

SharePoint Portal as a Strategic Management and Planning Tool: University of Southern Queensland (USQ) as a case study

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Abstract

SharePoint Portal Server is a Microsoft portal product that enables a customised corporate intranet to be created that has a high level of functionality with applications in knowledge management and collaboration. The University of Southern Queensland has identified SharePoint Portal technology as a powerful tool for a range of applications, including in strategic management and planning. This paper will describe the basic features and applications of SharePoint Portal, the deployment of the portal in both faculty and corporate contexts, and provide a case study of how this product has been utilised as a central element of the roll-out of a new Planning, Quality & Review Framework for the University. In particular, the use of the portal to integrate strategic planning, institutional research and financial management and planning - as a vehicle for the roll-out of the corporate Strategic Management Information System, as a customised document repository and in the facilitation of collaborative document development - will be explored.

1. Introduction

1.1 SharePoint Portal Technologies

SharePoint Portal Server is a Microsoft portal product that enables a customised corporate intranet to be created that allows for multiple levels of secure access and a high level of functionality across a range of applications in knowledge management and collaboration (Schaefflein 2005). It was selected as an appropriate tool to support the development of a knowledge management system at USQ. Microsoft describe it as a system that enables organisations to develop an intelligent portal that seamlessly connects users, teams, and knowledge so that people can utilise relevant information and knowledge concerning their work. SharePoint Portal provides a business solution for an organisation that integrates information from other systems through a single sign-on point and provides application and integration tools to the organisation for developing a powerful knowledge management capability.

A critical feature of SharePoint Portal is that it is a groupware platform that uses a web-based central repository for all work-based information, including documents, announcements, calendars, contacts, tasks, and discussions. Groupware is software that promotes a more effective team-based and virtual working environment covering a wide range of relevant business processes and operations (Chaffey 1998). It is intended for large workgroups seeking to manage their information. As a customisable corporate web portal it provides a powerful level of flexibility enabling workgroups to develop appropriate local solutions in terms of their knowledge management requirements.

In technical terms, Microsoft maintains that this package facilitates end-to-end collaboration by enabling aggregation, organisation, and search capabilities for people, teams, and information. All users of an organisational system can locate relevant information quickly through customisation and personalisation of portal content and layout, as well as by audience targeting (Microsoft 2005). This allows the effective development and maintenance of some of an organisation's critical knowledge assets. Users can target information, programs, and updates to audiences based on their organisational role, team membership, interest, security group, or any other membership criteria that can be defined. It allows for geographically remote access which is important for universities that are multi-campus and/or involved in distance and online teaching.

The choice of SharePoint Portal has the advantage over other knowledge management systems in the USQ environment in that it is fully integrated with the most widely used desktop productivity tool of USQ employees: Microsoft Office. While the various information and knowledge management systems today provide similar capabilities and functionalities, this system offers these functionalities with a relative user friendly interface and at little extra software cost.

As the basis for an effective USQ intranet, SharePoint Portal was seen to be efficient in locating and accessing documents regardless of where the documents are sited, in collaborating and communicating with colleagues, peers and experts in specific areas of activity, and in accessing useful tools such as common workspaces with version control of documents, discussion lists, and surveys. SharePoint Portal also offers a high level of security for sensitive information.

1.2 Scope of This Paper

This paper will describe the ways that SharePoint Portal has been deployed within the Faculty of Business at the University of Southern Queensland (USQ) and at the institutional level; and how this technology has contributed to the implementation of a new Planning, Quality and review framework at USQ.

2. The Deployment of SharePoint Portal in the USQ Faculty of Business

There is an increasing trend for intranets to be deployed as powerful knowledge management systems. However, in the early phases of adoption of any new approach, while there may generally be an intuitive acceptance of such a system this is often accompanied by some confusion around what is involved. As the saying goes, the devil is in the detail.

2.1 Previous Experience with a Faculty Intranet

The USQ Faculty of Business has had an intranet for many years but as the usage increased, it became apparent that various problems had emerged in the areas of accessibility, usability and data redundancy. Different types of documents were organised using folders under Windows Explorer. The folders became the main menu for categorising, organising and retrieving documents. Permissions to access particular folders tended to be given in an *ad hoc* manner. Any staff member could create folders within their intranet space, again on an *ad hoc* basis, and store, by creation or copying, whatever files they wished and then give permission to other staff to use as required. Over a number of years, these work practices resulted in a complex maze of folders and categories, many of which were duplicated in a number of areas with considerable redundancy developing in the system. While this method proved to be effective for staff who used particular data sets on a regular basis, occasional users and new staff found the system exceedingly difficult to use. Clearly a more efficient system was needed in the Faculty.

2.2 The FOB-KN Intranet

A new system was designed as an intranet and knowledge management system to enhance the strategic capability of the Faculty. This new development was known as FOB-KN and its implementation included taking full advantage of the SharePoint Portal technologies. There were four particular goals that were critical to the design. They were

1. the creation of a communications space for staff in the faculty,
2. the enhancement of the knowledge management capability of the faculty,
3. the enhancement of the decision-making capability of senior administrators in the faculty, and
4. to improve the learning capacity of staff members.

From its inception the FOB-KN was designed to be a communication space where staff members could be adequately supported in their decision making. While recognising that the intranet would be a vital element

in that communication space it was acknowledged that a wider range of tools were needed to create a user friendly space that would support Faculty collaboration as an integrated part of their daily work activities. Collaborative environments allow two or more participants to communicate, coordinate and collaborate to accomplish a shared objective (Fontaine, Parise & Miller 2004). The collaboration involved both face-to-face and electronic dialogue. Collaborative technologies such as email, discussion lists, the intranet (Johnson, 1991) are a critical part of such a communication space where information is accessed synchronously or asynchronously during dialogue and transaction exchanges.

One important aspect of developing the FOB-KN was to focus attention on the knowledge management requirements within the Faculty. The Faculty is involved with a complex web of arrangements with international and domestic partners. As well, the Faculty has been enhancing its distance education programs through the introduction of information and communication technologies (ICTs) to support the print-based study packages. These and other factors have increased the complexity and diversity of issues that all staff in the Faculty now confront. Senior administrators now recognise the importance of organisational learning in dealing with such issues at the strategic and operational levels of activity. Knowledge management is central to the learning organisation concept where an organisation is "...skilled at creating, acquiring, interpreting, transferring and retaining knowledge, and at purposefully modifying its behaviour to reflect new knowledge and insights" (Garvin 2000 p. 11). The FOB-KN provides the framework and tools for developing and maintaining critical knowledge assets in the faculty.

Decision-making in the Faculty has been somewhat less than optimal in many cases because of the difficulty in accessing critical information when required. In relation to the third goal, the FOB-KN has focused on overcoming this difficulty. The main menu developed for navigating this intranet is based on the critical decision points relevant to the faculty's operations. By relating the navigation to these critical decision points, the FOB-KN associates critical decisions with critical documents that support decision-making in various areas. These critical decisions were used to identify a common and 'intuitive' index for each decision point and to involve user groups in the system's design (Preece, 1994).

The critical decisions guiding the intranet's navigation menu are illustrated in Attachment 1. Attachment 1 has two main features. First, it illustrates the four layers or spheres of influence that the Faculty is continuously attempting to synthesise with the institutional mission, value and goal statements. At the core, students, potential students and alumni are seen as the key group of stakeholders towards which the Faculty's priorities and activities are directed. The second layer surrounding the core is the Faculty's portfolio of programs and courses that provide the connectivity with the core and positions the Faculty in the transnational business education marketplace. The third layer represents the strategic capability of the Faculty to develop and deliver a relevant and effective portfolio of program and course offerings. Finally, the operating environment provides the context in which Faculty decision making takes place.

The second feature of Attachment 1 is the identification of eight critical decision-making areas in the Faculty. They represent the functional and intuitive areas of activity that leverage concerted action towards high-performance outcomes. The eight areas are concerned with governance mechanisms, resource management, staffing, administration, marketing and business development, research, learning and teaching, and the accreditation and reaccreditation of programs of study. These areas were the starting point in the design, development and implementation of the FOB-KN.

The final goal of improving the learning capacity of staff members is related to the training and development requirements of staff as they engage with new technologies, new software and the changing requirements of teaching at a distance. There is a lack of resources to support staff (particularly new staff) as they continuously learn to engage with changes in their work environments. There have been many instances of 'reinventing the wheel'. The FOB-FN is designed to provide information, helpful hints, exemplars, frameworks and learning packages to support staff in the first instance. It is designed to be an intuitive source for help to reduce the amount of time that staff spend looking for someone in the University to solve the problem.

3. Institutional Deployment of SharePoint Portal

3.1 Background

The need for a robust knowledge management framework as a platform to facilitate information delivery, management, collaborations and communications has come from various areas of USQ. However, the primary focus for the institution-wide roll-out of the SharePoint Portal has been initially on the need to deliver the Strategic Management Information System (SMIS) to inform decision makers across the University. (SMIS is an ICT application developed in-house that integrates Australian population, student, staff and financial data from the Australian Bureau of Statistics, USQ and all Australian universities at levels of granularity and forms of analysis which supports strategic planning and review throughout USQ.) This has involved the deployment of the “*USQIndex – The Knowledge Network*” platform to USQ.

The following sections describe the current information situation in the context of capacities in which USQ employees are able to discover, share, collaborate and communicate information within and across organisational sections. It then discusses sets of products and technologies that enable the *USQIndex* platform to offer tangible improvements and benefits.

3.2 Existing Flaws in Information Management at USQ

USQ has tended to suffer from a problem that is common among Australian universities by way of the existence of information silos (products of yesteryear technologies and limited institute-wide information asset management) greatly impeding information sharing. Information and knowledge has tended to exist in isolated data islands within USQ’s network perimeter in the forms of network shares, local hard drives, directory services and exchange public folders where access is limited and there is no means for easy information discovery. In addition, there has been no over-arching management of USQ information assets on the corporate level as a whole – although there has been a minimum management of information at the division level. As a result, USQ staff have found it difficult to find the right amount of relevant and authoritative information in the computing infrastructure of USQ. The range of problems that have tended to be associated with this are as follows:

- It has been time consuming for staff to discover ‘required’ information. The cause of this wasted time was described in terms of taking too many mouse clicks to get to the useful information or not being able to discover the right information after spending considerable effort searching and navigating USQ networks.
- Search methods frequently generated large search results, much of which were contextually unrelated to the information a staff member really needed. This led to frustration and erosion of user confidence in the search methods.
- Staff-members often lacked confidence in the information they found on the USQ networks as it was difficult for them to ascertain whether that information was timely, accurate and complete.
- Staff members often found it difficult to know the best keyword choices to use in Boolean searches because of the large number of acronyms, technical terms and project names in regular use at the University.
- Staff had found it difficult finding the right people with knowledge and expertise on a subject.
- Staff had found it difficult to access information that existed in other sections of the University because of isolated data islands and restrictive network accessibility issues.
- Information that needed to be delivered to decision makers to aid decision-making processes was often untimely, resource intensive and cost-ineffective.
- Temporarily controlled accesses for regulatory authorities, business partners and other external entities required unnecessary resources to gather and rework required information for presentations.

- It was not easy to share personal work with the University communities. For example, an individual's work was mainly stored on the hard drive of the individual's machine and he or she had no quick and easy way of making this information available to the University community.

3.3 The Solution

USQIndex – The Knowledge Network platform represents a radically new way of managing and sharing USQ's knowledge and information assets from what had existed previously. It provides a corporate-wide, logically central knowledge management platform facilitating information sharing and team collaborations among all organisational sections of the University.

The platform is being implemented using Microsoft SharePoint products and technologies, Microsoft Internet Information Services (IIS), Microsoft SQL Server and Microsoft Office Systems. The choice of SharePoint Portal over other knowledge management systems is primarily based on the fact that SharePoint Portal is the only product that is fully integrated with the most widely used desktop productivity tool by the majority of USQ employees – Microsoft Office.

The implementation of the USQindex platform delivers the following minimum functionalities:

- Efficient ways of discovering and accessing documents required by staff for their tasks, wherever those documents may be physically located. For example, a quality officer in one faculty is able to access the quality documents from a second faculty if appropriate access rights are granted.
- Efficient ways of discovering and communicating with the people 'in the know' on various expert topics. For example, when searching for the term 'physics' not only will the search return documents relating to the subject, it will also return the details of experts in the field.
- Efficient ways to establish and maintain workspaces for projects so team members can carry out their work and be able to collaborate and communicate with each other. All necessary tools (e.g. discussion boards, forums, surveys, workspaces, version controls, etc.) will be readily available when required.
- A logically central but physically distributed information repository for the institution allowing efficient information discovery and security.
- Organising the intranet to have a sense of place implemented with common quality-bound industry standards.
- Central location for accessing all applications available from a range of sources; such as InfoHRM Human Resources database, Course Evaluation Questionnaire (CEQ), Student Evaluation of Teaching (SET).
- Strategic Management Information System (SMIS) can be accessed, limiting the need for the creation of multiple logins.
- Effective mechanisms where the right contents can be targeted to the right people.
- Easy creation of facilities (portals or sites) that will allow external entities (such business partners, government agencies, etc) to look at University information without the need to recreate or rework existing work.
- Alerting users when information of interest changes through a subscription based service.
- Manipulating the documents not only through browsers, but with office products with which the majority of USQ employees have high levels of familiarity.
- Better ways to manage Information and Communication Technology (ICT) resources.

These functionalities are possible under SharePoint Portal.

3.4 USQIndex Platform Architecture

The *USQIndex* environment has needed to be built as a multi-portal platform in a hierarchical structure (i.e. parent-child relationship). At the top of the hierarchy is the corporate (parent) portal for corporate-wide information. Underneath the corporate portal is a host of organisation section portals (children) facilitating division-specific information as well as team collaboration sites. The corporate and sectional portal structure need to follow the organisational structure of the University. (Refer to Attachment 2.) This is for two main reasons:

- easy management of the platform; and
- information structuring for a sense of ownership.

The desire for this design is to realise the many benefits that it is capable of providing. These benefits include, but are not limited to, the following:

- centralised administration of the environment;
- decentralised but co-ordinated management of information architecture;
- centralised management of personal sites;
- easy customisation according to each division's needs; and
- easy implementation of web-parts specific to each division.

Within each portal, there will be SharePoint Services sites to facilitate workspaces and team collaborations.

3.5 Corporate Portal

The corporate portal is the entry point from which all staff can access the latest corporate-wide information. It also provides shared services to the sectional portals. Shared services include:

- searches;
- user profiles;
- alerts;
- audiences; and
- single sign-on.

The corporate portal also hosts the personal sites created by each staff member. These sites must be quota-based and determined by the amount of resources afforded.

3.6 Sectional Portals

Sectional portals focus on information at the level of the organisational section. If information created at sections are for corporate-wide use, it needs to push up to the corporate portal. Information in a section is meant only for those staff members in that specific organisational section.

3.7 Information Standards

Information Standards are being established for the efficient structuring of information to facilitate better management and fast information discovery. Establishment of a common language of terms and metadata will enable staff to speak the same language. Information standards will complement the technologies that will be used for the implementation of *USQIndex* because the technologies such as SharePoint Portal are most often generalised for all situations.

4. The Use of SharePoint Portal in the USQ Planning Process

4.1 The Emerging USQ Planning, Quality & Review Framework

USQ has in place a Planning, Quality & Review Framework based around a standard quality cycle (Attachment 3). Within this Framework, USQ has adopted a relatively straightforward institutional planning and budgeting process that consists of the following elements:

- The conduct of a number of senior management planning retreats informed by topical discussion papers that analyse the operating environment, discuss institutional performance and explore potential future directions.
- Inclusive processes for the setting of institutional goals, objectives and targets¹ that involve drafts developed at the senior management retreats being circulated widely for broad discussion and input. (Institutional goals are developed within a framework (Attachment 4) based on program management principles but referred to in-house as the 'USQ Activity Structure' because of the risk of confusion of the term 'program' in a university setting.)
- The use of the resulting agreed institutional goals, objectives and targets as the basis for the development of the institutional strategic plan covering a five year timeframe.
- The development of campus plans and specialist institutional plans (Learning & Teaching Plan, Research & Research Training Plan, Equity Plan, Marketing Plan, etc) as three-to-five-year tactical plans that elaborate on the themes identified in the institutional strategic plan.
- The development of faculty and organisational section strategic plans that are built up from the question of how faculties and organisational sections can support and contribute to the achievement of the agreed list of institutional goals, objectives and targets. (The timetable for the development of different types of plans are staggered across the year, in part to ensure that 'an iterative dialogue' develops between the different planning processes. For example, the institutional strategic planning process guides the faculty and organisational section process occurring later in the year, which, in turn, will inform the institutional strategic planning process undertaken in the following year.)
- Basing the budget process, workforce planning, and the development of operational and resource management plans and academic program development plans on the faculty and organisational section strategic plans – the latter two processes being documented as attachments to the respective faculty and organisational section strategic plans.
- A budget framework that:
 - ◆ is integrally linked to the University's planning processes;
 - ◆ is transparent and simple, involving clearly articulated principles;
 - ◆ recognises and rewards performance;
 - ◆ encourages efficiency in resource allocation; and
 - ◆ encourages new initiatives that are aligned with institutional strategic directions through the allocation of discretionary and incentives funds on a competitive basis.From 2006, USQ will move to rolling three-year budgets with actual budgets for the first year as developed in the operational and research management plan and indicative budgets for the two out-years.
- Quality management and organisational review that will increasingly occur at a number of levels – ranging from the continual availability of performance data through the Strategic Management Information System (SMIS), regular monitoring and annual review of performance against agreed targets that precedes the faculty and organisational section planning process, annual academic program reporting based on a standard reporting template and informed by Activity-Based Costing (ABC),

¹ Using the definitions of Warren Piper (1993), "Goals are descriptions of what it is planned to achieve and are useful if they also identify the main functions of an organization"; "Objectives are operational statements and are written in terms which make it evident when they have been achieved. They are descriptions of position rather than action of a future desirable state." and targets are "Best regarded as a sub-set of objectives and expressed in quantitative terms. They set a measure of what is intended to be achieved by specific dates. They may also set standards."

organisational reviews based on a five-year rolling timetable and sectional contributions to the periodic AUQA reviews.

4.2 The Role of SharePoint Portal Technologies in the Roll-Out of the USQ Planning, Quality & Review Framework

The degree of integration and inclusiveness of the various elements of the Planning, Quality & Review framework demand a high level of communication and collaboration across all USQ organisational sections, and is heavily dependent on sophisticated knowledge management strategies. SharePoint Portal technologies have provided the basis for the required level of sophistication in these processes to be achieved. At its most basic, SharePoint Portal provides a high capacity and high functionality information repository that provides ready access by stakeholders at defined levels of security to the full range of data, document templates and supporting documentation that are required for each stage of the planning process. This information repository includes validated material from both central administration and peripheral operational areas, enabling the sharing of an integrated suite of management information within a single quality assured, standardised and secure operating environment. Importantly, the ability to provide ready access to a wide range of highly refined relevant and customised management information has been critical to change from a planning process that tended to be reactive, inflexible and poorly utilised to a proactive planning process that is forward looking, adaptive and central to operations at all levels of the University. The high level of functionality of SharePoint Portal also facilitates the re-use of information for a variety of purposes – hence facilitating processes such as external reporting, grants and submission writing, project management, committee work, public relations exercises, etc. which can now more readily piggy-back off the information repositories set-up primarily to support the Planning, Quality & Review Framework, through information that is readily customised and nested to suit the specific needs of individual organisational sections or particular processes.

SharePoint Portal's inclusion of technologies to facilitate collaborative document development has also been critical to the implementation of Planning, Quality & Review Framework. For example, each strategic plan has its own secure intranet workspace with a nominated list of authors, who can check out and amend documents, and reviewers who have reading access only; a planning template with embedded links to the specific data elements in the Strategic Management Information System; and other validated supporting documentation. SharePoint Portal also automatically provides a 'paper trail' record of the development of the planning process that can be invaluable in subsequent review and reporting.

The dynamic created by SharePoint Portal fertilises cross-organisational collaboration through an active and ongoing dialogue that promotes negotiated, informed and open outcomes and decision making; which ultimately impacts on the institutional culture. Siloing; ad hoc or closed decision-making; a paucity of scrutiny and review; and a whole host of other features that were once common in university management are made difficult under the dynamic that SharePoint Portal creates.

The ability for SharePoint Portal technologies to be used as a basis for improved committee management is also developing as an important aspect of SharePoint Portal's benefits. The use of SharePoint Portal for the storage and retrieval of committee documentation, the collaborative development of committee agendas and support materials, the potential for 'paperless meetings' based around projected or otherwise shared SharePoint Portal images, automatic notification by e-mail of updates to workspaces, and the facilitation of the monitoring and reviewing action items all represent important innovations to committee management; including the management of those committees, workshops and forums that have a direct bearing on the planning process and other aspects of the implementation of the Planning, Quality & Review framework.

5. Conclusion

From the point of view of the user, SharePoint Portal provides an easy-to-use, 'smart' and secure workspace; ready access to a single source of approved, reliable data and information – overcoming the formerly common problem for staff of 'information overload'; a well-defined structure for efficient involvement and effective seamless collaboration in the planning process; effortless record-keeping; and, ultimately, a far more effective but less stressful process. The outcome is a planning process and resulting planning

documentation that enjoys both authority and mass ownership, which can be fully utilised, and which forms a solid basis for effective review. However, perhaps an even more profound and important outcome of being able to reap the benefits that employing SharePoint Portal technologies has brought to the USQ Planning, Quality & Review Framework is the changing way in which individual stakeholders are approaching the tasks of planning, quality and review and the associated change in the way that they perceive the outcomes of these processes. Drucker (1994) described the then emerging knowledge society as being associated with an age of social transformation that is characterised by discontinuous change. As such, the postmodern era places new demands on organisations which require to be dealt with in particular ways. As noted by Sterling (2004, p. 68):

In the current postmodern conditions of complexity, instability and unsustainability, the response of policy makers is too often to 'order the mess' by increasing central control and regulation, a first order response that is likely to stifle rather than release the creativity and innovation that these conditions require. In short, the ethos of HE needs to move from 'systematic control to systemic inquiry'. Universities need to 'become knowledge generating, rigorous and transformative in ways and on terms that we can still barely envisage from our current positions. ... Otherwise, ... they are in danger of becoming both valueless and visionless and complicit in the market-driven vision of the role of higher education.

This insight supports the views of Limerick *et al* (1998, p. 135) who stated that: “Discontinuous change can be an alienating experience for the good corporate citizen, for it takes away the predictable structures and processes that have become part and parcel of their self-definition.” Limerick *et al* call for the need for organisations to foster the ‘collaborative individual’ who can successfully and continually contribute to redefining organisation-environment boundaries, processes and relationships, and be proactively innovative. Many of the strategies identified by Limerick *et al.* to develop collaborative individualism are facilitated by the use of SharePoint Portal - including the development of contracts with employees through objectives negotiation, the opening up of information systems, and management by empowerment. Hence, by playing a major role in allowing USQ to introduce an institutional planning process that can be open, collaborative, customised, iterative, negotiated and empowering of the individual within a coordinated, integrated and authoritative framework, SharePoint Portal technology has supported the University to better position itself to be sustainable in to the future. This position, and the cultural change that underlies it, have been pivotal to USQ pursuing its transnational vision within a global marketplace (USQ 2005).

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