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## **Business Culture and the Death of a Portal**

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### **Abstract**

*After receiving a Government grant under an 'e-commerce early movers' scheme, the Western Region Economic Development Organisation in Melbourne conceived and developed a business-to-business portal for use by small to medium enterprises (SME) in the region. This innovative project was to create a horizontal portal – Bizewest, which would enable the whole range of SMEs in Melbourne's west to engage in e-commerce transactions with each other. E-commerce portals come in all shapes and sizes, but they all have one thing in common: they all involve interactions between information technology and people. Information systems are complex socio-technical entities and research into their implementation needs to take account of this. The research reported here was socio-technical in nature and was based on considering this innovation through the lens of innovation translation, informed by actor-network theory (ANT). No matter how good the portal software, the final success or failure of the portal is primarily related to how well it is adopted and used. This paper outlines the development of the Bizewest Portal and the difficulty its proponents had in persuading regional SMEs to change their business culture to make best use of on-line trading with each other. This difficulty in changing business culture led to Bizewest's ultimate demise.*

**Keywords:** Portal, horizontal business-to-business portals, small to medium enterprise (SME), technological innovation, innovation translation, actor-network theory (ANT)

## **1 Introduction**

The Western Region Economic Development Organisation (WREDO) is sponsored by the six municipalities that make up the Western Region of Melbourne (Pliaskin and Tatnall 2005). WREDO, a not-for-profit organisation also supported by several major business enterprises, was charged with fostering economic growth and encouraging investment within the Western Region of Melbourne. This region contains around 20,000 businesses and is regarded as the

manufacturing, transport and distribution hub of south-eastern Australia (Tatnall, Burgess and Singh 2004).

This paper describes the creation of the *Bizewest* Business-to-Business (B-B) Portal, and WREDO's difficulty in persuading local businesses to change their ways sufficiently to fully utilise the portal. It begins with WREDO applying for a Government grant, without much prior discussion of its purpose or value, to set up the portal: it just seemed like a good opportunity. The paper then goes on to discuss the development problems WREDO experienced in setting up the portal, and WREDO's attempts to get local SMEs to make use of the portal. The paper does not describe the Bizewest Portal software technology to any degree, but rather investigates the adoption (or perhaps non-adoption) of this technology by SMEs in Melbourne's west. In regard to technological innovation it does not matter how good the technology is if no one makes use of it. If the intended users do not adopt the portal, then it will fail. The paper investigates reasons for non-adoption of the Bizewest Portal and outlines the lessons that might be learned from this. Management decisions to implement new technology, in this case a business-to-business portal, must take account of the likely adoption and use of this technology and take necessary steps to ensure that it is adopted and used to full advantage, otherwise time and money will be wasted.

## 2 Background

### 2.1 Web Portals

The term 'Web Portal' is rather overused and so is difficult to define precisely, taking on a somewhat different meaning depending on the viewpoint of the stakeholder (Tatnall 2005; Tatnall 2007). In general terms however, unrelated to the World Wide Web, the dictionary defines a Portal as "a door, gate or entrance" (Macquarie Library 1981). More specifically, a Web Portal can be seen as a special Internet (or intranet) site designed to act *primarily* as a *gateway* to give access to other sites containing information or services. There is no definitive categorisation of the various types of portal, but one list is as follows: General Portals, Regional or Community Portals, Vertical Industry Portals, Horizontal Industry Portals, Enterprise Information Portals, e-Marketplace Portals, Personal/Mobile Portals, Information Portals and Specialised/Niche Portals (Davison, Burgess and Tatnall 2004).

Even though some aspects of the Bizewest Portal, the subject of this paper, could be described as just web pages, as its primary purpose was to provide a *gateway* to information and services that might be useful to the SMEs, it can well be described as a *horizontal industry portal*.

### 2.2 The Birth of the Bizewest Business-to-Business Portal

The *Victorian E-commerce Early Movers Scheme (VEEM)*, a State Government initiative, was announced in February 2000. This scheme aimed to provide assistance to local government to encourage SMEs to use e-commerce for the purpose of expanding business and to make these trading entities more competitive (Tatnall and Pliaskin 2005). Assistance under the VEEM scheme could cover up to 75% of costs associated with projects and funding could involve capital, equipment and labour implementation costs, but was not to include

ongoing maintenance or operating costs. Projects needed to demonstrate that they would provide significant leverage to indirectly improve local economies, and that they would reach a level of self-sustainability within the period of their business plan as no funding was to be provided for maintenance purposes (VEEM 2000).

WREDO decided to apply for funding for the 'Western Melbourne Business-to-Business Portal'. In its submission it argued that this B-B portal was to provide a regional approach to enabling businesses to actively participate in the information economy. Only businesses in Melbourne's Western Region would be permitted to set up trading on the portal. Specifically the goals of the project were to:

- Create a web portal, with a payment gateway, for business and local government in Melbourne's West.
- Initially target a total of 300 businesses to participate in the project.
- Develop a regional web-based registry for the businesses involved.
- Increase awareness and participation with emerging technologies.
- Create an ongoing program of regional seminars and training for the pilot businesses involved.
- Focus on involving the youth of the area in the promotion of new technologies for business (Tatnall and Pliaskin 2005).

### 2.3 Development of the Portal

In June 2000 WREDO learned that its submission had been successful and that Government funding of \$257,400 for the project was to be provided for a period of twelve months on condition that WREDO provide additional funding equivalent to one third of this amount from its own funds. WREDO then allocated the further \$88,000 towards the project making a total project budget of \$345,400 for the year (Tatnall and Pliaskin 2005).

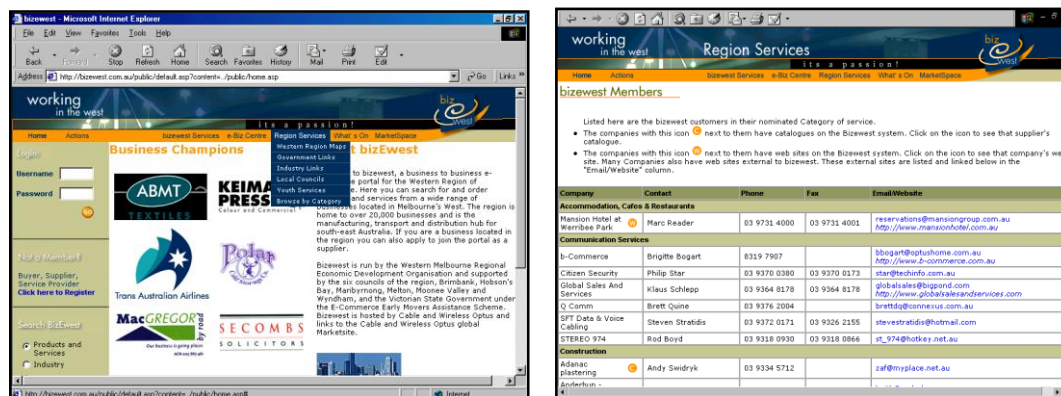


Figure 1: The Bizewest Portal

After receiving a grant for what it thought to be a large amount of money, WREDO originally intended developing the portal itself, possibly with the assistance of a software company, and providing training to local SMEs (WREDO staff 2001), but it did not really anticipate the size or complexity of the task it was undertaking (Tatnall and Pliaskin 2005). After a great deal of negotiation with software companies and ISPs, development of the portal infrastructure and services commenced in late January 2001 with initial testing beginning in April. WREDO had soon discovered that what it was doing was anything but straightforward and that little precedent existed, at the time, for a

regional horizontal B-B portal of this type. They also discovered that the money they had available did not go as far as they had thought it might. Some of the difficulties they experienced in building the portal have subsequently been discussed by other researchers (Lepa and Tatnall 2002; Gengatharen and Standing 2003; Pliaskin and Tatnall 2005). Bizewest became operational in May 2001, but without a payment gateway which was not available until February 2003.

## **2.4 Attempting to Convince Regional SMEs to Adopt the Portal**

Once the portal was operational, getting local businesses online was the next step and this involved two parts: convincing regional SMEs to adopt the portal, and assisting them to set up suitable web sites to link to the portal. Previously an enterprise had been identified within each local council area and designated as the 'business champion' for that locality. These business champions were to play a pivotal role in ensuring that enterprises within their municipal areas were made aware of the Bizewest Portal and its possibilities. WREDO also enlisted the help of local industry groups and other umbrella bodies.

Through a series of initiatives including business breakfasts, workshops and lots of publicity, Bizewest was promoted to industry in the region. In addition, no initial costs to the business who adopted the portal formed part of the considerable effort made by WREDO to convince SMEs that getting onto the portal would be worthwhile (Tatnall and Pliaskin 2005). *WREDO News* featured several articles on the site and the main WREDO website dedicated space to Bizewest. The media wrote positively on the project after having viewed demonstrations of it, and letters were written to likely prospect businesses. The issue was raised at the monthly WREDO networking breakfasts with written material supplied to participants.

To assist businesses to create their web pages to link to the Bizewest Portal, WREDO held two Web-A-Thons at local shopping centres. At these sessions Year 11 Information Technology students from local Secondary Schools who had been specially trained to do so assisted local organisations to create their web pages. WREDO also arranged for some of these students to consult with local businesses on a one-to-one basis on their 'work experience' days to set up their web sites. These simple sites were, however, well suited to their initial needs and had the advantage to these businesses of being very cheaply created – the cost of using a 'work experience' student was only \$5 per day. This also provided some excellent work experience for the students, and the arrangement continued for some time.

## **2.5 The Death of the Portal**

Although 180 businesses had taken up the offer and joined with Bizewest, many balked when it was suggested in late 2002 that in future they would need to pay an annual fee to cover the costs of hosting the portal. The problem was that the grant to set up the portal provided no funds for on-going maintenance and enhancement, and Bizewest was running out of money.

In early 2003 the WREDO Board began considering options for the Bizewest Portal as it could not continue to spend money on its hosting and maintenance, and it appeared that insufficient local business would be prepared to pay for the

privilege of using the portal. An internal report (WREDO 2003) outlined several options:

- Pursue additional government funding to continue to operate the portal for 12 months.
- Seek a commercial sponsor.
- Sell the portal.
- Suspend or cease operations.

Even though the portal infrastructure was in place there was still a great deal of work to be done to encourage business to use this tool and WREDO had run out of time. In June 2003 operation of the Bizewest Portal ceased, but some aspects of this portal were relocated onto another WREDO website.

### **3 Research Framework and Methodology**

The discipline of information systems is a socio-technical one that must consider how *people* interact with and use computer-based systems which are complex socio-technical entities involving both human and non-human components. Research into the implementation and operation of information systems needs to take this heterogeneity into account and find a way to give due regard to both the human and non-human aspects of these systems. The implementation of a new information system, or the upgrading of an existing system, necessarily involves change and so should be viewed in terms of technological innovation. The word 'innovation' is synonymous with 'newness' and 'change' (Dutch 1962) and is concerned with the application of new inventions. The study of innovation does not concern itself with inventors and the details of their inventions, but about individual and business decisions to *adopt* these new inventions.

There are a number of well known approaches to modelling how technological innovation takes place including the Theory of Reasoned Action (Ajzen and Fishbein 1980), the Theory of Planned Behavior (Ajzen 1991), the Technology Acceptance Model (Davis 1986) and Diffusion of Innovations (Rogers 1995). This research instead used as its theoretical framework *innovation translation*, informed by actor-network theory (Latour 1986; Law and Callon 1988; Latour 1996). While many other approaches to research in technological areas treat the social and the technical in entirely different ways, actor-network theory (ANT) proposes instead a socio-technical account in which neither social nor technical positions are privileged (Tatnall and Gilding 1999). Researchers using an actor-network approach concentrate on issues of network formation and investigate the human and non-human actors involved, focusing on the alliances and networks they build up. ANT offers the notion of heterogeneity to describe projects such as this in which a local semi-government organisation engages an Internet service provider (ISP) and a software company to build a business-to-business e-commerce portal for use by SMEs within a regional area. The project involved not just these entities, but also non-human entities such as computers, modems, telephone lines, software, Web development tools and the portal itself, as well as other human entities including local business proprietors from small and medium-sized enterprises, customers, programmers, development managers, and local government staff (Tatnall and Burgess 2002).

Often a small business which is considering some technological innovation is interested in *only some aspects* of this innovation and not others (Tatnall 2002;

Tatnall and Burgess 2002). In actor-network terms it needs to *translate* (Callon 1986) this piece of technology into a form where it can be adopted by this business. This may mean choosing some elements of the technology and leaving out others, resulting in what is finally adopted not being the innovation in its original form, but a translation of it into a form that is suitable for use by the recipient small business (Tatnall 2002).

The research project to investigate adoption of the portal consisted of three stages:

- Stage 1 (- second half of 2001) began with interviews of the ‘business champions’ identified by WREDO. This was followed by further interviews resulting from the first set of interviews. In this stage an initial list of actors was identified. (In ANT terms an actor is seen as a human or non-human entity that is likely to have an effect on the outcome by making its presence individually felt (Law 1987) by the other actors.)
- Stage 2 (- second half of 2002) involved returning to the businesses interviewed earlier and checking whether things were progressing as they thought they would. The actors identified in Stage 1 were also followed up.
- Stage 3 (- first half of 2003) checked these same businesses to see if any change in the way they did business had resulted from their use of the portal.
- Stage 4 (- first half of 2004) involved a post-mortem on why the portal failed. This involved discussions with WREDO staff and various portal users, concentrating on an investigation of interactions and associations between actors.

#### **4 Why the Bizewest Portal Died – an ANT Analysis**

The Bizewest Portal was intended primarily for business-to-business trading with an internal regional focus: to use the portal you had to be from a business in Melbourne’s West. The SMEs in this region, however, proved reluctant to fully adopt this new facility and a number of reasons for this can be postulated:

1. The portal software was not well devised and was too complex.
2. Lack of a payment gateway.
3. The financial cost of using the portal was too high.
4. WREDO did not promote the portal well enough.
5. It was too hard for SMEs to set up their own web pages on the portal.

Regarding the first of these possible reasons an interview with the portal software developer suggested that WREDO was not, at first, completely clear on what it wanted: “When we were first approached to do the development neither WREDO nor the Business Champions had any idea of what the solution would be.” (Batteries Included 2001). She went on, however, to indicate that despite this the portal software development then proceeded well as the concepts became better understood, and that the final product satisfied everyone’s requirements. In ANT terms, WREDO’s problematisation (Callon 1986) of the portal was quite weak at the start of the project, but increased during portal development after discussions with the developer.

A simplistic view of the portal would have it that businesses make their adoption decisions primarily because of the portal’s characteristics, but the interviews conducted in Stage 1 dispelled this view and indicated that business needs and expectations were a much more significant factor. In each case, interviews indicated that reasons for adoption were not closely related to the characteristics

of the technology itself as the theory of innovation diffusion (Rogers 1995) would suggest. Most of the companies that adopted the portal early knew little about the technology but were excited by the concept of getting onto the Web and just wanted to be involved. A typical response was from a small printing company: “I think that we saw that the opportunities are just fantastic, I went into it straight away and we received a lot of assistance. It was a great opportunity to get in at the ground floor and be one of the front runners and really I suppose that the earlier that you are in the better chance you have of reaching those new clients. The other thing was that being a small company, advertising can be quite expensive, and we thought that if we can get this free it would be fantastic.” (Printing Press 2001). This business wanted to *translate* (Callon 1986) the portal primarily to a means of advertising and were not really interested in some of its other features. Another response was from the IT Manager of a small textile company: “I think the way that we will go is like many businesses; we will dip our toe in the water and do some basic ordering: stationery that’s a common one.” (Textile Company 2001). This also involved a translation of the portal to become a means of ordering supplies. The managing partner from a small firm of solicitors added: “We spent a lot of money on computers and put a lot of effort into it, but regarding expertise – I have had some responsibility in that area. I know nothing about computers other than I try and push the boundaries by setting targets that I’d like to achieve and then give my people who know more about it the task of telling me why they can’t achieve or how they can achieve those targets.” (Footscray Solicitors 2001). Some of the businesses were just beginning to use IT, an example being a cold storage and transport company: “We have just finally got all our computers in the office here networked in the last three weeks. Part of this total package, if you like, is that we’ve networked all the computers throughout all the office here and we’ll have everyone linked into the portal.” (Cold Storage 2001). The manager indicated that a major reason that this company adopted the portal was the hope that it would provide a better opportunity to deal with people in the local region (Tatnall and Burgess 2004). He indicated that although he didn’t really understand much about the portal or what it would do, he thought it was going to provide many benefits for everybody and not just his company. This was important to him. He could see use of the portal changing his business by enabling it to use people in the local region, and that “working together for the benefit of everybody” would be advantageous for the region (Cold Storage 2001).

Looking now at the suggested reasons for failure of the portal it can be seen that the software itself was not a major issue with these people. They did not see it as too complex and had no way of judging whether it was well devised, nor did they even mention costs or the payment gateway. These were just not important considerations for adoption. Further interviews in Stages 2, 3 and 4 reinforced this view showing that although by then these businesses knew a lot more about the portal and its possibilities, the technical side was not really at issue. Cost did, however, become an issue when WREDO indicated that it would have to recover the money spent on hosting the portal.

It is also clear that WREDO had promoted the portal very well with its business breakfasts and news releases. Interviews with businesses which had not yet adopted the portal showed that this was not because they were unaware of it, but often that they could not see how they might use it. The idea that it was too hard for SMEs to set up their own web pages on the portal is also dispelled by the



service offered by WREDO using Year 11 Information Technology students. This actor-network was well established and operating.

Several more subtle reasons for non-adoption of the portal now emerge:

6. There was no real need for the portal.
7. The membership was too restrictive, being limited to businesses in the Western Suburbs.
8. A critical mass of portal users did not develop.
9. The SMEs would not, or could not, change their *business culture* to make use of the portal.

One thing that becomes clear from the application of ANT to a consideration of technological adoption is that in most cases where an innovation is not adopted, or is adopted in a different way to that expected, is that there is no single cause and that a combination of factors is usually involved (Callon 1986; Latour 1996).

In the case of Bizewest, probably each of these possible reasons was partially relevant to the death of the portal. For the portal project to be successful, Bizewest needed to be seen by the proprietors of the SMEs as a necessary means of undertaking e-commerce and business-to-business transactions. They needed to be convinced that this technology was more worthwhile and offered them better business prospects than the approaches they had used in the past. The portal needed to set up a problematisation (Callon 1986) of B-B trading that brought out the benefits of using a portal for this purpose. There also needed to be an interessement (Callon 1986) to interest and convince these SMEs to change from their old business culture and adopt the portal. It was not enough for those promoting the portal to eloquently espouse its benefits: the SMEs would also have to give up at least some of their old methods of business-to-business transactions and change their business culture. After enrolment of these businesses, the portal would have been judged to be truly successful when SME proprietors began advocating its advantages to each other (Tatnall and Burgess 2002), but unfortunately this did not happen as too few SMEs were prepared or able to change their business culture to make appropriate use of the portal. If a critical mass of portal users had developed, then other businesses would most likely have seen good reason to also join up, but this did not happen. The result was the death of the portal.

## 5 Conclusion

Many businesses adopting the portal did so because it seemed to them to be ‘a good idea’ rather than because they had any clear idea of its benefits. Few had looked objectively at the characteristics of portal technology or business-to-business e-commerce, and common reasons for adoption included: “If other businesses adopt it and we don’t we will be left behind.” “All the talk is about e-commerce and how it is the way of the future.” “It doesn’t look too hard to make it work and we have little to lose.” and “My kids tell me that everyone will be on the Internet soon and we had better be too” (Tatnall and Pliaskin 2005).

WREDO’s attempt to establish an inward-focused portal to allow SMEs in the Western Region of Melbourne to engage in B-B e-commerce was a courageous move, but this attempt to change the culture of these businesses was probably too ambitious. It succeeded as far as it did because of the excitement generated by this

new technology and because WREDO had a good reputation in the Western Region and was well trusted. It had little to do with any evaluation by the SMEs of the technology itself, and everything to do with WREDO's success at interesting them in the portal's possibilities, even if they did not fully understand them. It finally failed for these same reasons.

It was unfortunate that the government grant to set up the portal did not include some funds to support its on-going development and use, and an important lesson can be learned from this. If such grants offered a little more flexibility, worthwhile but slow moving projects may get more of a chance to succeed. Had on-going funding been available for another year to educate more small businesses in the portal's benefits a critical mass may have developed, and it is quite possible that as time passed and other business came to understand more about the benefits of e-commerce and the use of a B-B portal, their views may well have changed to the degree that they were prepared to pay for it. The later interviews suggest that it is quite possible that their business culture may have changed in this way, but as it turned out, this was not to be.

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