Reengineering is about fundamentally rethinking and dramatically redesigning business processes in order to lower costs and increase quality, service and speed. Such transformation is required in many industries today, perhaps none more so than the health sector. One enabling mechanism to allow for such large-scale change is found in information systems developments, most notably that of electronic commerce (e-commerce), offering a range of solutions for improving healthcare management.

This paper addresses the way in which the Australian health industry has grasped such opportunities for transforming itself through e-commerce strategies, allowing for improving cost-effective services to key stakeholders. A major achievement among a range of recent activities as outlined in the federal government’s report, From Telehealth to E-Health: The Unstoppable Rise of E-Health (Mitchell, 1999), is that of Australia’s first Internet trading community, The Project Electronic Commerce and Communication for Healthcare, otherwise known as PeCC, a key platform in transforming Australia’s health sector.

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INTRODUCTION

Recognizing the stark reality of economics can provide a strong imperative for reengineering an industry. This, coupled with the opportunities provided by evolving information and communication technologies in transforming healthcare delivery, provides a vital basis for radical change. Initiated in 1997, the Project Electronic Commerce and Communication for Healthcare (PeCC) emerged from just such a recognition by the federal government concerned over burgeoning costs in Australia’s $37 billion health sector. This multi-stage project was developed and has received support from a number of federal government departments, but is a joint activity of both government and industry. PeCC was developed to introduce e-commerce practices into the health sector with almost 700 suppliers, automating pharmaceutical and other supplies to hospitals and retail pharmacies. While multiple projects occur within PeCC, the focus here is on the Pharmaceutical Extranet Gateway (PEG), an Internet-based facility, developed to allow the automated passing of common order transactions between all parties and, in the process, to more tightly integrate their disparate systems. One of the most interesting features of the PEG project is that it has been developed and implemented by seven major pharmaceutical wholesalers, competitors operating in the same business but, nevertheless, collaborating in a critical and non-trivial endeavour.

During the PeCC study, interviewees at all points in the supply chain expressed concern at the fragmented nature of their IS, plus a good deal of frustration at the fact that accomplishing effective integration of their own IS suites had proved to be extremely difficult and, in most cases, impossible. Given, then, the difficulties encountered in IS integration initiatives within single organisations, one might expect that inter-organisational IS integration might be close to an intractable problem. Surprisingly, this is not what we found: certainly some fairly significant problems with inter-organisational collaboration were encountered but, in the main, the PEG architecture, combined with a heavy emphasis on standards, ensured that (within limitations) the project’s data integration objectives were achieved.

The pharmaceutical industry is one of the first industry groups to have adopted a standardised approach to e-commerce. The project’s impact, however, is significant within the broader healthcare industry. As one authority put it: “The project heralds a global transformation of many aspects of health industry administration, putting barcode scanners into the hands of nurses and even replacing the doctor’s hand-scribbled prescription. Every item used in hospitals, from cornflakes to soap, would eventually be covered” (AH&HCJ, 1999, p.75).

Hart and Saunders (1997) have explored the way computer networks are increasingly being used to support the flow of information between and within organisations, and how such usage both influences and has consequences for inter-organisational relationships. Tapscott (1998) goes further and emphasises that the concept of community is vital for success in the new economy. An emphasis on relationships, both business-to-business and business-to-consumer, is central as organisations learn to coevolve into online business communities or, as he puts it,
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