Robbie Ewen Fellowship Report
By Fiona MacAskill
University of Aberdeen

1. Introduction

The University of Aberdeen is about to embark in the implementation of an Enterprise Resource Planning (ERP) which will provide integrated management information systems across the entire organization. This means a one-supplier system which embraces and integrates finance/accounting, human resources, student records and the multitude of other essential systems which underpin key functions with the University.

Funding from the Robbie Ewen Fellowship was sought to investigate how other Universities have tackled the implementation of an ERP and identify best practice in managing the upgrade to a new information management system. This investigation focused on the implementation of the HR modules of the ERP system, the ways in which Human Resource departments have managed this change and made the most of the capital investment in their system.

This report lays out the findings of this investigation and highlight points for consideration by those leading the implementation of an ERP at the University of Aberdeen and elsewhere in Scotland. In particular, it highlights the key areas in which the University needs to plan for. It also highlights some of the key benefits and challenges experienced by HR staff implementing a new system.

2. Background to Site Visits:

Four Universities in South Africa were visited:

University of Pretoria:

Established in 1908, the University of Pretoria offers 1,800 academic programmes in both English and Afrkans. Since, 1996, the University of Pretoria has been the South African University with the highest research outputs. The University has 50,000 students based across 7 campuses.

University of Free State

Established in 1904, the University of Free State has its main campus in Bloemfontein and 2 further campuses on which students are taught. It has over 33,000 staff and 2900 staff.

University of Stellenbosch

The University of Stellenbosch is recognised as one the top research University in South Africa. It has over 27,000 students and around 3000 staff. The University of Aberdeen has an established relationship with the University of Stellenbosch.

University of Cape Town

Founded in 1829 the University of Cape Town is the oldest teaching University in South Africa. Currently there are over 25,000 enrolled students and 5,000 staff.

3.0 Findings:

3.1 Planning for Implementation

The importance of an effective planning phase at both an institutional and departmental level was emphasised across the study.

3.1.1 Planning at a University level

At an institutional level this included agreeing the 'information architecture' at the beginning of the process. That is agreeing the framework in which the system will operate. It was found at other institutions that departments across the University did not use the same terminology/value to describe the same thing. For example, do finance, HR and student recruitment use the same departmental name to house the same staff? Common information architecture is essential in an ERP to ensure that the system interacts across the university. Discussing this from the outset will prevent the 'information architecture' being defaulted to the terminology of the first department to implement which would likely cause issues as ERP is rolled out. Stakeholders from throughout the University should be included in this, not just those who will be implementing in the ERP in the near future. Thus ensuring that the last implementer is able to map onto the new system as easily as the first.

Gaining an understanding of the existing system infrastructure of the University was also highlighted as important. By mapping our current systems, the way in which they interact and the potential impact of change in one the University can be better prepared for a successful transition to a new system.

3.1.2 Planning at a departmental level

Planning at a departmental level is also essential and should be embarked on as soon as possible. This includes the identification of priorities for ERP and the order in which the department wishes to implement the various modules/functionality available to them. The common model in the study was the implementation of the core HR/Payroll employee records module first, with additional functionality to support other HR functions (e.g. recruitment, training, appraisal management, performance management) added later. On average it took around 6/7 months to implement this central module and thus the establishment of priorities from the outset is essential to ensure that ERP delivers the most valuable solutions first.

Secondly, the mapping of existing process and procedures is an essential in the planning process. For example, charting the current standard procedure for a new appointment; identifying each of the steps from recruitment to payment of the first month's salary. This can then provide the basis upon which the new system can be built. This is a time consuming process and one which Aberdeen would benefit from starting as early as possible, to allow consideration for process streamlining or business changes to take place. The time commitment required for this stage was emphasised at the University visited, with most arranging at least a week long focused workshop with core team members and the supplier to ensure processes were effectively mapped.

The University of Pretoria also recommended undertaking a gap analysis as this stage. It felt that the functionality of their legacy system had initially had been underestimated and it was not until the system was unable to deliver what the users wanted, that gaps in functionality were identified. A gap analysis at the outset would help plan for this and manage the expectation of users.

Thirdly, it was recommended that preparations for ERP include an evaluation of the data currently held in the current system. The old adage of 'garbage in, garbage out' was emphasised especially as improved management reporting was perceived as a key benefit of ERP. In addition, will the University transfer will all historical data into the ERP? Doing this could result in the need for tables to be built in the new system for obsolete terms, for example to hold the historical names of departments. While, not doing so could limit the effectiveness of management reporting.

3.1.3 How will requests for customisation be handled?

One common recommendation was that Aberdeen looked ahead to how we would deal with system customisation requests. At each institution Aberdeen was encouraged to stick as closely to the standard or 'off the shelf' system as possible. Customisations usually result in additional cost to the

University and can negatively impact on the implementation of future upgrades as additional work is needed to connect non standard functionality.

However, despite this, every University had customised aspects of their system to meet their unique business requirements. With one University indicating to have customised up to 50% of the system. Thus it seems likely that customisation will be raised at some point during the course of implementation at Aberdeen. Thus establishing from the outset how these requests will be considered was recommended.

At the University of Stellenbosch all customisation requests had to be approved by the project board thus allowing central control of changes. At the University of Pretoria this central model was also used. However, one project lead felt that if he started again, he would manage customisations by setting each department their own customisation budget. Thus forcing them to take more ownership in the establishment of their own priorities and better manage change within their sections.

It is important that this process challenges the implementers to review current processes along with the system functionality. Is it possible for example to change or streamline the business process itself rather than customising the system to mirror current processes?

3.2 The Implementation Team

One of the key areas for consideration raised by my visits was the nature of the team responsible for implementing the new system, in particular who should be involved, the skill set these of individuals and their duties within the larger business function.

At an institutional level it was emphasised that these teams should include champions at a top level within the University who were willing to take ownership of the system's implementation. Support from these senior managers was seen as key in overcoming challenges, especially those which arose from a resistance to change.

At each University I visited implementation was divided into modules, with each department taking ownership of the implementation and maintenance of the parts relevant to their business function. As such separate systems teams were established throughout the University.

The teams established for this purpose within most of the HR departments I visited had similar characteristics. In particular they consisted of a dedicated team of at least 3 staff members whose key responsibilities were the implementation and as time passed the maintenance/development of the system.

The teams usually consisted of one person who had experience of system implementation at another organisation and at three of the Universities had also previously worked for the supplier as a consultant. Mr Wessel Nolt at the University of Stellenbosch stated that he felt that his experience as an Oracle consultant had been invaluable during the implementation project. As although the consultants provided were excellent they were motivated to complete the project quickly and it was useful to have a knowledgeable 'middle man' to manage this and ensure they delivered what the University needed.

The other common team member was a full-time member of operational staff from the business function, who was seconded from operational duties. They were felt to be important team members as they were able to provide an insight into business processes and what the system needed to deliver. They were also critical in testing the new system and usually played a key role in the development and delivery system training.

The University of Pretoria indicated that they had hoped to second an operational team member full-time to join each department's implementation team. However, within their finance department

dedicated functional staff were not fully released from their operational duties, instead they split their time between system and operational activity. It was felt that this lack of a dedicated functional person was a key factor in the delayed implementation of the finance module, as decisions relating to the system were slowed in lieu of operational responsibilities. As such the project took much longer and resulted in additional costs, as external consultants were left waiting for decisions to be made.

In all of the Universities expect the University of Free State these teams reported into the HR Director. At the University of Free State, the team was made of a mix of IT and HR staff, although it was noted that the IT staff members were felt as part of the general HR team.

Experienced external consultants from the supplier were also highlighted as important team members. One University indicted that the implementation of their student module had suffered in comparison to the others due to an inexperienced external consultant team. This consultnat team did not have the same depth of knowledge of those supporting other sections and thus was unable to provide the same number of options or system 'work-arounds' to help make the student system fit the needs of the business. Thus the ability to have some control of the consultants assigned to the project would be beneficial to the University.

Ensuring that these external consultants are an integrated part of the implementation team is also essential for an effective knowledge transfer. This ensures that University staff gain an in-depth understanding of what the consultants are doing and learn enough to support the system effectively once the consultants have left. Thus reducing the need to engage (and pay for) external support on future projects/system developments.

3.3 Realisation of Benefits

Each University felt that they had benefited from the implementation, although each university had used the opportunity provided by the new system differently, so the impact of this change varied. None of the Universities were easily able to directly quantify the impact of ERP on the HR department or University more widely. However, it was generally felt that the new system had resulted in process efficiencies, which released staff from transactional/basic processing tasks and allowed their skills to be redirect to enhance the delivery of other services.

3.3.1 Self-Service

Self-Service functionality, whereby staff or students interact directly with a system to complete certain processes instead of an HR staff member doing this for them. The implementation of this functionality was felt to be a key benefit.

One example of this is the processing of payment claims, such as requests for the payment of overtime, adhoc hours and external examiners. These are common in South Africa; the University of Pretoria for example processes 30-40,000 claims per year. Previously these claims were submitted to HR on paper forms which was entered in to the legacy system and passed to Payroll, who rechecked the information before payment was authorised. It was thus a resource intensive process and it is similar to the way similar claims are processed in Aberdeen.

Now with OraclePeoplesoft a large proportion of these claims are managed through a self-service process within the system. An employee can input overtime online which is sent to his supervisor for approval. Once approved the claim is made ready for payment. There is no need for additional interaction from HR or Payroll staff.

Self-service functionality was also found to bring process efficiencies to recording of annual leave and sickness absence. ERP thus offers opportunities to automate the transactional side of the HR service and allow staff time to be utilised strengthen areas. At the sites visited this usually resulted in more resource being used to provide a better HR advisory and professional support to managers. It was highlighted that this did result in the need for HR to evaluate the skills of its staff and provide additional training for those moving from a primarily data processing role to a more interactive advisory one.

The move to self-service also positively impacted on other departments at the University of Pretoria, For example, the department of Veterinary Science had previously employed a full-time member of staff to manage such overtime claims, following the introduction of self-service, her skills could be redeployed elsewhere. Thus there is potential for the streamlining of HR processes to have an impact on other departments and staff within the University.

3.3.2 Communication

The improvement of communication and information transfer between departments was noted as a benefit of ERP implementation. In particular, more information now flowed seamlessly between departments and less human intervention was required, ERP also provided a more stable and reliable process for information transfer than the makeshift connections of the legacy system.

In an HR context, ERP allowed greater integration with finance and reduced the need to manually transfer information between departments. This reduced the likelihood of manually error as information was now no longer keyed by each department and allowed real-time information to be viewed more easily by colleagues outwith HR. Links with other departments were also established to meet University needs. For example at the University of Free State, the children of staff members are exempt from paying tuition fees. ERP allowed a formally paper process to be streamlined and the information relating to this scheme to flow between HR and Register, reducing the administration associated with this process. Thus ERP can be adapted to support the cross-department communication most relevant to the organisation.

Information flow following implementation was also improved at an individual level as new functionality allowed staff at some Universities to access their personal record online. This includes payslips, tax forms (eg P60), biographical information and employment history. This not only gave staff greater ownership of their information, it also helped reduce enquiries for this basic information at the HR office.

3.3.3 Improved management reporting

The newly implemented systems also improved the quality of management reporting at the Universities visited. As they were better able to record information and collate it into a report which could be analysed at a departmental or institutional level. One example of this is at the University of Stellenbosch, where they annually assess staff as part of performance review which impacts on the level of bonus staff receive.

Before the implementation of Oracle, HR was unable to report on this process effectively and could not provide senior management with an analytical assessment of the scheme. HR is now able to provide accurate and reliable information on this. In addition, they have been able to identity

previously unseen issues, such as the overuse of the top bonus score by managers. Thus ERP offers the potential for the University to connect information more easily and provide managers with more accurate and analytical reports.

In addition, Stellenbosch have for the first time made it possible for managers to run standard staffing reports directly without having to contract HR, giving them more initiative and control of management information. Managers can run a reports on a number of things such as staff absence in there area or staff with an upcoming birthday. However, it was noted that these reports are under utilised by managers, as they still view HR as the owners of this information and were accustomed to this information being pushed out from the centre rather than proactively using it. Thus, cultural change may be required to make this additional functionality more effective.

3.4 Managing Change

One of the key issues which prevented the maximisation of the benefits of ERP was a resistance to change. This could be seen both amongst HR staff and the wider University community. This resulted in the new system being viewed quite negatively by some of the staff interviewed which created challenges for those implementing the system, as faults were always found before benefits.

One strategy suggested for combating this was implementing the new system slowly, starting with the key areas and the parts with the biggest wins. For example, in HR when implementing the self-service functionality many Universities started with the annual leave process as it was relatively simple and one which all staff could interact with and feel the benefit of a streamline process. This allowed staff to become accustomed to e-forms and approval requests, so when self service functionality was rolled out to administrator overtime and sickness absence the change was less extreme. It also allowed staff and managers the opportunity to provide feedback and suggestions for improvement.

Connecting the system to other commonly used packages was also popular. For example, generating outlook diary appointments in a manager's diary when s/he approves a staff members leave.

A reluctance to change the ways things are done can result in the opportunities of ERP being missed. For example, the University of Free State have access to the same self-service functionality which brought huge efficiencies to the overtime process at Stellenbosch and Pretoria. However, they have chosen not to implement it as they are not comfortable changing current process and devolving control to line managers. It is thus essential that the University of Aberdeen are effective at change management if we are to maximise this business improvement opportunities.

This may include giving careful consideration to how system functionality is rolled out, ensuring that adequate training is provided for managers on HR policies in addition to technical training. A system of monitoring the use of self-service functionality at least in the initial stages of implementation to support the devolution of certain processes to departments may also be beneficial.

3.5 Other issues for consideration

There were a number of other issues or approached which were discussed during my visit which may provide food for thought.

At the University of Pretoria, since the implementation of ERP each person connected with the University is assigned only one user ID and is tracked by all systems using this. For example, if a staff member enrols as a student, they are not assigned a new and separate ID as a student, neither is a

student who takes up a staff role. Pretoria felt this provided process efficiencies and improved the experience of the individual.

However, it this was to be implemented in Aberdeen additional processes for how this would be managed would need to be agreed. For example so who would be responsible for maintaining the biographical data of an individual who is both staff and student HR or Registry?

Another issue which was raised most of the Universities visited was that of multiple appointments and the complications they raised in implementing aspects of the functionality. For example, the establishment reporting lines for an employee's annual leave when their manager for their two posts is different. Thus it may be prudent to discuss this issue the supplier early on to understand how this might be handled and plan accordingly.

4.0 Conclusions and Recommendations

My visit to South Africa has shown that ERP in an opportunity to achieve process efficiencies and improve the way business is undertaken at the University. I hope I have highlighted some useful points of discussion and key issues which require consideration.

The report flagged the importance of effectively managing of the implementation process to ensure that the opportunities of ERP are maximised. This includes planning at an institutional and departmental level to gain an understanding of the systems currently in operation and the business processes that will be supported. The report also outlined the model of a full-time implementation team utilised in South Africa. Even if this model is not adopted at the University of Aberdeen, I hope that the level of the staff resources required to implement an ERP successfully and in a timely manner has been highlighted.

The opportunities of ERP for the University in terms of improved communication and management reporting were also clear from my visit to South Africa. As were opportunities for resource saving in HR, in particular by releasing staff from transactional work to provide more added value services. However, I also discovered the importance of HR departments and staff being open to change and willing to adapt the way things are traditionally done to gain the process efficiencies offered by HR.

Overall, ERP has huge potential to improve the way that key University functions conducting business, however it does depend on the University and its staff being open to embracing change.

Key Recommendations:

1. That the 'information architecture' that will underpin the ERP system is agreed as early as possible, with input from all relevant stakeholders.
2. Individual departments begin evaluating and mapping their current process and data in preparation for ERP.
3. That a review be undertaken of current data held on HR systems, to ensure only accurate data is migrated to the ERP. Along with an assessment of what historical data should be transferred to the new system.
4. That the University develop a plan or process for handling customisation requests during the implementation phase and beyond.
5. That the HR department given consideration to the processes which could adopt the Self-service functionality, the impact of this and any potential risks.