



B2B E-Marketplaces: An Australian Case Study

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ABSTRACT

The role of e-procurement and the emerging business model of the e-marketplace in Australian business is the focus of this research paper. The primary research question of this paper was to ascertain how a "best practice" Australian organisation is undertaking the role of direct and indirect procurement on the buy-side and selling into a global market on the sell-side via e-marketplaces. E-marketplaces are evolving as value drivers in the evolving e-business story and this paper presents the results of a case study of one Australian organisation and its experiences as it grapples with the technical, process and people problems of e-marketplace driven procurement. A leading e-marketplace user, BHPBilliton, will be analysed together with its e-marketplace partners.

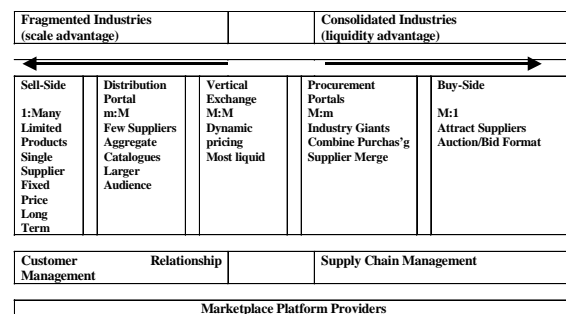
INTRODUCTION

Businesses are now looking at the extended supply chain, procurement and e-marketplaces to provide additional business efficiencies and business leverage to maintain their competitive positions. Strategically a superior supply chain (Cooper et al., 1997) will increase a business's responsiveness and competitive advantage. This paper looks at the role that the e-marketplace may play in the Australian business environment. The results of an Australian wide survey are presented together with an analysis of the current and future procurement practices of 38 Australian organisations together with their intentions of moving to the e-marketplace model for procurement.

e-Marketplace Landscape

There are several forecasts that predict the rapid growth in the number of European e-marketplaces (Raczkowski, 2001; Favier, 2001; IDC, 2001), the rapid growth of transaction volume (Raczkowski, 2001; Morbitzer, 2002) and the growth of the overall capitalisation of the e-marketplace (Favier, 2001; Morbitzer, 2002; Metcalfe, 2002). Whilst these figures carry the risk of all forecasts the real dilemma is finding the correct viable business model that will support e-marketplaces. Early e-marketplaces were set-up by aggressive dot.coms and sought revenue by charging a percentage of the total purchase transaction. The rates were typically 1% to 5%. The rapid growth of these e-marketplaces soon saturated the marketplace and many could not generate enough revenue to survive. Transaction pricing (Raczkowski, 2001) was not attractive enough and linking revenue with value became necessary. A McKinsey report (Hansen et al., 2001) identified five categories of e-marketplace models; project/specification managers, supply consolidators, liquidity creators, aggregators and transaction facilitators. Forrester (Favier, 2001) goes further and charts the evolution of e-marketplaces after the dot.com crash of 2001. They see 2002 as a year when e-marketplaces will start to merge in response to buyers and sellers demanding better services. By 2003 alliances are predicted to form between consortia and dot.coms and buyers will start to lock-in. Raisch (Raisch, 2001; pp.281) tracks this evolution of e-marketplaces and sees three key e-marketplace models emerging. The first is the direct e-marketplace, (Dell Computers), the second the consortium e-marketplace, (Boeing and Global Aerospace), and finally the independent e-marketplace, (Freemarkets). The B2B landscape (Raisch, 2001; pp.225) is provided in Figure 1.

Figure 1. The B2B Landscape, (Raisch, 2001).



Research Questions

The primary objective of the study was to analyse a "best practice" Australian Global organisation and seek responses to issues including the current and future procurement practices taking place and to further ascertain their intentions to enter the e-marketplace model. This will be presented in a case study. More specifically the research question of this paper is: What is the current usage of e-marketplaces by the case study organisation?

METHODOLOGY

This paper presents a case study of best practice e-Procurement via an e-marketplace. Yin(1994, p. 35) emphasises the importance of asking "what" when analysing information systems and goes further and emphasises the need to study contemporary phenomena within real life contexts. The data collection process included examination of existing documentation, content analysis of email, interview of actors and direct observations.

CASE STUDY

BHPBilliton & e-Marketplaces

Broken Hill Proprietary (BHP) is the "Big Australian". For decades BHP was the largest Australian company and mirrored the resource nature of Australia's economy in the 20th century. In 2001 BHP merged with the UK based Billiton Corporation to form BHPBilliton, one of the largest resources enterprises in the world. Currently BHPBilliton use multiple marketplaces both on the buy side and the sell side. See Table 1 for the current (August 2002) listing of the e-marketplaces that BHPBilliton participate in. On the buy side Quadrem, Elemica and LevelSeas for direct procurement, with Corporate Express and Freemarkets for indirect procurement. On the sell side, eSteel iConnectTrade, and Global Coal trading handle the steel and coal resources that BHPBilliton sell into the world market. Many BHPBilliton

sites have implemented e-marketplaces solutions including Corporate Headquarters, Queensland Coal, Escondida and New Zealand Steel. The BHPBilliton Company Escondida, based in Chile, commenced operating with 20% of total orders being placed through the Quadrem marketplace.

Quadrem

Quadrem is a public e-marketplace (Quadrem Profile, 2001), providing supply chain processes for both buyers and sellers in the mining, minerals and metals industries. It is backed by 21 major mining organisations with the major shareholders being Alcan, Alcoa, BHPBilliton, De Beers and Codeelco among others. The market for procurement in this industry is about \$US200 million with Quadrem buyers representing about \$US80 million. Technical, process and change management issues seem to be paramount when proposing to extend this functionality from Escondida to other Global R/3 BHPBilliton customers. Technical issues included the hardware intensity of MySAP applications, the use of different versions of XML and the interoperability of service orders. Process issues include the need to have an excellent procurement process in place before conversion to the e-marketplace model and the inability of SAP R/3 processes to handle marketplace transactions. Change management include the standard range of "internal" change management practices but the inherent external nature of inter-organisational systems means that many change management practices must be applied outside the company boundary to non-company personnel. This factor is crucial when developing systems that link organisations.

Elmica

Elmica is an e-marketplace that services the worldwide chemical industry and services industry like BASF, Bayer, Dow and DuPont. Mining Industries are very heavy users of chemicals for mining operations and processing and the interaction between BHPBilliton and Ciba led to the connection of Elmica with Quadrem. This hub-to-hub connection of the two e-marketplaces signifies a "next generation" super e-marketplace. It is expected that \$US70 million (Kaneshige, 2002) will flow between the hubs with no additional fees being charged for the inter-connection. Issues like the level of privacy, security and transaction operability will be monitored to ensure no degradation of services for the e-marketplaces.

Esteel

In 2000 BHP commissioned e-Steel Connect to (Bruder, 2000) develop an e-marketplace for the BHP customers and suppliers. The marketplace will allow customers access to direct value added services such as transportation, logistics, order tracking, order status and mill test certificates. The underlying technology will enable B2B flexibility with channels, suppliers and customers engaged in end-to-end e-commerce.

Corporate Express

Corporate Express is an Australian publicly listed company (Ellis, 2002) and part of the worldwide Buhman group of companies. It operates in 23 locations in Australia and New Zealand and employs about 1500 people. It has annual sales of about \$AUD633 million with \$AUD 200 million transacted electronically. It is Australia's most transacted B2B site. There are 50,000 users turning in 3,500 orders per day. BHPBilliton use Corporate Express for much of its indirect procurement and has developed direct connection between the R/3 system and the Corporate Express System.

Global Coal Trading

GlobalCoal Trading is the premier e-marketplace for trading coal and coal related services information and products. BHPBilliton is one of (GlobalCoal, 2002) the founding companies that helped formed the Standard Coal Trading Agreement and this forms the basis for transactions in GlobalCoal Trading.

Table 1. e-Marketplace used by BHPBilliton

e-Marketplace	Sector	Focus
Quadrem	Mining & Metals	Direct Procurement - Maintenance
Elemica(hub link Quadrem)	Chemicals	Direct Procurement - Chemicals
LevelSeas**	Transportation	Direct Procurement - Logistics & Trans
CorProcure	Horizontal	Direct Procurement - Varied
iConnectTrade	Metals	Sell Side - Steel Products
ESteel**	Metals	Sell Side - Steel Products
Global Coal Trading**	Mining	Sell Side - Coal
Corporate Express	Office Goods	Indirect Procurement - Office Goods
Freemarkets	Rev Auctions	Indirect Services

** Indicates that BHPBilliton have taken a development/equity role the e-Marketplace

LevelSeas

LevelSeas is an example of a consortium of companies setting up a distribution portal in which B2B commerce can be transacted. LevelSeas provides the marketplace mechanism for connecting shipping lines and commodity exporters. It was set-up in 2000 and in 2001 BHPBilliton expanded its equity in the E-marketplace from 2.6% to 5.7% (Thornton, 2001). For a resources organisation that moves massive amounts of cargo each year the entry into a cargo e-Marketplace was logical.

Freemarkets

One of the pioneers of online B2B auctions is Freemarkets, which was established in 1995 and launched their online auction site in 1999. To date they have conducted auctions involving more than 19,000 suppliers from more than 70 countries worth \$US30 billion (Freemarkets 2002). In the first quarter of 2000, they conducted auctions involving 47 Fortune 500 buyers and 4000 suppliers (Jan and Wu 2000). BHPBilliton have conducted (Thomson, 2001) reverse auctions for variety of indirect items. In early 2001 BHP sought accommodation services through the reverse auction freemarket portal. They have since conducted several reverse auctions.

DISCUSSION & CONCLUSION

What is the current usage of e-marketplaces by the sample organisations?

On the procurement side of BHPBilliton we see a pathway for adoption of e-marketplaces to achieve business benefits. Both direct and indirect goods are sourced from multiple e-marketplaces. On the sell side BHPBilliton have taken equity positions in several of the e-Marketplaces they participate in a suppliers. The ISM/Forrester (2002) report showed that 20.2% of the sample U.S. organisations purchased using e-marketplaces. A recent survey of Australian organisation showed only 10% purchased on-line. This would seem to again indicate the immaturity of the Australian organisations in using e-marketplaces as a procurement channel. This slow adoption of the e-marketplace channel is extolled in a recent PriceWaterhouseCoopers report (PWC, 2002) where the difficulty of locating real benefits from participating in e-marketplace business model was described. Buyers were fearful that price and cost advantage will be lost whilst suppliers are being forced into the e-marketplace to remain "in the game". The PriceWaterhouseCoopers report makes a case for e-marketplaces that have added value for both suppliers and buyers. For our case study company BHPBilliton there seems to be no trepidation into entering the e-Marketplace as either a buyer, seller or even an as equity partner. Table 1 shows the range of e-marketplaces that BHPBilliton participate in. There is no doubt that BHPBilliton shows a strong disposition towards adopting the marketplace model. This mirrors the latest research by IDC (2002), where a survey of 2000 businesses in 10 countries has signalled a doubling of e-business spending in the forecast period. The Survey showed that many companies are being driven into e-business by their customers wanting them to participate in e-marketplaces.

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