers (Porter, 2001) and the income generated from participation, transaction and advertising fees for neutral owners. The network view of e-marketplaces focuses on the motivation for inter-organisational relationships (Oliver, 1990). A digital knowledge network can potentially enable SMEs to compete with their larger counterparts that have larger internal networks and communities of practice (Braun, 2002). The service motive of an e-marketplace owner is concerned with a need to provide participants with better services. For CP-REMs, this could be a reliable and trusted e-marketplace system and the help provided to enable SMEs to participate in the CP-REM. With the community motive, the main objective of the e-marketplace owner is to stimulate community development by encouraging adoption of e-marketplace trading to ultimately raise the levels of e-business knowledge, skills and technology within the community.

In the case of a government-sponsored CP-REM for SMEs, the marketplace owner is motivated by a combination of the drivers mentioned above. The main motive is a community one and ownership therefore needs to be neutral or unbiased, but the CP-REM may still need to be economically viable especially if funding is limited. This can also impact on the form of ownership arrangement of the CP-REM. The economic motive can thus conflict with the community motive, unless realistic estimates are made about the level of funding required and the local government is prepared to meet any shortfalls. Research indicates that generally the investments needed to create e-marketplaces are very high (Brunn et al., 2002).

There is also a need to identify champions among the stakeholders. According to Chatterjee, Grewal & Sambamurthy (2002), top management in an organisation will affect the extent to which web technologies are assimilated in e-commerce strategies and activities. Stakeholder champions in a CP-REM will allow a positive attitude towards e-commerce adoption to permeate at all levels of CP-REM participation.

Needs Analysis

Planning for the CP-REM should also include an in-depth examination of the features and e-commerce readiness of the SMEs in the region and drivers for their participation. This will determine the services to be provided and the schedule of their delivery. Although a region may have a reasonable proportion of e-commerce ready SMEs, this does not necessarily mean that e-marketplace participation may be immediately beneficial to them. If their on-line business activities are largely B2C and they already have an established customer base, they may adopt a wait and see attitude to e-marketplace participation. Grewal, Comer & Mehta (2001), hypothesised that organisational motivation and ability are important determinants of e-marketplace participation. There is a need for deeper analysis to identify key players who are likely to trade on the REM and plan for REM features that would motivate these players to join. Help must be given to them to migrate their transactions to the e-marketplace ie to transform them into 'experts' (Grewal et al., 2001) who can then become the motivation for others to join. This needs to be done in order to build and maintain liquidity of the e-marketplace (Brunn et al., 2002).

In determining the features and services that the CP-REM needs to have and the timing of their introduction, a proper evaluation of the required and available resources needs to be conducted to formulate project plans and set realistic goals. A staged or phased roll out of features allows for focused goal setting, project and marketing

plans as well as the opportunity for all stakeholders to learn as CP-REM development progresses. It is recommended that community content and a business directory be the first components offered on the portal. This will provide the build up to the introduction of the REM's exchange mechanism, by first creating the networked community and the critical mass needed to sustain the portal.

Stage 2 – Launch Community Web Portal with Regional Business Directory

Partnerships to provide E-Business and Technical Support and Advice for SMEs

In stage 2, the community portal is launched together with a regional business directory. At this stage, SMEs signed up may or may not be e-commerce enabled. SMEs should be getting the benefit of reasonable cost one-on-one trusted technical support and advice to promote uptake of e-commerce. Partnership with external expertise in SME business and technical solutions is listed as one of the good practice elements of regional SME e-business initiatives in Europe (EBPG, 2002). TwinTowns.com does not have any such partnerships, which are vital especially if appropriate technical and advisory resources from within the marketplace maker are limited.

Building Trust, Network Externalities, Content and Critical Mass

At this stage, trust and network externalities need to be developed. Networks may already be present in the region in the form of business associations. Further network externalities can be built with the presence of good feedback mechanisms and the formation of interest groups and forums within the portal. A good marketing strategy targeting both community and business sectors is also necessary to obtain critical mass. In the TwinTowns.com case study, there appears to have been a lack of promotion of the portal. In other CP-REMs (www.albanygateway.com.au and www.mysouthwest.com.au), business directories and community content have been delivered and marketed to build critical mass for the portal as a precursor to the introduction of e-marketplace exchange mechanisms. The go4gain regional portal comprises an on-line business directory, collaborative e-marketplace and network for SMEs in the West Midlands of the United Kingdom (www.go4gain.co.uk). Despite its narrower focus, it still adopted a staged approach to REM development.

Evaluation of Existing Services and Proposed Additional Services

There is a need for proper evaluation of the benefits to all stakeholders at this stage and whether or not the project goals are being achieved. Feedback must be obtained from participants about the portal with a view to improving it in the next stage. Evaluation is also needed to determine the benefits of introducing REM exchange mechanisms and the type best suited. In being guided by the need to provide growth opportunities for SMEs, the local government should also be in a position to advise the SMEs whether the CP-REM is the best model for them or if they are better off in private extranet-style arrangements. This again lends credence to the need for having partnerships with neutral e-business advisers for SMEs, to avoid bias.

Stage 3 - Introduction of REM Exchange Infrastructure.

Building and Maintaining Liquidity

The specifications for the REM exchange mechanism would have been determined in the previous stage. The choice of exchange mechanism is contextual and to some extent driven by the primary motivations of the market maker. In the case of TwinTowns.com, the mechanism is a procurement tool where suppliers are restricted to local registered SMEs and buyers need to be registered. To solve the 'chicken and egg' problem of building liquidity (Brunn et al., 2002), the procurement departments of the two towns and the HEIs in the region have been asked to commit in principle to a 'buy local' policy using the REM as one procurement channel. However, this now changes the ownership structure of the CP-REM from neutral to owner-buyer and introduces the possibility of bias. Furthermore, it still needs to be determined whether the SMEs in the region have the capacity to supply the amounts required. If they do not, this could lead to buyers being disenfranchised with the system, which could also happen if there is no critical mass on the REM. Another way to build liquidity is to adopt partnering between the REM and specialised service providers or with other marketplaces. Lenz, Zimmerman & Heitman (2002), found that strategic partnering could help create competitive advantage for B2B marketplaces. Regional authorities also need to remember that creating a B2B e-marketplace involves changing existing business practices and behaviour in order to achieve critical mass (Brunn et al., 2002).

REM Training, Evaluation of Existing Stage, Planning for Next Stage

With the introduction of the REM exchange mechanism, user training is needed in addition to the ongoing training and marketing activities of the preceding stage. Ongoing evaluation of REM features and benefits is necessary to ensure objectives are being met or to take remedial action. Planning needs to be done for the additional features and services to be adopted in the next stage.

Stage 4 - Become a Value Added REM and Digital Knowledge Network

At this stage, the REM would need to provide added value to its participants in all aspects of their business operations. The partnering concept should be fully explored and implemented. Strategic alliances need to be created (for example with financial service providers and logistics companies) to provide trusted services to participants. This is essential if the REM is to achieve its long-term objective of expanding the markets of local SMEs to include state, national and international arenas. Added value from the REM would also be in the form of data mining and other digital support services to provide participants with the necessary tools for customer relationship management (Lenz et al., 2002). Collaboration and knowledge sharing within the REM will allow for clustering and the presence of vertical markets within the marketplace, which can lead to significant levels of innovation (Braun, 2002).

Ongoing evaluation and feedback are important to ensure the CP-REM continues to provide value to its participants and stakeholders. It is also important that technical and advisory support for SMEs continues as new entrants join the marketplace.

Although the primary motive for the development of TwinTowns.com is a community motive, there has not been much provision or thought given to the networking aspect of the CP-REM or the provision of value-added services. Identification and canvassing of prospective partners can even bring in additional sponsorship funds for the REM in the early days if the model is based on sound fundamentals.

Implications of the Findings

The idea for a specific policy to encourage SME uptake of e-commerce at the regional level is laudable. However in the case of TwinTowns.com, it is the execution of this policy and some of its components that appear to be questionable. While a government-sponsored REM does give SMEs a low-cost, low technology-compliance entry into e-marketplace trading, research has shown that the preferred REM models have a narrower focus. For example the REMs in the Achat-ville project in France and RAKAT in Denmark (EBPG, 2002) were not developed simultaneously as part of bigger community portals. Nevertheless they still required large investments. Similarly, even with a narrower-focused REM, the go4gain collaborative e-marketplace involved total costs of £3.1 million (Government Office for The West Midlands, 2002, April 23). Because one of the major barriers to SME uptake of e-commerce and e-marketplace participation is a lack of technical skills or knowledge on e-business strategy, a large proportion of the investment needs to be expended on providing on-going support and advice for SMEs on e-business. Even in Finland with 90% SME access to the Internet, the eAskel program continues to be run (EBPG, 2002). In TwinTowns.com, provision for training was only in REM usage and broad-based group discussions on the benefits of e-marketplaces.

Although TwinTowns.com has some good practice elements for e-marketplaces, these elements have not been exploited fully, due to a lack of resources. A staged approach like the one proposed would have provided TwinTowns.com with a holistic view of CP-REM development at the outset. It would have shown that a larger project team was needed, that the scope should have been narrower or the portal developed in incremental stages.

While long-term outcomes and goals could have still been planned, with staged development these could have been revised if there were unexpected hiccups. Looking at stage 2 of the CP-REM development framework, if TwinTowns.com had progressed incrementally and at the end of stage 2 found that there were not enough drivers for introducing the exchange mechanism, its development could have been kept in abeyance. Resources could have been diverted to building critical mass with the community content and business directory.

While the staged approach to CP-REM development is based on incremental growth, it does not necessarily mean that all REMs must progress in this manner. This however, does not reduce the value of the framework, as it shows the benchmark variables that a CP-REM needs to attain to be able to operate successfully at particular stages. Using the framework, at this stage TwinTowns.com should have built up critical mass, trust and network externalities on the portal. Therefore, although the portal was not developed in stages, the framework can still indicate to TwinTowns.com where it is now positioned and what it needs to be doing and achieving at this stage to meet its objectives. It also provides an idea of the future path that the CP-REM can take in order to provide the local community with the full benefits of e-marketplace participation.

CONCLUSION

Government-sponsored regional e-marketplaces have the potential to encourage greater SME uptake of e-commerce. For regional authorities considering a REM that is part of a community portal, this paper provides a framework for its development. Stage theory and principles of IS implementation are used as the basis for the staged approach to CP-REM development adopted in the proposed framework. The staged approach of

incremental development allows REM sophistication to grow alongside evolution of learning in the SME e-business context, so that one does not get ahead of the other. It allows for realistic goal setting and a structured approach to the evaluation of REM benefits.

In using the experiences of TwinTowns.com to test the constructs of the framework, the results indicate that the enormity of CP-REM development should not be underestimated. Regional authorities that are thinking of developing CP-REMs need a full understanding of the complex issues that need to be considered, from the economic, technical and social viewpoints. The proposed framework offers regional authorities a holistic view of CP-REM development. It is a starting point for future research in the area of CP-REM development, both within Australia and in other countries.

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