University of Sunderland

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Business Process Review/Re-engineering at the University of Sunderland – the immediate effect on staff and systems.

Ian Neal – Director, Plus 2
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Ian has been a Senior Teacher in a number of UK schools and has worked for the University of Cambridge developing the UK's first International Student Centred Review scheme. He moved to Sunderland University in 1992 and is Associate Dean. He has travelled widely, providing educational consultancy in South America, Egypt, Saudi Arabia and most countries in Europe.

Introduction

In Spring 2001, the University of Sunderland began a comprehensive Business Process Review and Re-Engineering (BPR) activity. This was carried out under the auspices of a Project Team (Project "Plus 2"), which was set up to procure and implement a new Student Administration System, a Virtual Learning Environment and a Managed Learning Environment. This project lasts 3 years, beginning in September 2000. A principal element of the Project's philosophy was to be as inclusive as possible – drawing in as much of the University community of staff and students as possible. There were two main objectives for this philosophy – to ensure institutional 'buy-in' to the systems being procured and implemented; and to utilise as much of the University's significant expertise as possible to ensure that sound and valid decisions were made.

This paper describes the methodology and immediate effect of the Business Process Review. The evaluation that followed the BPR activity, which sought to find the effect on the BPR itself on the University and its staff, will be reported here. The evaluation of the BPR findings themselves (that is, did the findings of the BPR lead to lasting changes in the processes) will follow.

Context to the BPR activity

While the BPR was carried out ostensibly to inform the implementation of the Project's Systems, in fact the exercise was wider than this and served to review the functional activity that was in place at the time. The University's Annual Operating Statement to HEFCE set out the three-year vision for the development of business systems, and this – together with the University's Information Technology and Information Services strategy document – provided the context for the BPR.

It should be noted that the order of operation was not quite right – we should have done BPR, and then based system selection on findings. Instead, we chose the system then did the BPR. Project timescales demanded this – procurement had already started when the Project was established. A retrospective appraisal of the Project's systems selection indicates that we procured the right systems, but we were reviewing the process during – rather than before – implementation and the procurement was carried out in isolation (Neal, 2002).

The areas for attention

It was decided that the following areas would be reviewed first:

> Enquiries, Recruitment and Admissions;
> Approval, Validation and Programme and Module Data Banks;
> Accommodation;
> Enrolment, Re-enrolment, Invoicing and Debt Management;
> Programme Registration and Module Choice;
> Research;
> External Returns and Performance Reporting;
> Student Tracking – especially Recruitment, Retention and Progression;
> Assessment.

While these appear to be confined to the Student Administration System, in fact they spread beyond it. Two examples will illustrate this. The Accommodation function is handled jointly by the Accommodation Office (bookings etc), Estates (housekeeping, security etc), Finance (invoicing etc). The Research function is handled jointly by the Graduate Research School (administration), all Schools of the University (supervision), Finance (invoicing), Marketing Department and the Centre for International Education (marketing) and so on. Therefore, the BPR included representatives of ALL staff (and some students) of the University.

The methodology

The project decided to implement the PISO model (Process Improvement for Strategic Objectives). This model was originated by the University of Sunderland School of Computing, Engineering and Technology, and is a streamlined version of more complex BPR methodologies. PISO has the advantage that it combines the traditional "systems efficiency" rationale with the new "strategic objectives" one. Its approach is one of identifying the "problem area", identifying the objectives, analysing the existing process, "logicalising" it, then recommending a new process. When done properly, the framework places emphasis on the involvement of stakeholders in achieving consensus concerning the desired strategic changes. It is not, therefore, simply a way of "doing some re-engineering to a process" – rather it takes those involved with the process along with the review and uses their expertise as a guide for the re-engineering. PISO starts with the assumption that a project may originate with a manager perceiving a need for changes to be made but with little idea how to achieve them, or what they will entail. The subsequent analysis is undertaken not by expert systems analysts/business consultants but by employees well familiar with the work environment where the changes will take place. (Deeks, 1999) This approach fitted well with the Project's overarching aim – inclusiveness – the timing of the Project, and with the staffing levels possible. Two members of staff were allocated to the task full time from the project team. Other teams members assisted them from time to time. All the reviewers received training in the operation of the PISO methodology. This team undertook all the interviews of stakeholders, constructed the diagrams of the "old" processes, logicalised the processes and constructed the diagrams of the recommended processes. They also wrote the draft reports and the recommendations.

Alongside the functional activity was a steering group and a series of sub-groups. The steering group was made up of the team with responsibility for the implementation of the

Student Administration System, supplemented by the Academic Registrar who convened the group. The sub-groups were made up of key stakeholders for the function under review.

In practice, the sub-groups set the parameters for the team of reviewers, and made suggestions of where to start the data collection process. The reviewers then began by establishing the "Strategic Objective" of the function, defined – usually – by the member of the University Executive responsible for the function. They then set about the task of interviewing all relevant stakeholders – starting with those suggested by the sub-group, but extending the list as far as necessary to ensure complete coverage of the function. As the interviews proceeded, the sub-groups were kept informed of the information being collected. The functional diagrams were constructed and then modified as more information was collected. Once the data collection exercise was completed, the review team drew up the functional logicalised diagrams, which were then tested against the original strategic objectives and discussed with the previous interviewees, then adjusted until a consensus was achieved. The review team could then draw up the new process diagrams and the recommendations that were considered by the sub-groups, formalised and passed to the implementation team and the University. In only one case did the sub-group disagree with the findings of the review team. In this case, the final report was reworked, but the findings were not altered.

Dissemination

Although it was important that the findings and recommendations of the BPR process informed the University's thinking and activities, it was very important to the Project to ensure that all members of the University (whether involved with the BPR or not) could gain access to the results. Therefore, the following dissemination mechanisms were adopted:

Full reports:	BPR group and sub-groups
	Key functional stakeholders
	Implementation team
Summary:	All key stakeholders
Recommendations:	All staff (via the Project website)
Full reports, commentary and digest:	University Executive

This ensured that those who needed access to the full report could do so, while all those who had taken part could see that their time had led to an outcome.

Impact and involvement

The impact of the BPR activity on the staff of the organisation was significant. This was the first time in most staff members' recollections that an institution-wide activity of this scale had been undertaken. The introduction of other Business Systems (such as the Finance System and the Human Resources System) did not include such a comprehensive activity. Although the University had previously undertaken institution-wide consultation exercises (the most recent one being in preparation for the QAA Continuation Audit), these were largely paper-based and, where group discussions were held, they were carried out in

functional areas by the managers of those areas. The BPR activity that is the focus of this paper actively sought out as many individuals as possible, and Project Team members interviewed them. This inclusiveness had a valuable impact on, not only the participants, but their close colleagues as well.

Outcomes

When judging outcomes, it is important first to establish the criteria against which one is making the judgements. We have chosen to use three criteria, which relate to the Project's philosophy and the aims of the activity. These are:

- the extent to which the BPR was inclusive, and brought people 'on board';
- the extent to which the methodology defined the functional processes and the potential improvements to them;
- the extent to which these potential improvements were taken up by the University.

There was little doubt that the first of these criteria was fulfilled well. As was explained, a very large number of people were involved, from all levels of the University. A sample of these were interviewed and participants reported to evaluators that they 'felt involved' in the decision making processes of the University, and that they agreed with the findings and recommendations. This feeling of involvement was, of course, one of the main intentions of the activity and it was gratifying that it had this effect. The extent to which this brought the staff 'on-board' with the Project is more difficult to assess. Anecdotally, the Project team (who had not been involved with the BPR process) regularly reported that the BPR activity was referred to during training and development sessions, and during consultation sessions. It could be seen that the inclusiveness of the process had the desired effect and that, even if the findings had been inaccurate, inconclusive (which they were not) or unadopted (which was so in some cases), the process itself was well worthwhile.

The second of the criteria, again, was fulfilled well. The sub-groups that constructed and approved the reports included key players from the functional areas under scrutiny, and they agreed with the findings. In most cases, there was little contentious about the findings and discussions in the groups were more concerned with establishing the minutiae of the findings than taking issues with them. In several cases, the 'field team' were sent back to examine further specific areas to ensure that the findings were as helpful as possible. The process worked well in providing a snapshot of the University as it was and establishing effective ways forward to improve the processes. Thus, at functional sub-group level, the process worked well.

The third of the criteria mentioned above, however, was rather less successful. In most cases the process described above in *Methodology* stalled between the agreement of the findings and recommendations by the sub-groups and the implementation of the re-engineered functions by the University. This was partly due to the loss of a 'Champion' at a key point in the activity. One of the University's Executive left unexpectedly just as the findings were emerging from the sub-groups and this meant that the University-level impetus was lost – the BPR relied on this person to set and drive through the strategic objectives, and to provide us with feedback on the reengineered strategic objectives. He had also intended to drive through the recommendations. However, once he left, the University level feedback and impetus was lost. Instead, feedback came from University senior managers with the subjectivity that

comes from defending operations that they themselves had established. In one example, that of handing over operational activities for systems functions to School, rather than these being carried out by the Registry, there was very limited take-up of the recommendations. Interestingly, Schools were keen to get involved in the new system, and to take on additional responsibilities – this was the recommendation of the BPR. However, the recommendations have not been adopted because of the centre's unwillingness to hand over responsibilities. This is different from reports from other Universities, where the difficulty is persuading Schools to take on the additional responsibilities. In another example, a department of the University not directly concerned with the function blocked the implementation of a recommendation of the BPR – mainly due to their own internal agenda. In general, the BPR findings were used to govern the automation of existing functions and operations, rather than re-engineering them to operate more efficiently and effectively, which was disappointing.

Summary

The BPR activity worked, but not necessarily in the way that was expected. It highlighted a difficulty with the management of the institution, in that Schools wanted to accept responsibility, but the Central Services were unwilling to relinquish it, preferring instead to extend their staffing to do so. It has been recommended that the institution revisits the BPR process in the light of the centralised/decentralised debate.

The objective of getting people to think about the processes that they are concerned with or responsible for has been achieved well - the BPR gave people to opportunity to say what they had been thinking for a long time. It also made people focus in on the processes that they operated. Before the BPR, they had not formalised their thinking about what they do on a regular basis.

Other points that were learned are:
-    the importance of having a Champion at a high level cannot be overemphasised – but having a 'fallback' is just as important;
-    it is much better to use a technique that is as inclusive as possible – if the re-engineering isn't as effective as it could be, at least the staff feel more involved, which is a useful outcome in itself;
-    it is better to use a methodology that emphasises and contexualises the strategic objectives of the institution;
-    it is worthwhile implementing an evaluation process to measure actual against desired outcomes;
-    it is important to base revised and written procedures on agreed findings and recommendations.

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