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Business Process Redesign in Information Technology Incident Management: A Teaching case

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Abstract
This paper consists of a detailed case narrative on how a leading Australian Finance organisation has utilised contemporary Business Process Management (BPM) concepts for improving the IT incident management processes within the whole organisation. The target audience includes practitioners who are interested in BPM case studies and Academics who may be seeking case studies for innovative teaching practices.

Key words
Business process management, Teaching case, Information Technology Infrastructure Library (ITIL), Reference models.

INTRODUCTION
The case method is recognised as a powerful way of teaching. It enables the instructor and the audience to focus on ‘real’ issues faced by real organisational situations (Felton, 1979). The primary focus of effective case method teaching is not on the transmission of information; it is on the development of multiple perspectives and analytical, evaluative, and problem-solving skills (Felton, 1979). These generic skills have now been identified as ‘crucial requirements’ within IS graduates, specifically in the Australian context (Edwards, 2000; Bruce et al., 2004). However, comprehensive and relevant teaching cases, in particular in the area of Business Process Management are presently a much sought, but, rare resource. This paper attempts to address this gap by providing a detailed case narrative that describes a business process redesigning initiative, recently conducted at a leading Australian Finance company to improve their IT incident management processes.

The paper will first introduce the case organisation, and will then provide an overview of the project background. The narrative then proceeds to discuss the current situation of the processes under investigation and summarises the different techniques applied within the project. Finally, the paper concludes with an overview on the proposed recommendations.

THE CASE ORGANISATION
The case organisation described herein is Suncorp. The Suncorp Group is one of Australia's leaders in banking, insurance, investment and superannuation. The Group focuses on retail consumers and small to medium business. Customers have access to 172 Suncorp retail outlets, including branches and agencies and 57 business banking outlets, predominantly in Queensland (Suncorp, 2005).

The Group has demonstrated a significant record of growth over the past few years. It is one of Australia's top 20 companies and is Queensland's biggest corporation with a market value of around $11.4 billion. It is Australia's 6th largest bank and 4th biggest general insurance group. The Suncorp Group is market leader in Compulsory Third Party insurance (53%) in Queensland, a major force in motor insurance (30%) and home and contents insurance (31%) and number 2 in Agribusiness lending, nationwide. Suncorp’s unique operating model has

1 For further details about the organisation, please visit the company homepage available at http://www.suncorp.com.au
driven share price growth of 72% in the past two years (Suncorp, 2005). Striving and succeeding in a competitive industry, Suncorp pays close attention to optimizing its business processes.

**PROJECT BACKGROUND**

An effective IT Help Desk is recognized as a fundamental requirement of organizations that are operating in a competitive environment. Although the cost of desktop hardware has been decreasing, the cost of supporting the user desktop and laptop infrastructure remains a major expense for most organizations. Pressure is on IT management to increase user service while reducing costs. The proliferation of desktops and laptops within organizations supporting network and server infrastructure present major support challenges to a customer’s IT organization. This challenge arises from the need to support users who are increasingly dependent on the availability of real-time information at their desktop or laptop to do their job. The primary role of IT Customer Services is to be the first point of contact for customer needs regarding access to the IT production environment. The Service Desk is a single point of contact (SPOC) for end-users who need help. Without this single point of contact an organization would face major losses in time spent on looking for ways to fix issues and get help. This whole process is generally known as “Incident management”.

Incident management is an essential process that provides organizations with the ability to first detect incidents and then to resolve the incidents as quickly as possible. The process also provides management with accurate information on the incidents impacting the organization, so that they can identify provide the required support resources and plan for their provision. All organizations experience incidents that impact the normal running of the business. As businesses have become increasingly dependent upon their IT services, the need to react quickly and effectively to any incidents that adversely affect IT services or infrastructure has become vital.

Microsoft (Battell and Brooks) states that the aim of the incident management process is to ensure that incidents are detected and recorded in order to provide information for problem management and planning activities. Following the recording of an incident, “Incident Management has a reactive task, i.e. reducing or eliminating the effects of (potential) disturbances in IT services, thus ensuring that users can get back to work as soon as possible (Van Bon et al. 2002). The Information Technology Infrastructure Library (ITIL) uses a broad definition of “incident”, stating that “An incident is any event which is not part of the standard operation of a service and which causes, or may cause an interruption to, or a reduction in the quality of that service” (Great Britain. Office of Government Commerce. 2003).

**THE CURRENT SITUATION**

Like many other organizations, Suncorp have developed multi tiered, Information Technology (IT) support services delivered by help desks, which comprise of multi levelled support staff who are responsible to achieve good customer relations by restoring the failed services/Incident in minimum time. A Business Process Improvement project was initiated in September 2004, with the aim of scrutinizing this core supportive process within Suncorp, and consisted of three main goals. These were:

- To have a consistent approach to addressing all IT related incidents being reported
- To establish the image of a “One Stop Shop” of the IT Help Desk (from Suncorp’s internal clients perspective), and
- To align the processes with the Information Technology Infrastructure Library (ITIL) model; which is a recognised ‘best practice’ guideline for IT service management.

The major stakeholders of the processes were identified and interviewed to gather information on what the current process was like. Key issues that the stakeholders perceived were extracted during the interviews and noted as pointers to addressed in the to-be phase. This section describes the current scenario in detail and also summarizes the issues identified to date.

**As-is Processes**

Incident Management at Suncorp, is concerned with restoring normal service operation as quickly as possible after the occurrence of an IT incident and minimizing its adverse impact on business operations. The current Incident Management process at Suncorp consists of the following four (4) main tasks:

- Incident reporting: Occurring incidents are detected and recorded.
- Incident analysis and diagnosis: Recorded incidents are investigated to give initial support to the customer.
- Incident resolution and workaround: Recorded incidents are closely examined in order to restore service.
 Incident review and closure: The given support and solution is evaluated and the recorded incident is formally closed.

It is important to emphasise that the scope of the initiative was limited only to the processes outlined above and hence does not include any subsequent processes such as problem management. The following description outlines how the four core sub-processes of the Incident Management are currently conducted at Suncorp. Please note that the technical terms used within this description is defined in the glossary attached in Appendix A.

Incident reporting:

The incident management process starts with the detection of a service failure. A service failure may be detected by a client or through the IT infrastructure, i.e. some systems might notice a service failure. Clients have three options to provide notification of the failure. They can contact the Service Desk by different means – by going to the desk, by telephone, through the intranet, by email, or by fax. They might also notify the Resolver Group directly through means of intranet, email, fax, telephone, or by seeing one of them. Suncorp also provides a third option – some users have direct access to the SOLVE system which is the IT Service Desk management software. Customers who have access to the SOLVE system can record the service failure details directly in the system and thereby raise the creation of an incident in SOLVE which ends the incident reporting process. If a member of the Resolver Group has been contacted, he/she records the details of the service failure in the SOLVE system which also leads to a raised incident. The Service Desk team also records the details of the service failure in SOLVE. As they are in control of the SOLVE system they do not necessarily raise a new incident record but moreover review existing incident records in the database to determine whether the detected service failure is caused by some unknown incident or whether it relates to a known incident which will, in that case be updated with the new details. The Service Desk, and customers who have access to the SOLVE system, records incident details in the SOLVE – Help system. Whereas in all other cases, an incident record is raised in the SOLVE – Problem system. In case the system detects a service failure, it either automatically raises a new incident record on the SOLVE system, or notifies the Resolver Group of the service failure. This can be done either via email, system tools, or pager. In all cases the recording of an incident triggers the Incident analysis and diagnosis process.

Incident analysis and diagnosis:

In case the Service Desk was notified of a service failure related to an existing incident, a Computer Support Officer (CSO) has to determine whom the existing (and updated) SOLVE record is assigned to. In case it is residing with the Service Desk, it is managed within the Service Desk environment, i.e. both the CSO and an Desktop Support Officer (DSO) manage and solve the service failure and update the SOLVE system accordingly. If the incident record is residing with the Resolver Group, it needs to be escalated to an appropriate Resolver Group – a task that is conducted by both CSO and DSO.

The logging of a new incident record in the SOLVE – Help system leads to a CSO reviewing its impact to systems, service, and customers involved in order to assign it a Severity level. Incidents assigned to Severity 1 or 2 must be handled by either a CSO or a Workflow Controller as follows; the Problem Manager needs to be notified to confirm the severity. This can result in a confirmation of severity 1 or 2. Alternatively it may result in the re-classification of the incident to severity 3 or 4. Also, the Whiteboard (the name given to email notifications sent to all resolver group staff to notify them of high severity Incidents) needs to be updated and the Resolver Group or the re-classification of the incident to severity 3 or 4. Also, the Whiteboard (the name given to email notifications notified to confirm the severity. This can result in a confirmation of severity 1 or 2. Alternatively it may result in the creation of an incident in SOLVE which ends the incident reporting process. If a member of the Resolver Group has been contacted, he/she records the details of the service failure in the SOLVE system which also leads to a raised incident. The Service Desk team also records the details of the service failure in SOLVE. As they are in control of the SOLVE system they do not necessarily raise a new incident record but moreover review existing incident records in the database to determine whether the detected service failure is caused by some unknown incident or whether it relates to a known incident which will, in that case be updated with the new details. The Service Desk, and customers who have access to the SOLVE system, records incident details in the SOLVE – Help system. Whereas in all other cases, an incident record is raised in the SOLVE – Problem system. In case the system detects a service failure, it either automatically raises a new incident record on the SOLVE system, or notifies the Resolver Group of the service failure. This can be done either via email, system tools, or pager. In all cases the recording of an incident triggers the Incident analysis and diagnosis process.

Incidents (re-) classified as Severity 3 or 4 are evaluated to determine if they can be resolved directly through the Service Desk. In that case, the Service Desk starts the Incident resolution or work-around process. If a Severity 3 or 4 incident has been handed-off to a Resolver Group and if a Severity 1 or 2 incident has been handled as outlined above, it is decided whether a SOLVE Problem Record needs to be created or updated, or whether a SOLVE Service Request is created. In the latter case, the Service Request Process is triggered which is not in scope of the Incident Management process.

In the former case, the Resolve Group checks if the incident is correctly assigned to an appropriate group. If not, it is re-assigned to an appropriate group; either the Service Desk or a Resolve Group. If it is correctly assigned, the Resolver Group reviews all impacted services, systems and customers and then applies an appropriate problem diagnosis technique to identify the incident cause. Once a correct resolution diagnosis has been carried out, the Incident resolution or work-around process is triggered.
Incident resolution and workaround:

The Incident resolution or work-around process is triggered either through the Service Desk or through a correct resolution diagnosis from the Incident Analysis and Diagnosis process. In either case, an appropriate solution or work-around is selected by the accordant group (CSO, DSO, or Resolver Group). This task may include expertise knowledge, research, testing, vendor liaison, or knowledge sharing. Once selected, the solution or work-around is tested and implemented. After implementation, the customer is contacted via email or telephone to confirm if the service has been restored. A confirmed restoration of service triggers the Incident Review and Closure process. If the service has not appropriately been restored, it is determined if the incident requires re-assignment to another group. If not, another solution or work-around is selected and applied. Otherwise, the incident is re-assigned by either Service Desk or Resolver Group and is analyzed and diagnosed again.

<table>
<thead>
<tr>
<th>Staff</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mis-diagnosis of problems.</td>
<td>SLA’s/OLA’s not aligned or defined</td>
</tr>
<tr>
<td>Customer contact details not always sufficient to allow follow-up</td>
<td>WHITEBOARD – Lack of clarity of purpose, use and distribution as well as large numbers of Whiteboards</td>
</tr>
<tr>
<td>Inappropriate assignment of incidents</td>
<td>Ownership not clearly defined</td>
</tr>
<tr>
<td>Insufficient details logged when problems reported</td>
<td>Defined process does not cater for concurrent assignees</td>
</tr>
<tr>
<td>Slow response times by resolver groups</td>
<td>Lack of coordination with multiple incidents for the same issue</td>
</tr>
<tr>
<td>Lack of specialist support at IT Service Desk</td>
<td>Updating of record is time consuming and can be disruptive when attending Severity 1</td>
</tr>
<tr>
<td>Time of occurrence of incident is not always accurate</td>
<td>Standard for closing on SOLVE not defined and inconsistent.</td>
</tr>
<tr>
<td>Time taken to make decisions around assignment is often a problem</td>
<td>Problem Management notifications not carried out in a consistent order</td>
</tr>
<tr>
<td>Updating of records not always taking place</td>
<td>Ownership of incidents needs to be clarified.</td>
</tr>
<tr>
<td>Data quality in SOLVE records from IT Service Desk is not always sufficient</td>
<td>Timeframes to reassign incidents when incorrectly assigned is an issue</td>
</tr>
<tr>
<td></td>
<td>Standard for closing SOLVE records is not defined and inconsistent.</td>
</tr>
<tr>
<td></td>
<td>Multiple incidents created for the same issue</td>
</tr>
</tbody>
</table>

Exhibit 1: Categorisation of elicited issues

Incident review and closure:

The Incident review and closure process is merely triggered by a restored service. It is then determined which of the following resolution communication actions are required:

- a problem manager is notified of the incident resolution
- a final Whiteboard with the incident resolution is issued
- stakeholders are informed of the incident resolution (if applicable)
- a RVA is removed (if applicable)
- a final customer notification of restoration of service is issued
- the Service Desk knowledge base is updated

After communicating the resolution, it is evaluated if the resolution was permanent or if additional action is required. In case of a temporary work-around, a SOLVE Service Request for a long term solution is raised based on the SOLVE Problem Record. This triggers the Problem permanent solution process which is not in scope of the Incident Management process. Also, the SOLVE record is closed on the system, independent from the type of record (Help, Problem, Service Request). In case a PIR / post-mortem procedure is required, the Problem Manager conducts this procedure. In either case, a Problem Analyst conducts analyses of SOLVE statistics and
trends to determine possible underlying problem trends. If some are found, the Problem permanent solution process is triggered, if not, the incident is finalized and closed.

**Observed issues**
A range of issues were diagnosed during the data gathering phase. The project team has categorized them into four (4) main groups, based on the different perspectives (see Exhibit 1). These categories are:

- **Staff**: Issues pertaining to the IT staff at the Help Desk
- **Technology**: Issues pertaining to the Technological applications currently utilized by the Help Desk
- **Process**: Issues pertaining to the overall procedural flow on how the incidents are managed at present.
- **Clients**: Issues pertaining to the internal clients of Suncorp who report the IT incidents.

**METHODS AND TECHNIQUES APPLIED**
This business process improvement initiative employed a combination of techniques to achieve its improvement goals. Overall, the entire business process improvements efforts were conducted following the ‘Business process life cycle’ framework (Rosemann, 2001). The ‘modeling’, ‘analysis’ and ‘to-be’ phases; where graphical depiction of processes is a crucial aspect, were supported and conducted using the ARIS tool set and its embedded eEPC modeling methodology. Detailed **focus groups** were conducted to elicit information to derive the as–is process models. These focus groups also supported the elicitation and categorization of current issues. The elicited issues were synthesized within continuously evolving **issues registries**, which supported the decision making process (i.e. prioritization) for the to-be recommendations. A comprehensive search on **best practices** was also conducted within the analysis and to-be phases to identify and justify potential recommendations for the processes under investigation. Figure 1 depicts how they all ‘fit’ together. The following section will briefly introduce these individually.

**The Business Process Management lifecycle Framework**
A business process lifecycle, in general, is a high level description of the business lifecycle from a process perspective, and contains three phases; design, implementation and controlling. But what happens if the business goals change and the organization need to change its processes? What if the market requires the business to raise their level of performance requiring the organization to improve particular processes? It is in scenarios like these where process engineering becomes useful. Rosemann defines the term **process engineering** as “[...] a holistic approach for managing the entire process lifecycle” (Rosemann 2001, p 2). Every process has a lifecycle which contains several different steps. **The Process Lifecycle** referred to in this paper, contains seven steps as illustrated in figure 3. As figures 2 and 3 indicate, this narrative reports only up to the first four phases.

**Process identification:**
The goal of this first step, is to identify the starting point for the process change/improvement project; in other words to determine which of the processes have the highest priority when it comes to potential of change/improvement. Hammer and Champy (1994) define three criteria for selecting the right processes as; (a)
Dysfunction: "Which processes are in the deepest trouble?"; Importance: "Which processes have the greatest impact on the company’s customer?"; and Feasibility: "Which process is the most susceptible to successful redesign?". This step was already conducted when the project team commenced work, which resulted in identifying the Incident Management process for this BPM initiative.

**Process modelling (as-is):**

After having selected the right processes, the next step is to describe all the contents of these processes in detail (how things work in the real world at the current time), in form of models (as-is models). Key elements to note from this phase were: (a) the clearly defined objectives for modelling; (b) the use of an appropriate tool; (c) the use an appropriate technique/language; (d) having a documented set of modelling conventions; and (e) having a proper strategy to collect appropriate information for deriving the models (i.e. focus groups, interviews, and other levels of access to data).

**Process analysis:**

The objectives of the process analysis is to “[...] identify the objectives of the process and list current shortcomings” (Rosemann, 2001, p 12). This is done by asking questions such as the reasons for executing of the process, current problems with the process, what resources are involved in the process etc.

**Process improvement (to-be):**

The process analysis (together with the as-is model) lays the foundation for the process improvement step in The Process Lifecycle. If objects for improvement have been identified in the process analysis, these changes will be modelled in a new version of the as-is model, as the to-be model. If no relevant objectives have been identified, the as-is model can be used as the to-be model. There are three main areas where improvements need to be sought for: (a) improvements related to the specific outcomes of a process; (b) improvements related to the flow of activities of a process, (c) improvements related to resources involved in a process (Rosemann, 2001, p 15).

**Process implementation:**

In this step, the to-be model is implemented in the organization. As stated by Rosemann (2001), this has consequences both from an organizational and an IT point of view; new work procedures require the organization to train staff members involved in the process changes, and development of new software or configuration of existing software may be required (Rosemann 2001).

**Process execution:**

Process execution is the first step after a process engineering project has finished, and will hopefully show the expected benefits of the process changes/improvements. Minor adjustments to the processes that have been changed or improved are usually made, before the processes of the organization once again are stabilized (Rosemann, 2001).

**Process monitoring/controlling:**

The last step in The Process Lifecycle is an “[...] ongoing delivery of current performance data” which “[...] is a prerequisite for the fast adoption of business processes to new requirements” (Rosemann 2001), p. 29). Process monitoring covers the collection of data in regards to activities carried out at the current time, and process controlling means to accumulate and evaluate the data collected (Rosemann, 2001).

**ARIS toolset**

The ARIS tool set was used to derive, distribute and maintain all process models related to this project at Suncorp. ARIS stands for “Architecture of Integrated Information Systems”, it is an integrated modelling package that was developed by Prof. August-Wilhelm Scheer, Institute of Information Science, University of Saarbruecken. This tool has been recognised as the global market leader among Business process management tools (Gartner Inc, 2005).

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2 More comprehensive information about the tool can be obtained from the IDS Scheer web site: http://www.ids-scheer.com/
eEPCs

The (e-EPC) process modelling technique, derived by IDS Scheer AG (Sousa, Van Aken and Groesbeck 2002) has been used to model the as-is and to-be process of the Suncorp IT incident management process. Both model types have been created using the ARIS Toolset.

Event Driven Process Chain (EPC) models describe or illustrate a process in terms of an alternating and procedural sequence of Events (state) and Functions (activities) (Davis 2001). An e-EPC extends the basic EPC by presenting additional information related to the process, such as: Process participants in terms of organisational elements; and Process data and information systems.

Suncorp used eEPC models to support this process improvement initiative as they provided; (a) a generic view of the processes. Therefore, a conceptual schema or design of the IT incident management process can be presented, which is not tied to any specific implementation technology; (b) the models also enabled depiction of a high level view of the IT incident management process in a way that can be easily understood by both top level management and any other level within Suncorp; (c) the technique enabled to depict resource utilisation and time requirements in the flow of tasks within the IT Incident Management process, thus, adding a valuable information elements to the process analysis phase.

Focus groups

The focus group method is a depth technique, which seeks to elicit rich qualitative data about a participant's experience with a product, service or concept. Generally focus groups consist of 6 to 8 participants and a moderator who ensures the correct questions are asked and facilitates the discussion process. They usually run for around 60 – 90 minutes (Edwards, 2001).

Focus groups for the IT Service Desk were conducted in order to allow IT Service Desk customers to elaborate and develop their views in response to a series of statements/questions on the IT Service Desk as a whole. It also encouraged IT Service Desk customer’s interaction and facilitated discussion surrounding the issues and increased the depth of response. In total 18 customers from Brisbane and 9 from Sydney were involved in semi-structured focus groups. All members of the group were offered the opportunity to participate within the process. The responses have been focused around several key topics:

- Experiences (good and bad) with the IT Service Desk
- Improvements for the IT Service Desk
- Common and painful problems

These focus groups were primary input for deriving the process models and identifying the core issues within the existing processes.

Issues Registries

An issues registry is a synthesised log of all identified issues pertaining to the project. Information such as what the issue is; when, how, and by whom the issue was identified; when the project team plans to address the issue; potential resources to assist in the resolution of the issue; the level of perceived priority of the issue, how they relate to the project objectives etc are documented in tabular format. Please note that sample Issues Registries used within this project can be provided upon request.

Best practice identification

‘Best practice’ research, generally entails the search for other examples of how things are done better. This can be done by collecting qualitative and quantitative information (generally known as ‘benchmarks’) about related or similar processes to the one under investigation. ‘Reference models’ are another way to capture information about best practice. They refer to process models that do not describe one enterprise but an entire industry. A reference model can serve as a recommendation for the design of new processes.

One such Reference model that was deemed relevant within this project was the ITIL framework.

ITIL (Information Technology Infrastructure Library) is a process-based methodology that delivers a set of IT service management best practices that can help organisations align their IT with their business requirements, improve service quality, and lower the long-term cost of IT service provision. These best practices are applicable to all IT organizations, no matter what their size or what technology they use. Originally developed by the British government in the late 1980s, today ITIL is the world’s most widely accepted approach to IT service management (Great Britain. Office of Government Commerce. 2003).
TO- BE RECOMMENDATIONS

The above discussed methods were applied to proceed with the final recommendations. The primary objectives of the project staff were as follows:

• To have a consistent process
• To have a cleaner process flow
• To maintain correct owner identification
• To ensure all information is collected at first call
• To confirm that there was a correct structure to carry out incident management
• To have a clear identification of Incidents and Problems
• To have consistency with handling problems/incidents in all areas
Table 1: Proposed Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Activities</th>
<th>Benefits</th>
<th>Objective(s) Met</th>
</tr>
</thead>
</table>
| Agree Incident Ownership principles across the IT group. | • Define scope of ownership  
• Agree principles for ownership  
• Create rules for handover of ownership depending on decision  
• Define role of Incident Coordinator function for incident coordination across multiple groups.  
• Define mechanism for assignment of Incidents within Resolver Groups  
• Service catalogue for resolver groups to support ownership decisions  
• Agree that Service Desk Manager or Incident and Problem Manager have greater responsibility/authority for follow up of outstanding Incidents and Problems assigned to other resolver groups. | • Defined responsibility for ownership and incident resolution  
• Central area responsible for following up on calls on behalf of customers  
• Timeliness of communication with customer | - Correct Owner identification |
| Complete Service Improvement program to Implement the “To Be” process | • Confirm integration with other processes eg: Problem, Critical Incident.  
• Review and Acceptance of models by resolver groups.  
• Metrics gathered to benchmark the new process for ongoing measurement and reporting  
• Document procedures behind process  
• Impact Assessment  
• Change Management Plan  
• Communication  
• Pilot  
• Training | • Aligned to ITIL Framework  
• - Consistent Process across all of IT | - Alignment to ITIL Framework  
- Consistent Approach  
- Consistent Process  
- Cleaner Process  
- Consistent handling of problems/incidents in all areas  
- Understand Interfaces with other processes  
- Consistent handling of problems and incidents in all areas |
| Complete service improvement program to implement the use of SOLVE Help for all Incident Management (To be carried out as part of SOLVE Program of initiatives) | • Complete full impact analysis  
• Establish interaction with other processes and Solve Systems  
• Estimate development & training costs for SOLVE (incl. 3 queues)  
• Rename HELP to Incident  
• Make sure changes are reflected in both Mainframe and web versions  
• Understanding how outstanding problems and Historical Data will be handled in INCIDENT  
• Mechanism to assign an incident to multiple groups (including reporting) – Parent and Child records.  
• Investigating required changes to system generated incidents, as they are currently all  | • ITIL compliant Incident and Problem Management  
• Increased ITIL maturity scores if cause and solution details added to Solve Help (Incident)  
• Able to produce accurate statistics for Incidents and Problems.  
• Able to use Incident Analysis to identify problems  
• Remove confusing terminology. | - Incorrect Incident and Problem Management  
- Use of multiple call logging systems |
| Complete service improvement program to implement and agree OLA’s for Incident escalation times | • Define times for resolver groups to hold an incident before passing to another resolver group (aligned to severity definitions)  
• Investigate whether SOLVE can measure and alert.  
• Timeframes associated with escalation (to resolver group / management)  
• Guidelines for setting frequency of contact expectations with client  
• Define rules for when clients are contacted in relation to service breaches | • “elapsed time to repair” should decrease as Incidents are more efficiently escalated to the next level of support  
• Customer contact more efficient | - Clear understanding of OLA’s/SLA’s between resolver groups.  
- Timing of passing a call to another resolver group  
- Ensure Service Desk understand SLA’s/OLA’s |
| Complete Service Improvement program to better educate customers of the SLA’s | • Completion and publication of Corporate SLA and External Service Catalogue by the Service Desk  
• Alignment of vendor underpinning contract to Suncorp SLAs / OLAs  
• Mechanism for communication of expectations to Client from Incident owner | • Customer expectations better set  
• Help Desk and resolver group staff can better manage their workloads rather than having customers queue jumping | - Ensure Service Desk understand SLA’s/OLA’s  
- Ensuring Customer expectations are managed |
| Implement procedures to Improve the use of the Knowledge base | • Incident Resolution to update Service Desk Knowledgebase(s)  
• Define process to ensure appropriate transfer of information for inclusion in Knowledgebase  
• Provide wider access to Knowledgebase within IT  
• Resolver groups available to provide training to the Service Desk. | • Increased information available to Helpdesk Technicians and other resolver groups  
• Increased knowledge and skills of Service Desk Technicians  
• Reduced errors in assignment of calls. | - Ensure all information collected at first call  
- Consistent handling of problems/ incidents in all areas |
| Improve the Quality of SOLVE Data | • Incident and Problem Management have greater responsibility/ Authority for the quality of SOLVE data entered by other resolver groups.  
• Incident data to be maintained at a consistent level by:-  
  o Consistent capture across channels & mechanisms  
  o Consistent updating of information through Incident and Problem Management  
  o Consistent rules across all groups regarding information capture  
  o Consistent coding for Incident Closure  
  o Automation of data capture / reporting  
  o Further investigate the use of alerts in Solve | • Faster resolution of issues | - Ensure all information collected at first call  
- Consistent handling of problems/ incidents in all areas |
Table 1 summarises the proposed recommendations, together with a summary of the steps (activities) involved to complete the recommendation, the identified benefits and impacts, and how they relate to the primary objectives listed above.

CONCLUSION

This paper documented a detailed case narrative on a business process improvement project that was conducted at a leading Australian Finance organisation. It has vividly depicted how a combination of modern BPM concepts can be applied within a single BPM initiative to achieve both IT and Organisational objectives. The case narrative is rich and hence can be designed as a flexible tool for effective experiential learning within a related domain.

This case narrative can be categorised as a problem-defining case (as it presents participants with the details of a managerial problem, which they have to identify and define) and a concept-application case (as it recreates a set of circumstances in which a particular concept, theory, or method can be applied) (Lynn, 1992, pp.16-17) and is primarily catered as a teaching case that can be utilised within Information Systems and Business courses focusing BMP theory and concepts.

Detailed teaching case notes, summarising different pedagogical aspects related to the narrative; a set of related potential assessment items with model answers; an extra information pack which includes live discussions and presentations of the actual project team has also been created to enrich this teaching case. These have not been included here due to space constraints but is available upon request from the principal author.

This teaching case was applied within a Master of Information Technology – Core Information Systems Major unit, titled ‘Process Engineering’, at a leading IT faculty in Australia, Queensland, in Semester 1, 2005. Feedback from students have been very positive. Some sample citations include:

“It was a very challenging project, but it really made me see how to apply the theory that we learnt in class in a systematic and practical way”.

“It was the most ‘real’ assignment that I recall doing in my time at uni. I feel more prepared for the ‘real world’ with this experience.”

“I learnt a lot about teamwork, time management and how to present our work to meet professional standards”

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APPENDIX A: GLOSSARY

**CSO (Customer Service Officer)** – This is the job title of the Staff that work on the IT Service Desk. They are 1st level support staff.

**DSO (Desktop Services Officer)** – Support staff who resolve incidents usually be visiting the customers desk. They are 2nd level support staff.

**Meridian Mail IVR** – (Interactive Voice Response) The system used to record RVA messages.

**PIR / post-mortem procedure** : (Post Incident Review) A meeting held after each major Incident (Severity 1 or 2) to determine the root cause of the Incident so it can be logged as a Problem and permanently resolved.

**Problem Analysts** – Are not support staff. They do not resolve incidents. They analyse incidents resolved by others to find trends or recurring incidents and have them permanently fixed.

**Resolver Group:** Any IT Support Team other than the Service Desk. They are 2nd and 3rd line support as they resolve calls that cannot be fixed by the Service Desk. Resolver Groups are from both Application and Infrastructure Services.

**RVA:** (Recorded Voice Announcement) A message recorded by the IT Service desk to notify staff calling the Service Desk of existing Incidents.

**SOLVE system:** IT Service Desk management software

**SOLVE – Help system:** The call logging system currently used by the IT Service desk to log incidents.

**SOLVE – Problem system:** The call logging system currently used by all resolver groups other than the IT Service desk to log incidents.

**Whiteboard:** The name given to email notifications sent to all resolver group staff to notify them of high severity Incidents (Severity 1 and 2). Subsequent Whiteboards are sent to provide updates and resolution details.

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