

# E-Commerce, communities and government - a snapshot of the Australian experience

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**Abstract.** This paper is based on a research study of 12 local government councils in Australia funded by the Victorian e-Commerce Early Movers Assistance Scheme (VEEM). Multiple cross-case content analyses were used to identify the underpinning themes in the study sample. It was found that the VEEM scheme was successful in raising awareness of e-Commerce within the community, however there is a wide disparity in local government readiness for e-Commerce and community demand for e-Commerce. In order to accelerate the take-up of e-Commerce practices and technologies within communities, the tripartite relationship between State and Local government and the community is considered critical in diffusing e-Commerce. Specifically, the tripartite relationship should support raising awareness of e-commerce, and encouraging adoption of e-commerce.

## Overview

International experience with the information economy indicates that significant benefits fall to early adopters of e-Commerce. In response, the State Government of Victoria (one of six states and two territories in Australia) formulated a strategy - Connecting Victoria - to grow the information and communications technologies (ICT) industry and to share the benefits of these technologies across the community. A central tenet in the 1999 strategy was 'boosting e-Commerce', by 'vigorously promoting e-Commerce'.

One of the initiatives from this strategy was the Victorian E-commerce Early Movers (VEEM) scheme. Under the auspices of Multimedia Victoria (MMV), a department within State and Regional Development, this scheme was designed to provide assistance to local municipal councils to accelerate further take-up of e-Commerce practices and technologies to benefit the whole community. In 2000, Victorian councils were eligible to receive \$3 from the State, for every \$1 they allocated to e-Commerce initiatives. [For non-Australian audiences, a municipal council is a region or precinct which is managed by a body of people elected or appointed to serve as administrators, legislators, or advisors. Designated as “local government” it is the third tier of our government – Federal, State and Local. Each municipal council has responsibility for a range of services provided by Local Government in response to the needs and priorities determined by local communities].

The purpose of the research project was to examine how selected Victorian municipal councils, that received funding under the State Governments’ VEEM Scheme, diffused e-commerce within their communities. The primary objective of the research was to determine a model of best practice from a review of the e-commerce initiatives undertaken by these councils, which could be used by councils not funded under this scheme for future strategy setting. The secondary objective was to gain a better understanding of local and state government role in the diffusion of e-Commerce practices and technologies in the wider community.

This paper highlights the strategic and tactical issues facing local government councils when they attempt to diffuse e-commerce initiatives in their communities. It begins with an overview of related concepts including the digital divide, and knowledge communities.

## The digital divide

Countries such as the UK, India, Australia and New Zealand have acknowledged the existence of the digital divide. The label is a description of the gap of knowledge between communities with access to information and communication technologies (ICT) as opposed to those with no, or limited access. The gap exists because of several limiting factors, such as geographical, attitudinal and generational (Cullen, 2003).

These factors are particularly relevant to Australia and becoming increasingly important influences in the adoption of ICTs. Australian government policy papers (Department of Communications, Information Technology and Arts, 1999, 2004) and studies (NOIE, 2001) acknowledge that e-commerce is a strategic and competitive imperative for Australian businesses. For example, externally, the internet provides a new stage for business and allows Australian organisations to expand beyond traditional product and market perimeters. Internally, e-commerce has the potential to re-structure organisational processes and functions to allow

greater and more efficient utilisation of assets. The internal and external application of e-commerce allows business to strengthen customer and supplier relations which, in turn, facilitates the organisation's transformation of core relations and business processes (Maguire, Terziovski, and Samson, 2000).

International experience with the information economy indicates that early adopters of e-Commerce have reaped significant benefits. The Australian government and society generally recognises the importance of e-commerce adoption. Businesses that deal with governments have had to change the way they interact with government via on-line business dealings through e-Government and e-procurement.

The adoption and diffusion of information technologies amongst Australian SMEs however has been slow (National Office for the Information Economy, 2000). Predominant reasons for resistance relate to the business case for moving online, specifically the cost versus benefit issues; physical access or connectivity to ICTs; content; attitudes, ICT skills and competencies (Cullen, 2003; National Office for the Information Economy, 2000). Sharma and Gupta (2003) suggest disparities with the location and quality of internet infrastructure and the industry structure, business size and location may also contribute to the widening of the digital divide.

## Diffusion of ICT

The Victorian Government has been working through a number of initiatives to diffuse information technology through SMEs. This began in 1999 with a vision for growing the information and communications technologies (ICT) industry and for sharing the benefits of these technologies across the community. One of the central tenets in the strategy was 'Boosting e-Commerce', and the government's aim was to 'vigorously promote e-Commerce'. This strategy has since been operationalised through various government initiatives and programs to accelerate further take-up of e-Commerce practices and technologies.

Sharma and Gupta (2003) believe e-commerce diffusion should include the diffusion of internet technologies, telecommunications and the traditional commercial infrastructure. These aspects are considered vital for the ongoing survival of SMEs, and indeed a future measure of the prosperity of a SME maybe the rate of adoption of e-commerce and its integration into their business strategies (National Office for the Information Economy, 2000; Sharma and Gupta, 2003).

Whilst researchers have modelled a variety of diffusion models, none have assessed the tripartite relationship between the levels of government and the community, which is considered critical in diffusing e-Commerce (Hall, 2000). For example, Gibbs, Kaemer and Dedrick's (2003) e-commerce diffusion model examines global, environmental and policy factors. At the national level, national

policy is paramount to the diffusion of e-commerce, and includes government promotion initiatives for e-commerce and IT in general. This translates into providing SMEs with technical support, training and funding for IT use (Gibbs et al, 2003) but does not address how this might be operationalised.

The internet diffusion assessment framework of Press, Burkhart, Foster, Goodman, Wolcott and Woodard (1998) is broader in its assessment, focusing on the nation as a unit of analysis and characterising the state of the Internet along six dimensions – pervasiveness, geographic dispersion, sectoral absorption, connectivity infrastructure, organisational infrastructure and sophistication of use. This framework only provides a macro viewpoint of internet diffusion for comparative purposes with other nations, and does not address the role of government, communities and organisations in diffusing telecommunication infrastructure. Similarly, the technology diffusion model of Caselli and Coleman (2001) which focuses on the diffusion of computers around the world, utilises national data such as manufacturing trade openness, size of government, and level of human capital.

Clearly the role of government in diffusing technological infrastructure (e-commerce, internet, or computer) is critical, however evidence from Europe and the UK suggests that if “top down” Government initiatives are not supported by “bottom up” community regeneration programs, there is little likelihood of success (Hall, 2000). Top down initiatives provide funding and a sense of direction, but are likely to under-perform because they are not sufficiently sensitive to local needs, conditions and infrastructure. As well, government agencies have not been suited to lead information society initiatives because they themselves are laggards in embracing the information society. “Based on empirical evidence, Government organizations have been slow to embrace the web. Therefore, it is argued that the public sector must get better at devolving decision making to local communities because leadership comes from the private sector” (Hall, 2000).

## Knowledge communities

ICTs remain important in organising and sharing knowledge (Berawi, 2004). This is because the World Wide Web has transformed geographically dispersed businesses and communities into a global village for information sharing, social interaction and economic exchange (DeFillippi, 2002).

From an organisational viewpoint, knowledge capture and sharing is considered paramount – that is, having the right information at the right time for the right people, in a format that matches the task. Walsh and Ungson (1991) refer to this as organisational memory, or any piece of knowledge that is related to organisational tasks, which is stored and can be brought to bear on present decisions. Management of knowledge – acquisition and dissemination – must be

facilitated within the organisation to encourage knowledge sharing and building of the knowledge community. Whilst ICTs provide the infrastructure and environment to support learning, these of themselves may not be sufficient to stimulate effective learning (Barrett, Cappleman, Shoib, and Walsham, 2004). Therefore the knowledge community within the organisation is crucial in forming a supportive “climate” for knowledge sharing.

Whilst there is increasing recognition of the role of communities in knowledge sharing (Wenger and Snyder, 2000), knowledge communities are not limited to organisations but are also evident between people in different organisations coming together across boundaries to learn through sharing knowledge on particular topics (Anand, Glick and Manz, 2002). Therefore both organisational social capital and community social capital can provide leverage for each other, as well as providing a range of socio-economic benefits in different locales. Knowledge diffusion through “strategic communities” – communities or industry clusters that collaborate by disseminating knowledge of technical practices, sharing resources and economizing on set-up and transaction costs – is now recognised as providing significant competitive advantages to those companies and regions that embrace it. Best (2001) describes these as regional communities of innovation and recommends that regionally based companies, educational, and government institutions cooperate in fostering knowledge creation and skills formation.

## Methodology

The research study utilised the case study approach and structured interviews to elicit data from twelve participating councils. Councils were asked to fill in a pro-forma questionnaire, and this was supplemented with phone interviews. A case study protocol was developed which addressed procedures, questions, analysis plan and case study reports (Yin, 1994). The procedures related to an initial introductory letter to participating councils from the research team and Multimedia Victoria. This letter sought availability of council officers (for example CEO, VEEM project manager, economic development manager, IT&T manager) and any third party that could enhance the review. First round interviews were organised and participants encouraged to have available sources of information relating to both the VEEM scheme and the Council’s IT strategy. Second round interviews were conducted either in person or via telephone, dependent on depth of follow up required and geographic location.

Case study questions related to the VEEM project and its organisational context, e-Commerce strategy formulation, implementation of e-Commerce strategy, and the value of e-Commerce, both operational and business performance.

The case study report and format for analysis was influenced by MMV, and therefore focused primarily on the VEEM project. The report incorporated an

abstract, introduction, and sections on VEEM funding, key processes of the VEEM project, project completion, and project lessons.

Both the interviews and the case studies provided a longitudinal analysis of the process of change and the difficulties encountered at each organization in the formulation and the implementation of its e-Commerce diffusion strategy. An analysis of the events was documented in terms of what happened, how it happened, who was involved and the main lessons learned.

## Respondents Profile

Thirty-nine Victorian councils were funded under the VEEM project - 18 individual applications and five group applications. Twelve councils were selected for the research project on the basis of a balance between regional and metropolitan councils; a combination of group/individual projects; and projects that covered the range of specified range of categories, such as portal, training, e-procurement, strategy, GOL, expo, student initiatives, or other initiatives.

Those interviewed included the Chief Executive Officer, Economic Development Managers, Council Managers and third party suppliers. The range of job functions of interviewees highlighted both e-commerce expertise and the best person available. The inclusion of third party suppliers reflected the external partnerships forged as part of the specific project. Each council and its VEEM project is briefly outlined [NB The names of the councils have been abbreviated for ease of reading and to maintain the privacy provisions imposed by MMV]:

1. City of Bt – a regional council (nicknamed Silicon Gully), which has three major IT foci: IT2010 Strategy, Televillage and TeleCommunity. VEEM funding was to train business people via an e-Commerce Business Planning Workshop.
2. City of B - a regional council which also has three major IT foci: a Community Telco (a council backed community initiative successfully operating since November 1999); a Virtual Electronic Trading Hub (VETH), and a learning city vision, based upon education, research and development for all the community. The Council, in conjunction with support from neighbouring two councils applied for VEEM funding to develop a “Community Advantage” E-Charter as the first step in its learning city vision.
3. NG Council – a rural council in which local service groups have initiated most of the information technology diffusion within the community. VEEM funding was used to develop a community portal, analyse and work with 5-10 local businesses to develop electronic business plans and transactions, conduct one on one awareness and assistance to 120 local businesses, and upgrade and enhance Council’s web page.

4. City of S – a regional council. In conjunction with support from two neighbouring councils, VEEM funding was approved for the development of a Regional Electronic Facilitation Centre (ETFC). Specifically, the funds would be used to develop and implement a regional business portal, and accelerate the use of information and communication technologies in the region (which is being promoted for its agricultural and horticultural expertise).
5. SH Council – a rural council dedicated to help existing local businesses become more competitive. VEEM funding was for an “On-Line Project” which was divided into two parts: an e-Commerce expo, and development of a regional internet business directory and business profile.
6. City of W – a metropolitan council whose vision is articulated in its multimedia strategy, which is to enhance the level of customer service, provide greater access and business process improvement through the innovative use of multimedia and electronic service delivery. Current technological uses include GPS (Global Positioning System); GIS (Geographic Information System); multimedia, business processing mapping review, and electronic document management. VEEM funding was used to provide e-Commerce training for business proprietors of Non English Speaking Background (NESB), and to develop an e-Commerce supply chain model for the transport and construction sector.
7. City of Wy - a metropolitan council together with its neighbouring shires has formed and continues to support the Western Regional Economic Development Organisation (WREDO). WREDO is a not for profit organisation that seeks to promote the region as the transport and manufacturing hub of Australia, to increase the skill base of the resident youth, and to support local business in the take-up of information technology for promotion and electronic commerce. The City of Wy, together with five neighbouring councils and WREDO applied for VEEM funds to develop a regional portal, and assist with training and e-procurement.

The final draft of each case study was returned to the council for review and approval.

## Findings

There were three major findings, each which will be discussed relative to the results from the multi cross-case analysis and flow-on recommendations:

- The tripartite relationship between State and Local Government, and the business/community must be clearly defined, along with responsibilities to sustain momentum of e-commerce diffusion and to develop technology-based knowledge communities.

- The VEEM initiative was successful in raising awareness of e-Commerce in the respective communities however the two important issues both from an organisational and a community viewpoint that councils need to address in order to accelerate the diffusion of e-Commerce practices and technologies are raising awareness and making the business case.
- Technology capabilities – both infrastructure and suppliers - vary in communities and may result in locational or skills-based barriers which need to be addressed.

### Tripartite Relationship

Responding councils indicated that they considered continued financial support from the State Government was critically important. According to the interviewees, while the State Government's primary role is to articulate vision and policy, the two drivers for any State government initiatives in promoting e-Commerce should be awareness and skill development. Future e-Commerce initiatives should provide support either to local government as the catalyst for change, or directly to the community.

Many councils acknowledged that without the VEEM funding and indeed ongoing support from the State government, many of the projects would still 'be on the shelf', would not be highly prioritized by council, or would never have got off the ground. However there was also criticism that the State Government was offering too many funding options. This was perceived as creating duplication in funding applications, and had the effect of overwhelming council staff as to how these opportunities could realistically be assessed in terms of meeting local needs. Reviewing, responding to and then operationalising these initiatives required considerable work, and was also dependent on local relevance, and fit with council strategies.

The interviewees placed the role of local government in two categories – leader and facilitator. All councils except one (a rural council) believed local government should be driving the technology push because the uptake of e-Commerce and technology was seen as essential to job creation, sustainable economic development of rural and regional areas, and the stopping of youth leakage.

It is a principal of the State Government to have council provide a leadership role.

We have a strategy that recognises that council has a leadership role in assisting its community become aware of accessing and using IT, especially in rural and country towns (NG Shire Council)

Council is still the heavy driver of e-Commerce and we see this as a community leadership role.

There is a requirement for industry and council based leadership, and if not from industry, then council needs to keep pushing. We've had to work a lot harder than most, because this Shire doesn't have visible industry leadership (City of W).

Whilst philosophically councils agree they play a leading role in economic development of their Shires and economic development has been clearly linked to e-commerce, this has not translated to widespread acceptance at the local government level. Although the merit of having an e-commerce strategy was supported by many local government councils - all managers advised their respective councils had an informal direction or vision for e-Commerce integration - only two councils had formal written IT or multimedia strategies.

These were mainly focused on internal adoption of e-Commerce practices and technologies. Council therefore needs to firstly have a documented e-commerce vision, and secondly needs to demonstrate their own adoption of e-Commerce practices, as an example for the rest of the community. It adds weight to council's push for e-Commerce, if they are seen to be implementing these strategies within their own business practices. This may have an impact on the community uptake of e-Commerce. For example, if councils were promoting e-Commerce but not utilizing it within their own business processes, then the local business community may question the efficacy of e-Commerce practice. This was supported by councils' admission that many businesses displayed a natural reticence to jump on the 'e-Commerce bandwagon' because, amongst other things, there is the perception that council is not adopting e-Commerce.

This reluctance may also reflect council's capacity for change. "Information technology is linked to capacity for change and competitiveness: it is both a response to changing markets and a change agent within the organisation" (Jayne, 1999). When council does not see the need for change (change being the uptake of e-Commerce), then it will do nothing to make change happen. Where a council sees that e-Commerce uptake ties in directly with economic development, a dual e-Commerce focus (internal and external) makes it a stronger contender when competing for resources, investors, and supporters. The NG Shire was the only Council mindful of the change management issues which surfaced during the VEEM project, such as fear of change and the need for ownership. As a result, the CEO implemented a change management program which was primarily aimed at reducing fear, and providing employees with pathways for career development and advancement. Staff were able to incorporate e-Commerce processes within existing job responsibilities.

As part of determining an e-Commerce vision for the shire, Council also needs to assess the role council will play in the context of diffusing e-Commerce technologies and practices within the community. Is council the visionary, catalyst, driver, or facilitator? If the role of council is clearly to govern, then council should be working with the economic development units, and business community to develop catalyst programs and place themselves in the role of facilitators of e-Commerce. However, in some cases, the role needs to be visionary, as the community may not have the breadth or depth of vision to conceive of such things as a Tele-village or an Electronic Trade Facilitation

Centre. Aspects of e-Commerce can then be assessed in terms of the bigger picture for the Shire. For example how does the portal concept fit into a bigger vision for the Shire or region, and will a portal be sustainable in the region or the shire? The research interviews revealed each council was able to describe its role in relation to diffusion of e-Commerce, but when contrasted with the others in the interview set, was quite different in its focus. Two councils viewed themselves as the driver; and another two councils described their role as the catalysts. Other councils saw their role as facilitators in a supporting role, ie. the community and business drove the uptake, and council supported this or the community took action first, but needed council's support to sustain the integration of e-Commerce.

The adoption of the different roles would most likely be informed by the relationship between local government readiness for e-commerce and community demand:

“If you use the surfing analogy, where are we on the wave (and the wave is the demand in the community)? Are we way out in front of them and trying to be the beacon that people are heading towards, where they're saying yes, we want it and we're coming to get it. Or are we lagging behind and the community comes knocking on our door and says we want to pay our rates via a kiosk in the main street. The tension is whether e-Commerce readiness and demand is community led, or the responsibility of council. I think we'd prefer to be a little behind the wave because it is an additional cost in terms of service delivery. We're not necessarily going to save money by going into any of these areas, but we recognise we need to be responding to community demand and we will respond to that so long as the demand is there (City of Wy).

Weaker community demand and support for e-Commerce therefore suggests council may adopt more of a leadership role, whereas stronger community demand and support for e-Commerce may indicate council's role should be more facilitative. Stronger community demand may result in businesses and the broader community take on the responsibility for e-Commerce uptake in the role of initiators and/or partners. Initiators or e-Commerce champions can be individual business owners or centres of influence (businesses such as banks/accountants or community business groups such as Rotary) who are happy to promote awareness of e-Commerce because of their own experience with e-Commerce.

“Champions are required to keep on winding up the awareness campaign. These champions should ideally be in different business sectors to promote the value of e-Commerce (City of B).

Having a champion is the key without a doubt to successful integration of e-Commerce. Champions will come out from the processes but they also need some expertise around them who are equally enthusiastic, and prepared to work hard through these processes and think outside the square (City of S).

“Networking through champions is essential there is no doubt about that, but your champions are busy people and their time is limited. You can't expect to go to them every 2 or 3 years and ask for their involvement. What we've been able to do with our champions is use them in a way that is time limited, for a specific purpose, and project oriented, and once that's finished, we're out of their life” (City of Wy).

Hall (2000) suggested that whenever possible business and community should establish partnerships with local government in e-Commerce uptake and this was

supported by the interviewees who stated partnerships presented strong opportunities for showcasing successes and for developing an information society. One group of councils in their search project was able to convince its business champions to become shareholders in the commercialisation of an Electronic Trade Facilitation Centre.

One single champion becomes a voice in the wilderness over time, enthusing and retaining the interest of the other stakeholders. In this project, the other champions became the stakeholders (City of S).

The research identified the need for a clearly delineated model of diffusion that identifies the role of and relationship between State Government, Local Government and local businesses and communities in diffusing e-commerce. The conceptual framework outlined in Figure 1 attempts to address this gap. The framework suggests that to continually focus on delivering an improved information society, a multi-tiered approach is required.

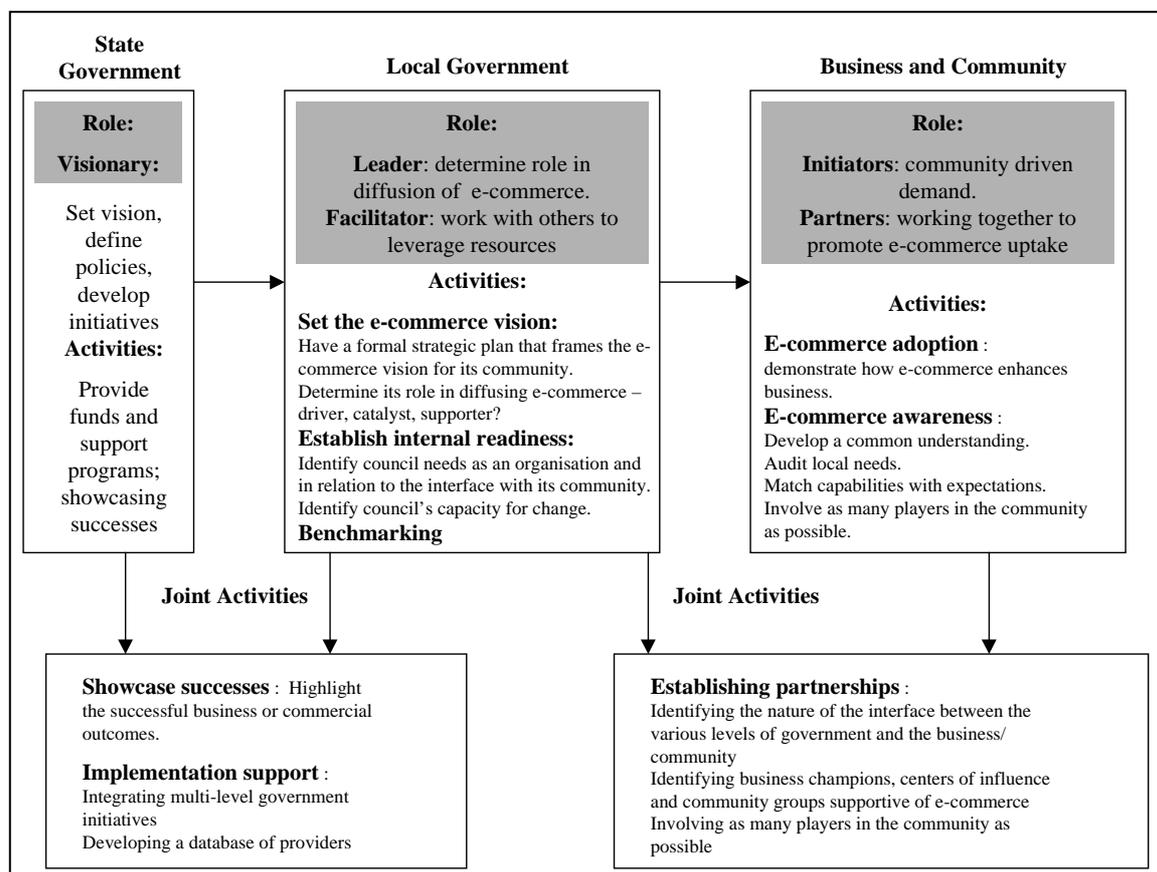


Figure 1. Conceptual framework of the tripartite relationship in diffusing e-commerce within communities

## Organisational and Community Issues

The research project identified two major hurdles facing SMEs and communities: 1) the lack of awareness, understanding and readiness for e-Commerce uptake, and 2) the demonstrable benefits for business.

Members of the community will already have been exposed to e-Commerce in some way, whether this is at the workplace, school, library, doctor's surgery or pharmacy, and of course within the home. However a more targeted approach to develop a common understanding of what e-Commerce is, what it does and how organizations and individuals can benefit from using it, may be the first step in the awareness of e-commerce:

Within any community it is important to know where the local community is at; if that means starting small, then start small. (SH Council).

The Expo was designed to start people thinking [about e-Commerce] (SH Council).

My main role is to assist the local community to accept and grasp the opportunities that IT and T provides. The primary objective of the project has been to push awareness of e-Commerce to local business. We need to work slowly with them. If someone is not sure, for example if Business A doesn't understand and Business B is a bit frightened by the technology, then its very important that a friendly approach is made by our staff and suppliers. The outcomes are more important than trying to finish the project (NG Council)

Raising awareness may also require understanding local needs. In one region, a local community group undertook this survey:

You need to focus at the community level. For example within our Shire, Rotary undertook a survey of local businesses to determine the needs and discovered there was a need for an Internet Service Provider (NG Shire).

All the research suggests that the use of electronic commerce reduces costs and improves the quality of business-to-business transactions. Most of the council officers and third party suppliers interviewed believe the greatest hurdle for businesses within their communities is being convinced of the business case for the uptake of technology.

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Full on e-Commerce on the internet is not the savings its cracked up to be – there has to be savings for the business before they'll jump in (SH Shire Council).

The trick is to demonstrate and prove the business proposition to the small business proprietor – without this, which takes a lot of time, many businesses will remain skeptical and unconvinced. E-Commerce awareness is like riding a bike, you've got to get them to do it first! (City of Bt).

The number one criteria for business is that we must be able to demonstrate value for business. E-Commerce has not been high on businesses' priority list because they haven't been given the business value proposition. Building the business case is an issue, but not a difficult one. The emphasis should be to try and convince the SME in the value proposition of doing e-Commerce (City of Bt).

The real issue is not the technology, and not getting it to the region, but getting SMEs to utilise it. The emphasis should be to try and convince the SME in the value proposition of doing e-Commerce. Hopefully the VEEM project addresses all or some of this (City of B).

The issue for those leading uptake of e-commerce is to demonstrate how e-Commerce enhances business. Every business aims to maximize resources in order to make profits. Any demonstration of value to a business will generate some interest. Most often the best advocates for e-Commerce adoption are those that have already incorporated these technologies and practices into their organisation. Therefore the benefit of past experience cannot be over-estimated, and wherever possible should be utilised.

Another regional council brought together thirty local businesses, each with various resources and expertise, to develop an e-charter for the region – a standard set of guidelines to embrace the uptake of e-Commerce. This approach strengthened the e-Commerce knowledge of the community, but more importantly demonstrated the competitive advantage of being a knowledge community:

We sat down with the businesses after doing our sums, and showed them that a significant amount of dollars was being spent outside of the region and not much was being returned to the region. By developing an e-charter, and the virtual electronic trading hub, we could provide an environment where buyers and sellers could first look to local content and thus keep the wealth generated within the region, which means jobs, wealth and a sustainable community development (City of B).

Building the knowledge community results in better understanding, unity within the community, win-win benefits for all, and delivery of tangible and sustainable results. The City of Bt's "Tele-Village" and "Tele-Community" initiatives are based on this principle:

The more players out there delivering this message the better off we'll be. One thing we are finding is that it seems to all be coming together. We've got the banking industry actually pushing the e-Commerce message; we've got other sectors of private industry in terms of portals being put out by the local newspaper, by television and we also have a tourism portal in the area. So the private sector is trying to drive it. The Chamber of Commerce is using it by actually putting out a messaging system in terms of email to all its participants. The Australian Industry Group is also looking at doing something similar. So the recognition is there that this new form of communicating and doing business is appropriate (City of Bt and BD, third party supplier to the VEEM project).

## Technology Capabilities

Localities within Australia are widely dispersed and infrastructure development has occurred mainly along the eastern seaboard. Physical access or connectivity to ICTs and the quality of technology infrastructure is therefore reflective of location. This certainly impacted on the two rural councils surveyed, and they saw the issue of infrastructure as a major inhibitor to the uptake of e-Commerce practices and technologies:

.....Our town is the furthestest point north which has access to the infrastructure – anything north of this, ie the rest of the municipality is not serviced well. e-Commerce is only as good as the connection. People will get frustrated if they can't get the connection and will resort to traditional methods until there is a consistency of service and delivery (SH Council).

An objective will be to improve the infrastructure to allow small business to develop. By having an IT infrastructure in place means rural and regional business won't have to move to metropolitan Melbourne. However, the quality of the infrastructure here is not good (NG Council).

A second issue is ICT skills and competencies. Councils were keen to match the capabilities already present in the community (the public sector, the private sector, colleges and training centres) with the expectations of the community. One rural council made it a priority to have local service providers. It wanted sustainable momentum (possibly underlined by their relative geographic position) of the project, which could be best delivered by the development of local knowledge and businesses.

Other councils however found local expertise did not match the needs of the project. The City of Wy for example sourced a local provider for their B2B portal, however the provider “fell over”, which necessitated sourcing of an outside service provider. To address this issue, councils called for a statewide database of service providers who could assist both local councils and local businesses. Those councils that did not have the expertise internally or within the community could utilise such a database, and this database of service providers might also provide similar benefits for community use. Additionally, councils advised that service providers “did the rounds” with respect to the VEEM projects. The development of a database may have prevented duplication of time and resources for councils when evaluating service providers.

## Synthesis

Evidence from overseas countries clearly highlights the importance of e-commerce in the development of a country's social and economic structures. The Australian government, following on from overseas experience has mandated the uptake of e-commerce as a strategic imperative. Whilst both Federal and State governments are actively encouraging the take-up of e-commerce via funding options which have emanated from its strategies, Australian SMEs have

demonstrated lower levels of engagement and interest. Rather than appealing to SMEs directly for these reasons, the VEEM project provided funding from State Government to local municipal councils to work with their business communities to increase awareness of e-commerce and adoption of the technology and processes. Based on feedback from the participating councils, this multi-tier approach to the diffusion of e-commerce is the most appropriate. A survey of SME attitudes to this multi-tier approach however may present a different perspective.

Projects funded under the VEEM scheme were disparate and revealed contrasting stages of readiness for e-commerce. The majority of the municipal councils involved in the assessment of VEEM appear to play a major role in driving the uptake of e-commerce. This community focus, rather than reliance on individual businesses, maybe a reflection of the value of group synergy which can facilitate more rapid and widespread interaction. Working through the community may also dispel some of the negative perceptions associated with top-down initiatives, as the councils have a more intimate understanding of the needs of the community and can encourage horizontal communication and grass roots involvement.

## Conclusion

Based on the qualitative analysis in this study we conclude that both council and community readiness for e-commerce are a mitigating factor in the uptake of e-commerce, and should be factored into any model of best practice. However, if council has a leading role in the uptake of e-commerce within the community, this should be limited to a facilitative role once e-commerce champions have been identified. These individuals or community groups can be used to increase awareness of e-commerce, and where necessary build the business case for the adoption of e-commerce. In turn, this will facilitate a supportive climate for advancement of e-commerce knowledge into the community, and encourage the development of regional communities of innovation. This is exemplified in the communities of at least three of the councils examined under the research project. Ideally, longitudinal qualitative and cross-sectional quantitative research should be conducted with these communities to track the relationship between council and its community, and the social and economic benefits derived from a funded and increased focus on e-commerce diffusion. This approach would enable the development and testing of theoretical models to explain why and how some e-commerce practices work in some situations and not others.

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