Chapter V

Employee Self-Service HR Portal Case Study: Access, Content, & Application

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Abstract

A number of Australian companies have realized the relative quick gains with low associated risks that can be achieved through the business-to-employee (B2E) model. Employee Self Service (ESS) is a solution based on the B2E model and it enables employee access to the corporate human resource information system. This chapter looks at the development of a human resources (HR) ESS portal and presents the findings of a case study of three Australian organizations that have implemented an ESS portal. A model depicting portal maturity is presented and analysis shows that ESS portals can be categorized as first generation with an "Access Rich" focus, second generation with a "Collaboration Rich" focus, or third generation with an "Application Rich" focus. The information and process

focus of the ESS portal of three organizations will be presented and will be used to place the organization into the portal development model proposed by Brosche (2002).

Introduction

Approximately 320 of Australia's top companies have implemented SAP's ERP system (SAP R/3), and of these approximately 150 have implemented the human resources (HR) module, with 33 implementing the ESS component. These companies include Toyota, Westpac, RMIT, National Australia Bank, Siemens, Telstra, and Linfox (Hawking & Stein, 2002). In recent times there has been a plethora of research associated with the impact and implications of e-commerce. Much of this research has focused on the various business models, such as business-to-business (B2B) and business-to-consumer (B2C), with the importance of developing customer and partner relationships being espoused. There has been little attention paid to the potential of B2E systems and the role that B2E systems can play in improving business-to-employee relationships. Many organizations have realized the relative quick gains with low associated risks that can be achieved through the B2E model.

The B2E human resources Employee Self Service (ESS) system is claimed to incorporate "best business practice" and therefore the significant growth in ESS systems (Webster Buchanan, 2002) is understandable when you consider the potential return on investment of ESS applications. Lehman (2000) saw ESS transforming labor-intensive, paper-based HR forms to digital-enabled forms, allowing a 50% reduction of transaction costs, 40% reduction in administrative staffing, 80% reduction in management HR duties, and a 10-fold speed-up of HR processes (Workforce, 2001). Many of Australia's larger companies and public sector organizations are implementing ESS functionality as an adjunct to their enterprise resource planning (ERP) human resources systems, and this chapter looks at case studies of three major Australian organizations, the pre-eminent Australian telecommunications company and two state government departments.

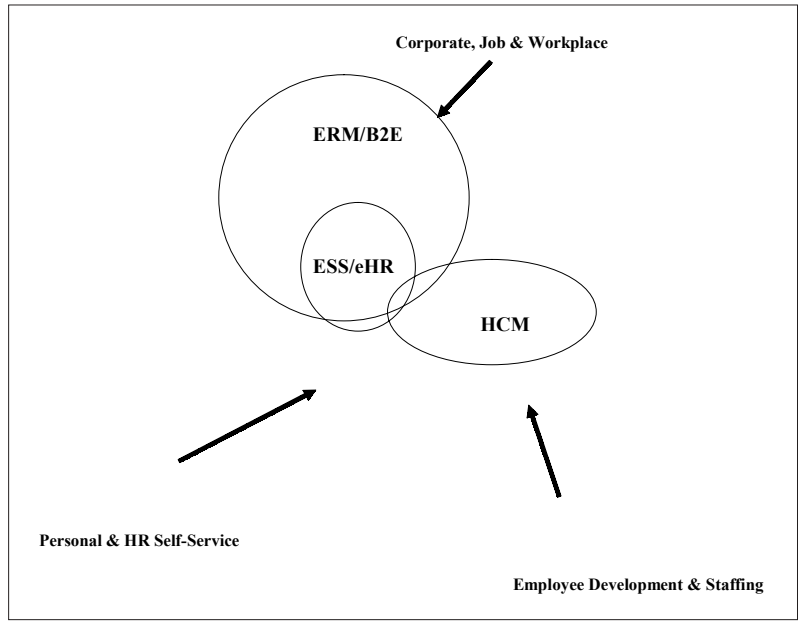
From Traditional HR to ESS Portals

The function of Human Resource Management has changed dramatically over time. It has evolved from an administrative function, primarily responsible for payroll, to a strategic role that can add value to an organization. Organizations have now realized the importance of this function and are investing resources into supporting Human Resource Management Information Systems (HRMIS). Hamerman (2002) describes a model of how Internet technology can be applied to HR functions. His Employee Relationship Management (ERM) landscape presents corporate, personal, and employee elements (Figure 1). Hamerman (2002) views ERM suites as being platforms for information delivery, process execution, and collaboration in the organization. He sees the ERM suite being focused on organization-wide issues including recruitment, development, retention, progression, and succession. Within the ERM suite sits ESS functionality. The ESS allows for greater operational efficiency and the elevation of the HR function from a reacting function to a more creative strategic function. The Human Capital Management (HCM) component signifies that the human resource is a very important resource for modern organizations. Hamerman proposes the advantages in empowering employees through an ERM suite include:

- multiple value propositions,
- consistent portal GUIs,
- all employee 24x7,
- real-time dynamic information delivery, and
- A comprehensive collaborative work environment.

The evolution of traditional HR to ESS portals has been accelerated by the convergence of several organizational forces. The internal process of HR is changing its role from support to a more strategic focus in the organization. The role has developed from being primarily administrative, to support, then to the role of a business partner. At the same time HR is a stable, reliable business process; has high recognition within the organization; and touches every employee. This high recognition gives HR a rapid acceptance when being given the "e" treatment. Another force acting on HR is the "adding value" imperative.

Figure 1. Employee Relationship Management landscape (Hamerman, 2002)



Organizations are involved in a "war on talent" (Link, 2001), and organizations see e-HR as an important technological tool in winning the war. HR has seized this change in organizational focus and adopted the B2E model to further enhance the business partner role.

Internet technology continues to shape the way that HR information is being delivered to employees (Gildner, 2002). There are three main information delivery platforms — Customer Service Representative (CSR), Interactive Voice Response (IVR), and ESS Web applications. CSR and IVR systems are used in 20-30% of employee enquiries, with ESS Web applications used in another 50% of employee enquiries. The Customer Service Representative is still the dominant access method for complex transactions, with ESS access replacing IVR as the preferred self-service method in large organizations.

Many of the world's leading companies are using ERP systems to support their HR information needs. This is partly due to the realization of the integrative role HR has in numerous business processes such as work scheduling, travel management, production planning, and occupational health and safety (Curran & Kellar, 1998). The B2E ESS model involves the provision of databases,

knowledge management tools, and employee-related processes online to enable greater accessibility for employees (Deimler & Hansen, 2001).

B2E Employee Self Service (ESS) is an Internet-based solution that provides employees with a browser interface to relevant HR data and transactions. This enables employees' real-time access to their data without leaving their desktop. They can update their personal details, apply for leave, view their pay details and associated benefits, view internal job vacancies, and book training and travel. The benefits of this type of technology have been well documented (Alexander, 2002; McKenna, 2002; Webster Buchanan, 2002; Wiscombe, 2001). They include reduced administrative overheads and the freeing of HR staff for more strategic activities, improved data integrity, and empowerment of employees. One report identified a major benefit as the provision of HR services to employees in a geographically decentralized company (NetKey, 2002). Tangible measures include reductions in administrative staff by 40%, a reduction in transaction costs of 50% (Wiscombe, 2001), and the reduction of processes from two to three days to a few hours (NetKey, 2002). A recent study of the UK's top 500 firms revealed that the majority of B2E ESS solutions were still at a basic level, and have focussed on improved efficiency and electronic document delivery (Dunford, 2002). Ordonez (2002) maintains the theme of information delivery in presenting ESS as allowing employees access to the right information at the right time to carry out and process transactions, and further, ESS allows the ability to create, view, and maintain data through multiple access technologies. Companies such as Toyota Australia are now extending this functionality beyond the desktop by providing access to electronic HR kiosks in common meeting areas.

ESS: State of Play

The Cedar Group (2002, 2001, 2000, 1999) carries out an annual survey of major global organizations in regard to their B2E intentions. The survey covers many facets of ESS including technology, vendors, drivers, costs, and benefits. The average expenditure in 2001 on an ESS implementation was US$1.505 million. This cost is broken down:

- Software – 22%
- Hardware – 18%

- Internal implementation costs – 18%
- External implementation costs – 17%
- Marketing – 10%
- Application Service Providers – 17%

Looking at this cost from an employee perspective, we see the average cost of an ESS implementation ranging from US$32/employee for a large organization (>60,000 employees) to US$155/employee for a medium-size organization (7,500 employees). The funding for the HR ESS comes from the HR function in North American and Australian organizations, whereas the head office funds the solution in European organizations. The study found that the main drivers for ESS are improved service (98%), better information access (90%), reduced costs (85%), streamlined processes (70%), and strategic HR (80%). Employees can utilize a variety of applications in the ESS, and the main ones identified in the Cedar survey are: employee communications (95%), pension services (72%), training (40%), leave requests (25%), and many others.

Manager Self-Service (MSS) is used differently in the three regions of the survey. North American managers use MSS to process travel and expenses (42%), European managers to process purchase orders (48%), and Australian managers to process leave requests (45%). Employee services can be delivered by a variety of methods, and the Web-based self-service (B2E) is undergoing substantial planned growth from 42% in 2001 to 80% planned in 2004.

The trend is for implementing HRMIS applications from major ERP vendors like SAP or PeopleSoft. ESS implementations show overwhelming success measures, with 53% indicating their implementation was successful and 43% somewhat successful. The value proposition for ESS includes:

- Average cost of transaction (down 60%)
- Inquiries (down 10%)
- Cycle time (reduced 60%)
- Headcount (70% reduction)
- Return on investment (100% in 22 months)
- Employee satisfaction (increased 50%)

The culmination of the Cedar Group reports lists the barriers to benefit attainment and critical success factors in ESS applications. North America and Australian organizations both list cost of ownership/lack of budget as the main barriers, while European organizations perceive lack of privacy and security as the main barriers. Other barriers include lack of technical skills, inability to state business case, low HR priority, and HRMS not in place. As with other complex IT application projects, executive commitment, internal collaboration, and availability of technical skills to implement the application are all considered important success factors.

Web Portals

The term "portal" has been an Internet buzzword that has promised great benefits to organizations. Dias (2001) predicted that the corporate portal would become the most important information delivery project of the next decade. The term portal takes a different meaning depending on the viewpoint of the participant in the portal. To the business user, the portal is all about information access and navigation; to the organization, the portal is all about adding value; to the marketplace, the portal is all about new business models; and to the technologist, a portal is all about integration.

The portal was developed to address problems with the large-scale development of corporate intranets. Corporate intranets promised much but had to address multiple problems in the organization (Collins as reported in Brosche,

Table 1. Portal generations (Eckerson, 1998)

Generation	Descriptor	Features
First	Referential	Generic focus Hierarchical catalog of pages Pull flow Decision support
Second	Personalized	Personalized focus Push and pull flow Customized distribution
Third	Interactive	Application focused Collaborative flow
Fourth	Specialized	Role focused Corporate applications Integrated workflow

2002, p. 14). On the user side, employees must make informed and consistent decisions, and are being implored to access multiple information sources on the Web. On the technology side, intranet sites in organizations have proliferated, resulting in an increase in search complexity for corporate users. Early versions of portals were merely Web pages with extensive document linkages, a gateway to the Web. These early versions have been replaced by several generations of portals.

Eckerson (1998) proposed four generations of portals (Table 1) and that portals can be analyzed by the information content, information flow, and the technology focus that make up the portal. Just as the intranet proliferated within organizations, portals are now starting to multiply. The portal management system or the mega portal is being developed to take control of portal proliferation with the aim to enhance business process convergence and integration. Shilakes and Tylman (1998) coined the term "Enterprise Information Portal" (EIP), and this definition encompassed information access, application nature, and Internet gateway that are apparent in the second and third generations of organizational portals.

One area that is being developed via portal technology is employee relationships. We have already looked at ESS as an example of a B2E system; some additional employee applications are M2E (Manager to Employee), E2E (Employee to Employee) and X2E (eXternal to Employee). Taken together, all these relationships are considered part of the ERM strategy (Doerzaph & Udolph, 2002). An ERM strategy is made up of the following components:

- self-service technology,
- collaboration tools,
- communication tools,
- knowledge management techniques,
- personalization focus, and lastly
- access technology.

The access technology can encompass employee interaction centers like hotlines, Helpdesks or enterprise portals.

General Motors is one of the leading HR portals in the world and they have proposed three generations of HR portal (Dessert & Colby, 2002). The three

Table 2. Generations of HR portals (Dessert & Colby, 2002)

Dimensions	1st Generation	2nd Generation	3rd Generation
User Stickiness	Static Web High Usage Search	Dynamic Personalized Robust Search	Anywhere Access Analytics Dashboard
Communications & Collaboration	News Chat Jobs	Unified Messaging Targeted Push vs. Pull Role Based	E-Learning E-Culture Broadcast Media
Information Access	Online Publications Links Launching Pad	Dynamic Publishing Native Web Apps Content Integration b/w Functions	Online Publishing Int Content
Services	Travel Expenses Payroll E-Procurement	Life/Work Events Communities E-Health	Role Based Online Consulting
Technology	Web/App Servers Unsecured Basic Login	Content Management LDAP Int E-Mail, Chat, IM,	Federated Services Wireless Multi-Media Broadband

phases are presented in Table 2 and are presented in five organizational dimensions.

A conceptual model of portal architecture is proposed by Brosche (2002, p. 19) and depicts a portal having core, key elements and specialization components.

The components proposed by Brosche (2002) can be further categorized as having an information focus, technology focus, or a process focus. We can further combine Eckerson generations with the Brosche portal model and analyze an organization's portal by its information focus, process focus, and technology focus, and categorize it as being first, second, or third generation (Figure 3).

Access rich refers to a portal that is a static information dissemination tool where the information is "pushed" to the user. This could be a portal where minutes, memos, and notices are posted and "pushed" to the user. The content rich portal has information that is posted by users in a two-way flow. In this portal information is "pulled" from the portal by the user and the real issues are all concerned with content management. The application-rich portal elevated the portal to be more than an information tool; it becomes a fundamental process tool where business is conducted. Using this proposed categorization of portals, we will analyze ESS portals of three major Australian organizations

Figure 2. Conceptual model of the corporate portal (Broche, 2002)

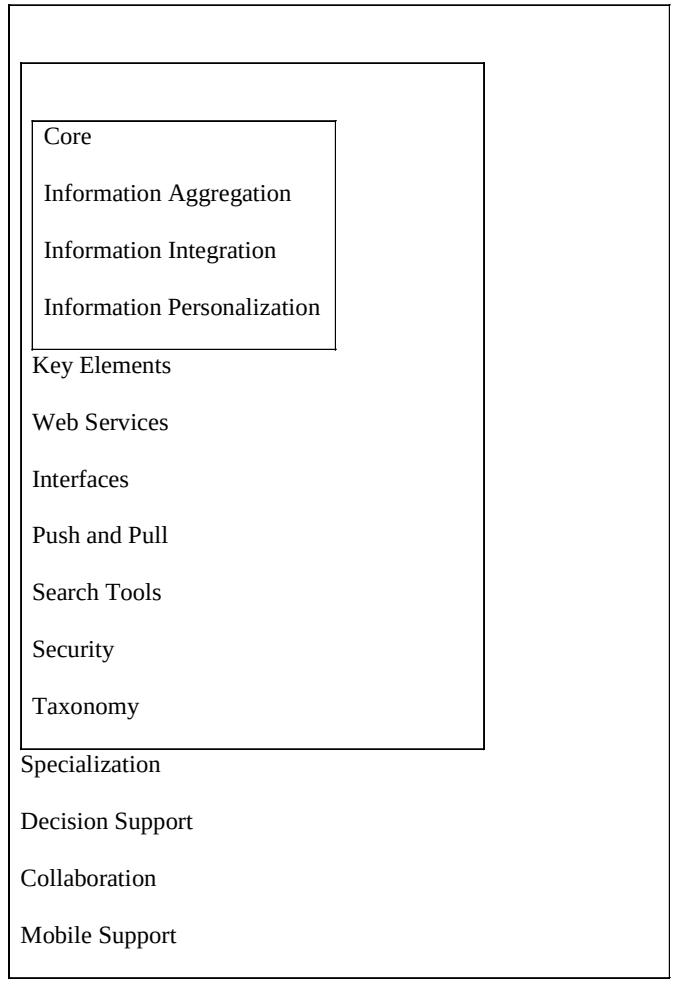


Figure 3. Portal generations by Brosche categories

Portal Generations / **Portal Categories**	**First** **ACCESS RICH**	**Second** **CONTENT RICH**	**Third** **APPLICATION RICH**
Information Focus	Static Aggregated	Dynamic Personalized	Integrated Analytics
Process Focus	Single HR Forms	Multi HR Publication	All HR Application
Technology Focus	Unsecured Web Servers	Content Management	Wireless Broadband

by analyzing their information and process focus of their portal. This analysis will then allow us to substantiate the applicability of Broche's categories of portal development.

Research Methodology

The move to B2E ESS portals is detailed through the use of a case study. Case study research methodology was used, as the chapter presents an exploratory look at implications of ESS implementations. Yin (1994, p. 35) emphasizes the importance of asking "what" when analyzing information systems. Yin goes further and emphasizes the need to study contemporary phenomena within real-life contexts. The ethic or outsider approach was used in this case study. This approach emphasizes an analysis based upon an outsider's categorization of the meanings and reading of the reality inside the firm. The analysis is based upon objective methods such as document analysis, surveys, and interviews. Assumptions that were gleaned in the analysis of maturity of portal development were queried and clarified by interview. Walsham (2000, p. 204) supports case study methodology and sees the need for a move away from traditional information systems research methods such as surveys toward more interpretative case studies, ethnographies, and action research projects. Several works have used case studies (Chan & Roseman, 2001; Lee, 1989) in presenting information systems research. Cavaye (1995) used case study research to analyze inter-organizational systems and the complexity of information systems.

A multiple company case study was chosen in an attempt to identify the impact of an ESS implementation and the associated development across both the private and public sector. The case study companies were chosen because they are leading Australian organizations with a long, mature SAP history and had implemented SAP ESS module. Initially information was collected as a result of the company's presentation at the ESS forum in June 2002. Interviews were conducted firstly by e-mail with managers from the organizations. These predetermined questions were then analyzed and enhanced, and formed the basis of the interviews supported by observations through access to the ESS system. Project documentation and policy documents were also supplied. The name of one of the case study organizations has been withheld due to conditions set in the case study interview. The analysis will look at the information,

process, and technology aspects as derived from the Broche model and will also look at implementation issues in developing the HR ESS portal.

Case Study

Private Sector Organization (Auscom)

Auscom is one of Australia's leading companies. Auscom's vision is to be a world-class, full-service organization by delivering company-wide process improvement, productivity gains, and cost efficiency (AuscomVision, 2002). It was privatized in 1997 and currently has 40,000 full-time employees, 20,000 contractors, 2,000 information systems, and 50,000 desktops (Greenblat, 2002). In the year ending June 2002, it had AUD$20 billion of sales and a profit of AUD$3 billion. The company operations are divided into several business units: retail, wholesale, infrastructure, and corporate center. This last unit is responsible for the HR processes within the company and had full responsibility for the IT strategy underpinning the ESS implementation initiatives, as well as the end-to-end project management of the implementations. One of the areas that Auscom had analyzed and felt was able to better deliver their vision was HR. The existing HR system was cost bloated, process fragmented, and had poor data access. Auscom wanted to explore the strategic aspects of HR, especially the concept of "employer of choice," and instigated "People Online" in May 2001. Initially the project was to be developed in three phases:

- Phase 1 introduced ESS to provide simple HR employee-based transactions and information search facilities. Phase 1 had two components, MyDetails, the simple employee HR ESS, and PeopleSearch, the information search component.
- Phase 2 would introduce workflow for both HR and non-HR processes.
- Phase 3 would provide access to corporate-wide applications.

Phase 1 was rolled out in May 2002 and Phase 2 was scheduled to be rolled out in November 2002 with Deloitte Consulting the implementation partner.

Details of the benefit metrics were not available due to commercial in confidence. The business case for Phase 1 identified four groups of benefits:

- quantifiable cost savings,
- increased data integrity,
- enabling process re-engineering, and
- e-enabling the workforce.

Four months after the implementation, an external organization carried out a review and analyzed the business requirements, performance, implementation, and project management of PeopleOnline. An analysis of the review is presented with reference to the portal generations in Figure 2.

Government Organization 1

Victorian Department of National Resources & Environment (NRE)

The NRE was formed from six state government organizations and employs approximately 5,000 staff at more than 200 diverse locations across Victoria. The NRE is responsible for preserving and managing Victoria's vast wealth of natural resources, including major oil and natural gas fields, substantial mining and agricultural resources, as well as one of the world's (On Sun, 2000) largest deposits of brown coal. The NRE must balance the need for development and wealth generation with the obligation to protect the land and its resources for sustainability and long-term benefits. On discussing the importance of IT in the strategic plan, Secretary Michael J. Taylor of the department commented:

"The information revolution is inescapable. Managing IT strategically in NRE is the department's response to that revolution." (NRE, 2003)

NRE first implemented SAP R/3 in 1999 to support its HR function (Shone, 2002). Prior to this, NRE was using another HR system with a customized ESS. One of the major benefits the department noticed with the implementation of SAP's ESS was the reduction in payroll processing, which was partly achieved through the introduction of online payslips. There was improved data integrity, not just with the use of ESS but due also to the integrative nature of the ERP

system. Data only needed to be entered once and employees could then ensure the accuracy of their own data. Staff were also able to apply for leave and overtime electronically, and apply and receive approval for training courses.

Government Organization 2

NSW Department of Housing (DoH)

The Department of Housing in New South Wales aims to assist people into lower cost housing when their needs cannot be met by private sector housing. The mission statement of the department reflects this focus:

"The purpose of the New South Wales Department of Housing is to work in partnership with the community to supply and sustain safe, decent, and affordable housing for people on low incomes, and to enable people in need to create environments where they live with dignity, find support, and make sustainable futures". (DoH, 2002/2003)

It has approximately 130,000 properties across NSW and employs about 2,300 people. The information technology drivers for the DoH ESS portal include (King, 2003):

- replace technology of unsupported legacy systems;
- enable best-practice HR processes;
- deliver information to support modern people management; and
- empower employees through the provision of ESS, MSS, and workflow process systems.

It is important to consider that the terms *information*, *processes,* and *technology* are paramount in the statement of DoH's main technology drivers. The ESS project was developed in two phases, with the first phase being rolled out in April 2003 after a project length of 11 months.

Discussion

Information Focus

Information focus or stickiness refers to the ability of the ESS portal to draw and retain the user. In Auscom the Mydetails application did provide enhanced stickiness, but PeopleSearch did not. The review team found that the needs of super/power users in switchboard/reception who use PeopleSearch extensively had not been analyzed enough in the initial business requirements analysis. There was also a problem when cost considerations created a scope and software change, and project requirements of the special power users were not re-visited after this change. There was also an operational problem where service level agreements did not have adequate time/penalty clauses and/or metrics built in, thereby causing performance problems to be neglected. The implementation of the Phase 2 ESS portal led to the reduction from 40 to 16 HR systems and the savings of AUD$5 million per year (Fleming, 2003).

In NRE the ESS portal has six employee information categories: employee details, leave information, payroll, training, recruitment, and résumé information (Shone, 2002). Earlier versions of the software were primarily information browsing applications, whereas this version allows employees to read and amend a multitude of information. Overtime hours, bank details, taxation details, and leave details are all live. One of the major benefits they noticed with the implementation of SAP's ESS was the reduction in payroll processing which was partly achieved through the introduction of online payslips. There was improved data integrity, not just with the use of ESS, but also the integrative nature of the ERP system. Data only needed to be entered once, and employees could then ensure the accuracy of their own data. The leave details instigate a workflow request that is transported via e-mail to supervisors.

In DoH, Phase 1 looked to extend information access and dissemination across the enterprise to allow employees to process payroll information, personnel details, and financial posting and reporting (King, 2003). Both employees and managers were able to access information from the portal, but the information flow was mainly directed to the employee.

Process Focus

This dimension looks at the extent that the portal reaches out to other areas of the organization, and the extent that the portal enables collaboration and cross-integration business process operations, like e-procurement, travel expenses authorization, payroll, time, and HR data management. In Auscom the services provided by the Phase 1 project were limited to HR type data including payroll. The extension into other areas of the organization and across business units was achieved in Phase 2. The Peopleseach component enhanced communications by providing a one-stop search facility in the whole organization. It was important that this communication tool should have been aligned to the corporate intranet look and feel. The process focus of the NRE portal emphasized traditional HR business processes and activities (Shone, 2002). The more strategic HR processes of recruitment and training were present, but there was no employee scheduling. Cross-functional processes were not accommodated greatly except for the ability to enter the SAP R/3 system to do maintenance tasks. Staff were also able to apply for leave and overtime electronically, and apply and receive approval for training courses. The DoH was again focused on the traditional HR processes, with the only cross-functional process being financial posting and reporting (King, 2003). This entailed some degree of collaboration into other functional areas of the organization with resultant problems of lack of integrative business processes.

In analyzing the portals for their information content, all three ESS portals did enhance information stickiness as they provided the full range of typical "pull" ESS features: personal details, pay, leave, bank, and benefit packages. They also provided a range of personalized "push" features. This type of ESS site is somewhere between a first-generation "*access-rich*" site with predominately "pull" features (static Web, high usage) and a second-generation "*content-rich*" site.

In analyzing the portals for their process focus, the information provided to the user was limited to HR- or employee-based information. There was no across-function process information, business transaction information, or product information provided. The process focus of the portal would indicate that the portal was immature and still first generation. All portals demonstrated moderate communications but limited collaboration features, again an example of a first-generation "*access-rich*" HR portal. The DoH portal was somewhat more advanced with the ability to access financial reports, demonstrating cross-process collaboration. As organizations move to more advanced portals like

Auscom Phase 3 and DoH Phase 2, it is expected that more collaboration will be used. The Auscom representative touched upon this collaboration focus when he commented on the difficulty of developing the interface between the corporate and the HR portal. It is almost a necessity to have a line of delineation between the functional areas.

Conclusions

Compared to other e-business solutions, B2E portals have a relatively low impact on the organization, employees, and processes. The risks of a B2E portal are minimal, as it provides a Web interface to an existing system and improves data integrity, as employees are responsible for much of their own data. ESS portals do promise to provide extended functionality into and across the organization. We can analyze the relative positions of Auscom, NRE, and DoH portal maturity by referring to Table 3.

Auscom developed its first-generation portal to be primarily an information pull application, with the main focus on traditional HR forms. Little collaboration or communication applications were developed in the first release. The next version of the portal looked at the online routing of standard HR transactions, online recruitment, talent management, and an enhanced emphasis on training. This development would move the Auscom portal into the "*content-rich*" and partially into the "*application-rich*" phases. Auscom seems to be moving in the right direction. There seems no doubt that the technology exists to move an organization like Auscom from first-generation "*access-rich*" to second-

Table 3. Portal generations by Brosche categories

Portal Generations **Portal Categories**	***First*** ***Access Rich***	***Second*** ***Content Rich***	***Third*** ***Application Rich***
Information Focus	Static Aggregated	Dynamic Personalized ***Auscom*** ***NRE*** ***DoH***	Integrated Analytics
Process Focus	Single HR Forms ***Auscom*** ***NRE***	Multi HR Publication ***DoH***	All HR Application

generation "*content-rich*" and onto third-generation "*application-rich*" portals. The DoH portal seems to be located in Broche's "*content-rich*" phase, ready for the implementation of additional applications. The NRE portal still is placed in the "*access-rich*" phase, but is developing the collaboration focus of a Phase 2 portal.

While the technology exists, organizations seem to be slow in moving to the more developed cross-process, integrated functional portal. It is possible that the business processes that would be utilized in an "application-rich" portal do not exist in the organizations. Portal development must follow the business, not lead the business. What is not vague is the understanding that ESS portals are information delivery platforms that have much potential to deliver not only cost-focused savings, but the more important strategic HR benefits being sought by modern organizations. The recent Cedar Report (2002, p. 1) commented on the importance of high performance workforces and the need for enterprise-to-employee solutions.

Major Australian organizations are exploring the use of ESS portals, and these modern e-enabled applications set the stage for other Australian organizations to be aggressive followers. We will watch with great interest the march to ESS and then the advancement to HR/corporate/enterprise portals.

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