ABSTRACT

The University of Melbourne is midway through its implementation of an ERP system, having implemented Financials (2003) and HR (2005) systems, currently implementing Research (2004 - ) and awaiting the purchase of a student system.

The success to date of the ERP system implementation at The University of Melbourne has been due to known critical success factors (Parr and Shanks, 2003) - management support, best people full time, empowered decision makers, deliverable dates, use of champions, vanilla ERP, smaller scope, definition of scope and goals, balanced team and commitment to change.

Other factors, unique to the Melbourne implementation have been identified, including attention to organizational culture and readiness, business owner change and pre- and post-implementation support. The authors contend that it is this combination of known and Melbourne specific factors, as well as the role of a “business integration” team to help embed the new system in the day to day end life of end users that has resulted in the successful training to date of 1200 Oracle Financials and 16,500 Human Resources/Payroll users at the University.

1 INTRODUCTION

The University of Melbourne, established in 1853, is Australia’s second oldest University and second largest research organisation. In 2003, its research expenditure was $363 million and its operating revenues exceeded $AUD 1 billion. The University comprises 11 Faculties and the School of Graduate Studies, some 120 academic departments, and 40 administrative departments. The main campus is at Parkville in Melbourne, but the University has over 30 individual locations, including teaching hospitals and seven other campuses located throughout rural Victoria. The University employs nearly 3000 academic staff, 3300 administrative staff, nearly 8000 casuals per annum and over 4700 honorary staff. Individual student enrolments in 2003 were nearly 40,000.

Following a review of the University’s core administrative IT systems in 1999-2000, Melbourne established the University Systems Project (USP) in 2001 to achieve a major program of change and reform to the University's core business systems and related business processes.

The Project’s priority is to deliver an integrated ERP system with finance, human resources, student and research modules. Locally, the (Oracle eBusiness suite) system has been named Themis – The Melbourne Integrated System, also named after Themis, the Titan of justice and right order in Greek mythology.

Progress to date has been steady. In 2003, the University successfully implemented Oracle Financials for 1200 users, while in January 2005 the University will fully implement Oracle HR/Payroll, having partially released HR Self Service functionality in July 2004 to all staff.

The development of the Research modules is well underway with progressive release from 2005 – 2007 of specific modules for Agreements, Publications, Ethics, Intellectual Property and Funding Applications. The decision to proceed on the purchase and implementation of a vendor student
system has yet to be made, pending the availability of a product that satisfies both Australian tertiary education administration and University business requirements.

The University, as a highly devolved organisation, with a significant degree of autonomy at the Department, much less the Faculty level, has provided a challenging organisational environment for the implementation of an ERP system. This paper identifies the factors that have contributed to the successful implementation of an ERP system at Melbourne, examines the unique role of the Business Integration Team in the implementation and the impact these have had on its successful training programs for Financials and HR/payroll.

2 DISCUSSION

2.1 CRITICAL SUCCESS FACTORS - THE MELBOURNE EXPERIENCE

Parr and Shanks (2003) identify management support, best people full time, empowered decision makers, deliverable dates, use of champions, vanilla ERP and smaller scope as critical success factors for ERP implementations in general. Other authors have identified similar factors in Higher Education implementations including Schlenker (1999).

At Melbourne, the University rated highly on all of the above critical success factors (CSFs), being in the fortunate position of enjoying the hindsight from variously successful ERP implementations at other Australian, USA and UK universities. In addition, some uniquely Melbourne CSFs, detailed in Table 1 below, have contributed to the Project Team’s successes to date. These CSFs extend beyond the implementation phase, to the operational system, when business modules are transitioned from the Project to the business owner, post go-live.

We contend that it is this combination of established success factors together with the uniquely Melbourne factors, that have delivered the successes to date.

<table>
<thead>
<tr>
<th>Cultural sensitivity</th>
<th>A hypersensitivity to University culture, especially to the highly devolved nature of the University, the requirement to work collaboratively with users and to influence rather than direct them.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment to integration</td>
<td>A strong commitment to the vision and benefits of an integrated enterprise system from the Project Team, the business owners and the Steering Committee, and the slow but steady resolution of integration issues through a Business Integration Team.</td>
</tr>
<tr>
<td>Due Diligence</td>
<td>External due diligence reviews of the Project at critical points to mark executive agreement to the go-live of each module.</td>
</tr>
<tr>
<td>Continuity and retention of staff</td>
<td>A focus on continuity and retention of staff, consultants and Steering Committee members throughout the Project, the post-go live operational stage (including the continued engagement of Project staff in new roles and business areas), and a very high rate of return of Project staff to business operations in the roles of “module experts”.</td>
</tr>
<tr>
<td>High regard for organisational readiness</td>
<td>Organisational readiness as a significant determinant of the rate of change and reform, and the degree of acceptable risk.</td>
</tr>
<tr>
<td>Partnership</td>
<td>Partnership between the Business Owner and Project Team to deliver change management, communication and training.</td>
</tr>
<tr>
<td>Business Owner Change</td>
<td>Recognition by Business Owners that change must occur within as well as outside their operations.</td>
</tr>
<tr>
<td>Pre and post-implementation support</td>
<td>Commitment to pre-implementation user education, empowerment and support, albeit tightly resourced. Early understanding of the need to resource post-implementation user support.</td>
</tr>
<tr>
<td>Relationship management</td>
<td>The building of strong relationships with key University areas and managers to develop openness and receptiveness to change and to smooth the way for changed business processes and</td>
</tr>
</tbody>
</table>
A “shared risk” rather than adversarial relationship with the vendor.

Table 1: Critical Success Factors at The University of Melbourne

### 2.2 BUSINESS INTEGRATION AT MELBOURNE

Whilst a number of the Melbourne specific critical success factors emerged as the University Systems Project got under-way, the awareness that commitment to integration was the key business and system issue was firmly established from the start. This commitment was formalised with the establishment of a Business Integration Team to work with the four business teams – Finance, HR, Student and Research – on the implementation of the various modules of Themis. Sometimes referred to as the conscience of the Project, its role is to ensure that:

- The enterprise impacts of each implementation are explored and agreed
- The configuration and business process decisions made with each progressive implementation, do not “close the door” for later implementations
- Cross-business and cross-system issues are knowingly owned and resolved
- As far as possible, “within scope” business integration opportunities are realized.

Primarily, the Team has had a business focus, rather than a technical focus, although it works closely with Project and University IT staff as well as business owners in conducting issues analysis and investigations, redesigning business processes and making recommendations to the Project and its governance committees on the resolution of integration issues. Table 2 details some of the collaborative work undertaken to date by the Business Integration Team.

<table>
<thead>
<tr>
<th>System access and the assignment of system responsibilities and delegations</th>
<th>Streamlined and consolidated the processes for providing and amending system access (new systems as well as legacy systems), responsibilities and levels of delegation for staff. Re-designed the HR staff appointment and staff transfer/promotion business processes to deliver staff access to administrative systems from the first day of employment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitioning arrangements from legacy systems to the new systems</td>
<td>Developed, implemented and communicated transition arrangements to users.</td>
</tr>
<tr>
<td>Data integrity between systems</td>
<td>Resolved anomalies in organisational nomenclature and definitions across the core administrative systems, both legacy and vendor – e.g. system and organisational definitions of departments, centres, official titles.</td>
</tr>
<tr>
<td>Reporting</td>
<td>Developed University reporting model and resolved a range of data integrity issues concerning reporting roles and responsibilities.</td>
</tr>
<tr>
<td>Legacy system issues</td>
<td>Resolved interfaces to new systems, retirement plans, end user issues.</td>
</tr>
<tr>
<td>Data map</td>
<td>Proposed the development of a data dictionary for end users to assist them understand the complex information that is now being made available to them via Themis.</td>
</tr>
<tr>
<td>Process automation</td>
<td>Identifying and facilitating the development of on-line business processes to replace manual processes.</td>
</tr>
<tr>
<td>New business processes and forms</td>
<td>Identifying need for and design of new business processes and business forms arising from the new systems.</td>
</tr>
</tbody>
</table>

Table 2: Examples of Business Integration Work

The Team has developed a strong end user perspective, recognising that system users are critical to declaring the Project a success, and conscious of the business disruption that can follow an implementation, as users struggle to make sense of the multitude of changes to their local business operating environment as well as cope with the new system.
The Team has also worked to open-up communication between different parts of the University and fostered the development and maintenance of these relationships so that implementation related issues could be raised, investigations and analysis undertaken and solutions developed, agreed and implemented.

The scope and role of the Business Integration Team has proved to be a continuing challenge for the Project and the Team itself. On the one hand, project management is focussed on maintaining tight control of scope, whilst the Business Integration Team is focussed on searching for opportunities, some not core to the project but providing benefits through the use of core functionality or the use of data from the new system for new or existing purposes. Examples include the development of new, integrated data outputs such as staff contact and location directories, staff qualifications, organizational email lists and their replacement of existing services and organizational arrangements.

This tension has been resolved to date by using the Business Integration Team to investigate issues and facilitate their resolution, whilst largely restricting its scope and implementation role. However, when Project resources have been tight, the Team has been charged with completing critical Project work. As additional functionality, data and capability is added with each implementation, an advocacy role for the Business Integration Team is developing with the Team working to identify and engage an organizational owner when work cannot be undertaken within the Project and also become involved in work outside the project that could benefit from the Team’s knowledge and involvement. The experience to date has been that exploiting the power of the ERP cannot be achieved without the formal commitment of resources and priority, indeed, the creation of the new project team post-implementation to benefit realization.

In 2004, the Business Integration Team expanded its brief to include the change and communications function for the HR/Payroll implementation. Originally initiated as a Project rationalisation, following staff departures, this expansion of the Team role has brought further coherence to the business integration work, particularly the translation of key system and business changes into readily understandable messages and actions for end users. The partnering with the Training and Documentation Team to develop and deliver an integrated training, change management and communications program is auguring well for a successful implementation of HR/Payroll in January 2005.

2.3 FOCUISING ON THE USER: INTEGRATING CSFS INTO TRAINING

Most implementation teams are so focused on system development, that training programs are often approached as an “afterthought”. Yet by fostering both Business Integration and Training teams from early in the implementation, Melbourne University was able to sustain a strong and continual focus on the end-user. This focus was seen from the start in the following training principles:

- Training and education activities would be job specific.
- Training and education activities would foster independent adult learning.
- Training activities would be delivered just in time.
- A range of training activities and delivery styles would be offered.
- Insofar as it is practicable, University resources (including seconding staff and using in-house services) would be used in developing and delivering the training program.
- The training model would progress through a three-tiered approach of conceptual, process, and system training.
- For Themis application users, system training would be a pre-requisite for system access.

In addition, the adoption of these principles sought to establish a professional and pedagogically sound program that would establish new standards of documentation while still providing the personalised approach to training that end-users were accustomed to.

The first of the system training programs was for Oracle Financials. This was a classic face-to-face, system-dependent training program requiring a comprehensive curriculum to train existing Finance users across an average of 5 training modules (totalling 31 hours). The training program ran from 2 December 2002 to 23 March 2003 (go-live was on January 1), trained 1210 staff (50% in December),
offered 12 courses in three streams to suit the user's role (data entry, operational manager or approver), and consisted of 657 training sessions and 4,562 enrolments (388 at remote campuses). The training modules comprised two sessions: a lecture-based 30-minute process overview session followed by a lab-based “hands-on” session. Due to the large number of concurrent training courses in December, several class groups were combined into one lecture session before breaking off into individual lab groups. Interestingly, these lecture sessions met with some resistance. It's difficult to determine whether this was a clash in learning preferences, or the view that only students sat through “lectures”, not staff. Later in the implementation, when concurrent sessions were not needed, the same material was presented at the beginning of the lab session and was met more favourably. Interestingly for the HR implementation, similar lecture sessions were marketed as “Information” or “Briefing” sessions and were always well attended.

To further endorse the cultural sensitivity CSF, a “train the trainer” approach to Financials training was developed and 23 department staff were recruited to training positions with the Project. This placed staff with the highest sensitivity to how their local area operated into the role of educator and champion. They received a two-week induction course and throughout the training period often had only two to three weeks more experience than their trainees. While a daunting prospect, this short turnover time allowed trainers to easily recall what their trainees were experiencing in learning to use the system. It also forced them to develop strategies of self-help, applying these to the trainer’s need for answers as much as the trainee’s. Not only did this develop a strong bond between trainers, with many forming the core of the Themis Financials User Group, but it started the ball rolling on introducing staff to an online help system.

The influence of the Business Integration team meant that even at this earlier Finance implementation stage, thought was given to the eventual HR implementation that would need to reach over 15,000 staff. Consequently, the goal of promoting an independent approach to learning was a high one for the training team from the start. This resulted in the development of the inbuilt online help files in Oracle Financials, adapting over 200 files to suit the requirements of the Melbourne University environment. This branding of the documentation with the University logo and business owner authorisation was important in encouraging buy-in from the business owners who would be charged with continuing to maintain this documentation post implementation. It also sent an important message to users that despite the goal of a vanilla implementation, Melbourne University needs were being met as a part of the implementation.

However, encouraging staff to access the online help files proved difficult. The previous finance system did not contain a help function, and staff were accustomed to calling the help desk for any assistance. Despite featuring use of the online help information during the training program, both trainers and trainees alike found it difficult to move beyond the habit of asking for help via phone, and would simply forget that they could try to seek a solution on their own. This was particularly troubling given the nature of the upcoming HR implementation, which due to large numbers of users could not be trained and supported in such a resource-intensive way.

Fortunately the training content for the HR implementation required less skills training and more process and information dissemination. Further parameters that would assist in the development of our HR training program included:

1. A current web-based system - the Employee Kiosk – used to apply for leave, update qualifications, change banking information and personal details. Although used to varying degrees by staff in different departments, use of the Kiosk had been growing over recent years.
2. We were of the view that HR information is inherently more understandable to users than financial data so that less “deeper” learning was required in the training program.
3. The fact that half of our HR approvers (around 600) had already received training to approve Financial documents both of which use the same system features.
4. The ability to draw on a broader support model encompassing policy, system, and technical support.
5. An inability to resource training for 16 500 staff - as well as the repetitive nature of the HR system providing a non-challenging learning experience for most trainees.

Unlike the finance system where users accessed the core application, the HR system would require staff to interact with self-service screens, which provided users with a more familiar web-based
interface. Most staff already had the necessary skills to navigate the internet, as confirmed by a survey across University departments. The challenge now was to reach a large number of staff on a broad range of issues. We conceptualised information, education, training and change management as a boundary-less continuum, with our goal to move staff from being unaware non-system users to being fully independent and confident system users. To assist in this goal, training and communication resources were directed to the development of a comprehensive Themis website. The website included resources for managers to use to inform their staff about process changes, FAQs, a broad range of HR and technical information, and an online curriculum that provided step by step instructions on how to complete the most common HR tasks on the system. We thought it important given the large scope of our users that the online curriculum accommodate a variety of learning styles, so self-paced learning modules were also available in printable format, as animated modules, and with a “voiceover” option.

To successfully publicise the changes as well as the range of information available to all staff it was important to approach the communication tasks at a variety of levels within the organization. While there was some expectation that information would filter down the management hierarchy, our use of Self Service Support staff (an extension of the Finance “Train the Trainer” program) also ensured information moved up the hierarchy and across it too. Table 3 below highlights the range of communications used as part of an overall “training” program for staff.

<table>
<thead>
<tr>
<th>Briefings</th>
<th>Powerpoint presentations and accompanying handouts initially used to brief University managers but then available to them to use to brief their own staff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>All staff briefings</td>
<td>Over 32 sessions at some 20 University locations to introduce the HR system to staff, demonstrate its use and answer questions. Many sessions introduced by Dean or Division Director to indicate executive support.</td>
</tr>
<tr>
<td>Briefings by invitation</td>
<td>Individual briefings at special and regular faculty and department meetings to work through local issues.</td>
</tr>
<tr>
<td>Briefings of senior executives</td>
<td>Individual briefings by Vice Principal, Human Resources (business owner) to raise awareness and seek support.</td>
</tr>
<tr>
<td>Themis website</td>
<td>All materials were available from the Themis Website, which also plays a major role in providing user support services.</td>
</tr>
<tr>
<td>“HR Matters” information sheets</td>
<td>Explaining key business and system concepts: Supervisor Responsibilities, Delegations, Electronic Workflow, Administrator Responsibilities, Role of Timekeeper</td>
</tr>
<tr>
<td>Self-paced learning modules</td>
<td>Step by step instructions on common HR tasks in the system (applying for leave, training courses, updating personal and professional details).</td>
</tr>
<tr>
<td>Training and ongoing meetings with Self Service Support staff</td>
<td>Both briefings and “hands-on” sessions offered to a group of 250 staff who acted as a local point of help in their department. This continued via fortnightly meetings after go-live.</td>
</tr>
</tbody>
</table>

Table 3: Major communication and training materials HR/Payroll implementation

A HR Self Service Support model, Figure 1 below, was also developed with these key elements:

- The Project would instruct all staff in the use of Self Service through various training and communication techniques, including briefings of managers, system demonstrations in lecture theatres, on-line courseware, and on-line help.
- Limited lab-based sessions (self enrolment) would be offered for those requiring this level of instruction.
- Self Service Support staff would be available within every University department to provide on the spot level 1 support to staff in the use of HR Self Service. These Self Service Support staff would also be a communications conduit with the Project and departments.
The Self Service Support staff would be trained in the use of HR Self Service and be actively supported by the Project via fortnightly meetings, special information sessions and regular communications.

Users would be encouraged to first seek assistance from their Self Service Support staff before contacting the Help Desk or the HR Department, that is, the Help Desk and the HR Department as far as possible provided second level support. Technical support would be provided to users via their department’s local IT expert (LITE), with the Self Service Support staff asked to assist with coordination of requests for IT support.

<table>
<thead>
<tr>
<th>University Systems Project in (a collaborative approach between teams Training, Communications, Change Management and HR System Development)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Faculty/Department Self Service Support Staff (SSSs)</strong></td>
</tr>
<tr>
<td>a key staff member from each Department and faculty who will receive briefings from USP staff, and ongoing training and support from the USP team.</td>
</tr>
<tr>
<td><strong>Information Technology Staff</strong></td>
</tr>
</tbody>
</table>

![Figure 1: HR Self Service Support Model](image)

The 250-plus Department-based Self Service Support (SSS) staff have played a key role in communicating with and supporting users and are critical to our Self Service Support Model. Following the success of the Train the Trainer approach for finance, these staff allowed us to turn the potential obstacle of a devolved University structure into an advantage. SSSs provide support to more staff than the Project, the Help Desk or the HR Department could ever hope to reach, as well they are able to provide local interpretations of how the HR system could be best utilised for the specific needs of their department. As a result, a similar model will be pursued for the Research system implementation, which also needs to reach a large number of devolved staff.

### 3 CONCLUSION

The success of the University Systems Project to date has been due to the factors common to other successful implementations – management support, best people full time, empowered decision makers, deliverable dates, use of champions, vanilla ERP, smaller scope, definition of scope and goals, balanced team and commitment to change.

Our belief is that there are other factors, unique to each implementation and specific to the organisation that impact significantly on success. This has been the experience at the University of Melbourne. Attention to organisational culture, consideration of organisational readiness and capacity and willingness to change, business owner change, pre- and post-implementation support are other
critical success factors that we propose be considered by other organisations as they implement an ERP system. We also support the establishment of a “business integration” team for any ERP implementation to provide the capacity to address cross business and cross system issues, especially those where the ERP intersects with legacy systems and processes. The business integration team can also play a vital role in helping to embed the new system into the day-to-day work life of end users. For this reason, there are clear benefits in having the business integration team work closely with those who provide communication, change management and training to users. This collaboration from an early stage of the project implementation will ensure that the practical needs of end-users are being championed.

Finally, the training program needs to be organized with both change management and business integration principles in mind. As the implementation of an ERP system is but a step towards the operational and ongoing use of that system, a successful training program will be one that is readily accepted and promoted by the very users it sets out to train.

4 REFERENCES


Author/s: JULIAN, JOHN; McGee, C; Perez, A

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