Introduction to Business Process Review and Improvement

Introduction

The Programme and Project Unit within CiCS has developed this document for use by staff involved in reviewing and improving the University’s business processes. Further information or guidance can be obtained by contacting the Programme and Project Unit (cics-ppu@sheffield.ac.uk).

This document supports the following three-stage approach:

1. Review: This stage encompasses the investigation of the ‘as-is’ process that is currently being performed.
2. Proposal for change: This stage uses the results of the review to define an improved ‘to-be’ process, before presenting a case for change to the relevant decision-making body.
3. Implementing the change: This stage addresses the implementation of the improved process once the proposed change has been approved. This stage should also introduce reporting measures for the new process, which will help to identify the extent of the benefits delivered by the process improvement exercise and should also support the introduction of a continuous review schedule.

Stage 1: Review

Before we can ultimately improve a process, we first need to understand how it works, who and what is involved and how it may integrate with the wider University’s business processes. This information will be uncovered by undertaking a review of the process currently in use; the ‘as-is’ process. There are a number of tools to help in gathering and presenting information during this stage and some examples are briefly identified below.

The outputs from the review stage will define a baseline for the current ‘as-is’ process, which will be analysed to identify how the process can be improved. The baseline will then provide a reference point from which to measure the benefits delivered by the subsequent implementation of an improved ‘to-be’ process.

Scope of the review

Before proceeding, the scope of the review stage needs to be defined and agreed. Staff resources to undertake the review will be required and a timescale for completing the work will need to be decided. It is
therefore important to define and agree clear boundaries for the review to help set expectations and to agree on a piece of work that can realistically be undertaken with the resources available. It is crucial to identify sponsors/business champions early on in the review and to get their support. It may be that this stage will focus on a process that has already generated complaints or one that has known efficiency issues. If it is unclear initially where improvements need to be made, a high-level review of a number of processes could be undertaken followed by a prioritisation exercise to decide the scope of a more detailed review.

The following key questions can help in deciding the scope of the review:
- What are the drivers for change? – E.g. to improve service levels, to comply with changes in legislation, to increase efficiency?
- Which process/processes will be considered and why?
- What resources are available for the review?
- What is the timescale? – When do we need to see results of the review?
- Who will make it happen?

In defining the scope, the stakeholders - i.e. those people with an interest in the process, who are involved in the process or who are affected by it - must be identified and involved.

**Useful tools**

- **High-level process map**
  The creation of a high-level process map will help to visualise the key processes and dependencies relevant to the review phase. The scope of the review should be indicated on the map. For example, the map below illustrates that the review will focus solely on process Z. The high-level process map can be used to illustrate how the process being reviewed contributes to the bigger picture of the work of the wider university.

![High-level process map](image)

**Approach**
- Define and agree the boundaries of the high-level process map. Are we focussing on a particular section/department or the whole University? Input will be needed from senior managers.
- Are there known problem areas? Is new technology available?
- What does each process do? Why is it done? Why is it done there? Are there areas of duplication?
- Refine the map – to identify quick wins/major problems
- Make a decision re the scope of the review - agree areas to work on first

- **Detailed process map (swim-lane diagram)**
  The detailed process map illustrates the actual steps within the process under review and who performs them. A visual representation of the process helps to identify areas that could be improved. The ‘swim-lane diagram’ (aka cross-functional flowchart) is the recommended format for a detailed process map. Each ‘swim lane’ represents a person, section, department or computer system, as here:
Approach
The following need to be considered when producing a swim lane diagram:
- Trigger events: What event kicks off a process?
- Termination points: At what point does a process end?
- Decision points: Where a decision has to be made within a process, what are the rules that determine what happens next?

The following need to be considered when reviewing a process using a swim lane diagram:
- Delays: e.g. these can be caused by repeated checking/authorising of process steps, or by formatting/reformatting of data.
- Added value of tasks: Tasks within a process should add value to the process (e.g. by enabling other steps in the process) or should add value to the service being delivered. Tasks that do not add value should be questioned and eliminated.
- Is the process designed to make life easier for those executing the process or for those impacted by it, such as service users?
- What are the known issues with the process?
- Is the process efficient? – E.g. the process may be heavily paper-based with a reliance on printing/photocopying, there may be duplication of effort or processes may not be performed in a standardised way across departments.
- Is the process effective? – E.g. the process may not contribute to the delivery of a satisfactory service in accordance with Service Level Agreements.
- What measures are available? – E.g. process performance, satisfaction of those delivering the process and of those impacted by it?
- Who owns the process/is responsible for its delivery?

Microsoft Visio is a useful software tool that can be used to produce swim-lane diagrams. A number of ‘Freeware’ software tools are also available – e.g. http://bizagi.com

- **RACI analysis**
  This shows who is Responsible, Accountable, Consulted, Informed for each activity. Here is an example RACI analysis:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Dept. X</th>
<th>Dept. Y</th>
<th>Dept. Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request update of data</td>
<td>R, A</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Supply current data</td>
<td></td>
<td>R, A</td>
<td></td>
</tr>
<tr>
<td>Update database</td>
<td>R, A</td>
<td></td>
<td>?I</td>
</tr>
<tr>
<td>Create mailing lists</td>
<td>R, A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit data</td>
<td>R, A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to database?</td>
<td>Yes (read/write)</td>
<td>No</td>
<td>Yes (read only)</td>
</tr>
</tbody>
</table>
• **SWOT analysis**
  This shows the Strengths, Weaknesses, Opportunities and Threats for things as they are now. Here is an example SWOT analysis:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>General awareness of present IT system</td>
<td>Data quality</td>
</tr>
<tr>
<td>Supports the needs of dept. X</td>
<td>Mixed engagement from Faculties</td>
</tr>
<tr>
<td>Supports most needs of dept. Y</td>
<td>Faculties cannot access data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve data quality</td>
<td>Depts. must ‘buy in’ to change (may continue using local paper-based processes)</td>
</tr>
<tr>
<td>Add value to the university by collecting additional data</td>
<td>Staff may still not update information</td>
</tr>
<tr>
<td>Consolidate data held elsewhere</td>
<td>Other issues outside this process need to be improved</td>
</tr>
<tr>
<td>Improve IT system data searches</td>
<td></td>
</tr>
<tr>
<td>Expand usage of the IT system</td>
<td></td>
</tr>
<tr>
<td>Expand access to departments</td>
<td></td>
</tr>
<tr>
<td>Support more functions</td>
<td></td>
</tr>
<tr>
<td>Improve resilience of the IT system</td>
<td></td>
</tr>
</tbody>
</table>

• **PESTLE analysis**
  This analysis is used for identifying the Political, Economic, Sociological, Technical, Legal and Environmental issues that need to be considered.

• **Root Cause analysis (‘5 Whys’ and ‘fishbone’ diagram)**
  This analysis is used for identifying the root cause of a given issue by repeatedly asking the question ‘Why?’ – five times is suggested. The ‘Fishbone Diagram’ can then be used to illustrate findings in terms of cause and effect – e.g.:

  ![Fishbone Diagram](image)

  Policy: No defined customer service policy
  Staff training: No current programme of staff training
  Procedures: Current procedures aren’t customer focussed
  IT: Systems don’t support self service
  Customer complaints

**Stage 2: Proposal for change**

This stage will focus on analysing the data and outputs from the review undertaken in stage 1 to identify ways in which the process can be improved. A crucial point here is to not lose sight of the actual purpose of the process.

Those best placed to identify where improvements could be made in a process will generally be the staff that deliver the process as part of their job and those that are on the receiving end of the process, i.e. the service users.

Where analysis uncovers particular issues, it is important to identify whether these are attributable to the process itself, to the people who undertake the process, or to supporting technology. Depending on where
the issues lie, the route to improvement could be via training, by redesigning an inefficient process or by improving use of existing technology/introducing new technology.

**People**
- Are staff/service providers/service users properly trained?
- Are there issues with motivation/morale?
- Are resources appropriate for each step?

**Process**
- Is the process efficient/effective? – Are the steps logical?

**Technology**
- Is appropriate technology currently supporting the process? - Is there a lack of technology? - Is the wrong technology being used?

It is important to identify and agree the problems. A number of ‘problem statements’ should be generated, which will help in defining the objectives of the process improvement exercise – e.g.:

<table>
<thead>
<tr>
<th>Opportunity/Issue</th>
<th>The data is not accurate or complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas affected</td>
<td>Dept. X when data is accessed. It also affects staff in Departments who may be contacted in error.</td>
</tr>
<tr>
<td>Analysis</td>
<td>Interviewees gave multiple examples of data issues. Some staff print data/lists and manually update these.</td>
</tr>
<tr>
<td>Options for consideration</td>
<td>Revise the process to improve data accuracy</td>
</tr>
<tr>
<td>Actions</td>
<td>Change procedures to make data maintenance compulsory</td>
</tr>
<tr>
<td></td>
<td>Nominate staff from each department to be responsible for updating and maintaining their own data</td>
</tr>
<tr>
<td></td>
<td>Nominate staff from each Department to audit data</td>
</tr>
<tr>
<td></td>
<td>Provide functionality within IT solution to enable data errors to be easily reported</td>
</tr>
</tbody>
</table>

**Improving the process**
A number of options for improving the process can be considered:
- Simplify the process: this can be done by removing unnecessary steps/steps that don’t add value.
- Remove bottlenecks: e.g. the output of task X may be much greater than the input to task Y thus leading to queues/delays.
- Change the sequence of tasks: it may be possible to adopt electronic ways of working and then to run tasks in parallel (such tasks may have to be performed in series in a paper-based process).
- Redesign the process from scratch: identify the event that triggers the process and the outcome that is required and then fill in the gaps.
- Redefine process boundaries: it may be possible for service users to perform some tasks themselves - e.g. online self-service

**The Proposal**
Depending upon the scale and impact of a proposed change to the process, it may be possible to just make the change and inform the stakeholders. Where the impact of this change will be far-reaching and particularly if large resource requirements will be required to make the change (e.g. the purchase and implementation of a new IT system), then a proposal will need to be produced and submitted via the appropriate decision-making body. In this case, it may be appropriate to initiate a project to deliver the change.
The proposal itself should outline the current situation, the proposed change options and the associated costs, benefits and risks of each option, with the preferred option clearly identified.
[Click here for the CiCS project proposal template.](#)
Stage 3: Implementing the change

Once the proposed change has been approved by the relevant decision-making body, it can then be implemented. Depending on the scale of the change, a project may be set up to manage the implementation.

The following areas will need to be considered:

- **Project Management**
  
  [Click here for an overview of the CiCS project management methodology along with supporting documentation.]

- **Change Management**

  Significant work may be required to establish new ways of working and to gain stakeholder buy-in.

- **Benefits Realisation Management and Continuous Improvement**

  [Click here for further information about Benefits Realisation Management.]

  It is important to introduce reporting measures for the new process, which will help to identify the extent to which the process has improved and should also support the introduction of a continuous review schedule.