The Adoption of E-Commerce by Microbusinesses

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Abstract
In Australia, about 89 per cent of businesses have less than five employees. This equates to 1035 000 microbusinesses. What is important to note is that 637300 of these are non-employing businesses (i.e. sole proprietors) according to the Australian Bureau of Statistics (ABS). By studying these figures it becomes increasingly apparent what a challenging task the majority of business operators have in adopting and successfully integrating electronic commerce into their business. They only have their own resources and experiences to draw on and face a multitude of constraints such as time, money, lack of expertise and access to limited amounts of information. Many microbusiness owners are more concerned about making ends meet and how they will satisfy upcoming customer engagements than how they will venture online. Even though microbusiness computer penetration is very high, at about 79 per cent, electronic commerce adoption is substantially lower. According to the ABS, only 64 per cent of microbusinesses have Internet connectivity and some 14 per cent have a web presence.

Disciplines
Computer Sciences | Physical Sciences and Mathematics

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**MICROBUSINESS RESOURCE LIMITATIONS**

For most Australian microbusinesses the first steps towards the adoption of electronic commerce can be very daunting. Companies with less than five employees can seldom afford a dedicated information technology (IT) professional on their payroll. More often than not, the IT role is bestowed upon the most naturally gifted computer-adept employee as an additional part-time job function. This individual is usually a self-motivated beginner who is provided with little training and usually learns ‘on-the-job’ by trial and error. Seemingly simple tasks such as purchasing a computer, finding a suitable ISP, registering a domain name and establishing a web presence can become unassumingly overbearing. Small business owners and key decision makers are usually too pre-occupied with the day-to-day operation of the business to worry about formulating a proper electronic commerce infrastructure plan. Many businesses aimlessly seek to go online giving little thought to answering fundamental questions such as why they are doing so, how they will go about it, and within what time frame and budget. Requirements are usually satisfied on an ad-hoc basis and with little prior investigation into how going online may impact current business practices.

**THE ROAD TO ELECTRONIC COMMERCE**

The road to electronic commerce can be segmented into four main stages: buying a computer, getting connected to the Internet, building an Internet presence and introducing electronic commerce functionality. These stages are discussed below.
**Buying a computer**

The first hurdle for a new start-up may well be where to buy a computer. There are equipment vendors on the Internet such as Dell, retail department stores such as Harvey Norman and local stores that may sell no-name brands and second-hand computers. Deciding where to go to purchase can be a dilemma. The second hurdle may be related to getting a valid quotation that includes all the components that you have specified. Trying to compare several quotations can also be difficult, so they are best compared against minimum specification requirements. Consider what type of configuration is suitable for your needs. Should the computer be a desktop or a laptop? How much storage space is required on the hard drive? How much random access memory (RAM) and what type of processing speed? Will the office computers and other peripherals be networked via hub? In addition, what type of software does the business require to go online? Which Internet browser will be used and which email program? Finally, the decision to purchase or lease the equipment is also important as it has considerable tax implications.

**Getting connected to the Internet**

Once the computer equipped with a modem has been purchased, getting connected to the Internet with the right ISP is a very important step on the road to electronic commerce success. Choosing the wrong ISP can be disastrous. Poor Internet connectivity, low modem-to-user ratios (leading to congestion during peak periods), inadequate customer support and expensive fees are enough to turn off any microbusiness owner from staying connected for long.

The *Australian ISP List* is a good place to start looking for information on prospective ISPs. Businesses that are located outside the Sydney metropolitan area may find it a particularly useful resource because it lists ISPs by their regional presence. The *Australian ISP List* also identifies additional services offered by ISPs such as web hosting and Internet training, and lists all the points-of-presence (POP) locations, network details, supported protocols and pricing. Depending on the type of microbusiness and the role the Internet will play in the business, it may also be useful to consider whether broadband connectivity is appropriate, either cable or ADSL. If narrowband is preferred because broadband is either too expensive or not offered in the serving area, ISDN could also be considered. Settling for a 56 Kbps dial-up connection may also be sufficient, but one or more additional dedicated telephone lines may be leased for the purposes of receiving email or browsing the Internet without interrupting the flow of incoming telephone calls.

**Building an Internet presence**

Once you have found an ISP that offers reliable connectivity, the next step is to establish an Internet presence. The same ISP that offers your business Internet access should also possess web hosting capabilities for an additional monthly or annual fee.
In most cases the ISP can also help you to register a domain name for your business and offer some advice about professional web development services. Web-page design expertise can vary considerably in price and quality, so it is advisable to obtain several quotes and to inspect a portfolio of current web sites designed by the prospective vendors.

Setting up a company web site takes a lot of planning – participating in electronic commerce is more than just building a haphazard home page just for the sake of getting something onto the Web. For example, will you require Macromedia Flash, database integration and/or web site promotion on selected search engines and directories? In some instances, business owners may decide to create their own web sites, but what should be contemplated is the steep learning curve associated with attaining professional web design skills. The time and effort exerted in a 'do-it-yourself' web site may not be reflected in the final result. An unprofessional site can do more damage than good, not to mention losing hours that could have been spent elsewhere in general business operations. This is not to say that outsourcing web development is a panacea – ongoing maintenance costs are not cheap to a microbusiness that is struggling to survive. Depending on the complexity of the web site, outsource fees are anywhere between $1200 and $5000 for a basic web site. For a microbusiness owner generating not more than $100,000 per annum this is a sizeable investment.

Introducing electronic commerce functionality

After establishing a basic company web presence the microbusiness owner may want to get paid over the Internet as well. Credit card payments can be processed in either a manual or automatic fashion. The manual way is for credit card details to be emailed to the business owner and for these to be processed offline. In order to process payments automatically business owners establish a merchant services agreement with a chosen bank and authorisation is conducted in real time. It may also be convenient to set up Internet banking capabilities at the same time. Additional electronic commerce functionality could be applied to the web site by introducing an online product catalogue or even a shopping cart system that allows consumers to shop over the Internet. When getting paid over the Internet, the business owner should enquire about secure payments. This can be implemented using 128-bit Secure Socket Layer (SSL) encryption or digital certificates.

Finally, after the B2C transactions are in operation, conducting B2B electronic data interchange should also be considered, depending on the nature of the microbusiness. More and more large retailers and government organisations are insisting that smaller players use EDI to streamline processes and reduce overheads.

THE ONLINE REALITY

The four main stages to electronic commerce may seem straightforward; however, it is one thing to read about these stages, but it is another thing to plan to do them, and yet another to implement them successfully.
High failure rates are synonymous with new start-up businesses, and it should be noted that electronic commerce does not miraculously make all other conventional business problems go away. In fact, a recent national survey conducted by Dun & Bradstreet (D&B) in Australia has revealed some very interesting trends. In short, Australian businesses are either 'loving or leaving the Internet.' They either think it is having a positive impact on their business, or they think it is not contributing at all and subsequently they are dropping out of the electronic commerce game altogether. According to Dun & Bradstreet '[b]usiness experimentation with e-commerce in the last 12 months has revealed that while a small proportion are doing more online, a larger proportion are doing less.'

How should these results be interpreted? Should this report deter microbusinesses from going online? Not at all. But it should at least act to raise the awareness that adopting electronic commerce requires some serious thinking. Inadequate research by a microbusiness can lead to the misalignment of tens of thousands of dollars with very little to show in terms of a functional company website at the conclusion. Perhaps a suggestion would be to follow the path to electronic commerce as outlined above. At the completion of each stage, the business should reassess its business goals and what it hopes to gain from the Internet before committing to the next phase of implementation. The business may require only a basic company website initially, but as the company grows in stature additional functionality can be added.
End | notes

21. A strong relationship between business size and the adoption of electronic commerce
   is apparent when comparisons are made with medium and large business types, which
   have close to 100 per cent IT penetration.
22. See also AUSe.NET's eight general stages that a small organisation will go through in
24. AUSe.NET 2000, 'How to buy a computer', www.ause.net/, v2.3a.
26. As well as looking at well-known ISPs such as Telstra BigPond or OptusNet, it is also
    worth looking at what some of the other ISPs have to offer.
27. AUSe.NET 2000, 'How to set up a web site', www.ause.net/, v2.3a.
28. Some ISPs are well known for focusing on offering business connectivity, such as
    connect.com.
29. A domain name in the form of .com, .org, .net or .info can be obtained with or without
    the .au extension for Australia.
30. See the services offered by Metro Software Developments, www.webdevelopmentaustralia.
    com/.
34. To learn more about EDI visit www.reims.net/Resource_Zones/EDI/edi_resources/
    edi_standards.html.
35. Hindle, K. G. and Rushworth, S. M. 2000, Yellow Pages Global Entrepreneurship
    Monitor, Swinburne University of Technology, Melbourne.
36. CyberAtlas 2002, 'Australian biz loving or leaving Internet', CyberAtlas,
    cyberatlas.internet.com/big_picture/geographics/print/0,,5911_979161,00.html.