

# City IT Portfolio Management

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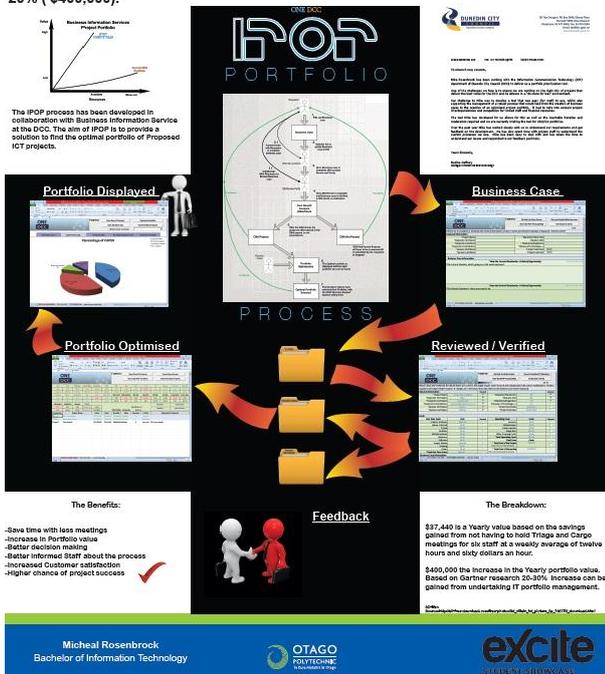
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## ABSTRACT

The Business Information Service (BIS) department of the Dunedin City Council (DCC) require a system to select an optimal portfolio from competing projects. Information Technology Portfolio selection is an integral decision in many organisations. It must make justifiable and informed decisions on investments where the effective application of limited resources is as essential as the process itself. This paper discusses the implementation of a structured framework for IT Portfolio selection through a decision support system (DSS). This is called the Information Technology Portfolio Optimisation Process (IPOP).



"The ONE\_DCC ICT Portfolio Optimisation Process - IPOP has addressed the problem of projects with little or no value entering the portfolio. This improved process which has been in place since June 2013, results in an optimal portfolio benefiting the Council with projected savings of \$37,440 annually & an increased portfolio value by 20% (\$400,000)."



The Dunedin City Council (DCC) is a Municipality comprising over six hundred staff; it is responsible for the local governance to the Dunedin City Area of a total of approximately 120,000 residents. The area of the organization that handles all things Information Technological is the Business Information Services (BIS). The BIS is experiencing pressure from various sources, both internal and external to "do more for less" and to be more effective with what they do have.

With an increased awareness of spending and a limited amount of resources to work with, the BIS have more projects requested than resources to accommodate them, which is a big problem for them. If BIS has 60 project requests in a yearly budget cycle then they have  $2^{60}$  ( $11,529,215 \times 10^{11}$ ) possible

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project selection choices, of which most are not optimal; but is a large amount never the less.

The problem can be coupled with conflicting strategic management priorities, dictating projects and priorities to BIS. These projects sometimes referred to as "Pet" or "Squeaky Wheel" projects, where the loudest or most noticed project gets priority and valuable portfolio resources, thus resulting in not doing the most important projects, ending up in a less effective portfolio.

The One DCC project has addressed the problem of projects with little or no value entering the BIS portfolio, this improved process results in an optimal portfolio which benefits the Council with better decision making capabilities, saving time and money.

The process used (IPOP) (figure 1) was created through an iterative collaboration and supervision with two senior staff at BIS, where the understanding the problem space changed and narrowed with time into a strong and robust process which could be rolled out to solve any general project portfolio optimisation.

The ICT Portfolio Optimisation Process (IPOP) starts with the Requestor, this is a Council employee, it could be from any council functional business unit like Parks and Recreation, Roding, Museums or Libraries etc.

The Requestor wants a project undertaken and submits a business case, the business case is structured in a way to ensure they have their supervisors sponsorship this ensures accountability. If the Requestor can't finish the business case for various reasons some of which can be things like not having all the required information, the Requestor sends a partially filled out or fully filled out business case to BIS.

BIS receive the business case and if incomplete they communicate with the Requestor to finish the business case. Once the business case is completed, BIS undertakes a Review of the business case to make sure it is accurate and paints a realistic view of the need or opportunity for needing a project in the first place. The Review is where BIS collaborate with the Requestor to alter the business case to reflect the most accurate picture and Verify its contents to make sure it doesn't contain any false information.

Once BIS have finished its Review and Verification, it submits the business case for a Cost Benefit Analysis (CBA) check, the reason for this is to be a first stage cull where projects with costs outweighing there benefits don't progress

to the potential portfolio. With business cases with a positive CBA check moving forward to the pool of passed projects, at this point whether passed or not, feedback should be given to the Requestor.

Once in the pool the decision makers can view the contents of these projects, this affords the decision maker not having to go through potentially up to 100 business cases. The portfolio optimizes the projects by maximizing the value and keeping within certain constraints like budget and hours.

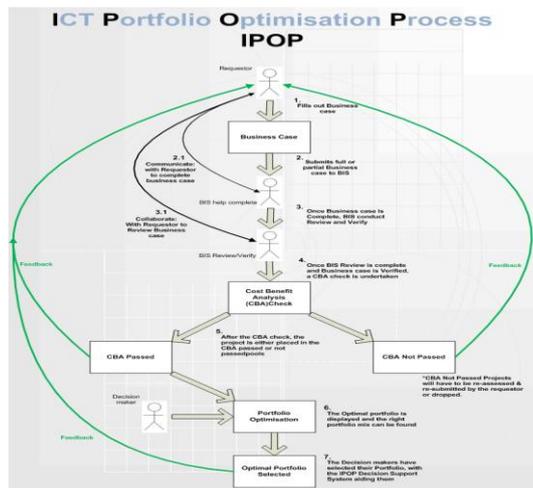


Figure 1

The Decision makers have the optimal portfolio and should have the ability to mix the portfolio to see different scenarios, the final decision is up to the decision makers but with staff view open on the portfolio any large deviations should have to be justified, this ensure transparency and accountability by making the process as visible as possible.

One DCC have performed a Task Analysis to outline the tasks that the system needs to achieve, a dialogue diagram was constructed to provide a graphical method of specifying the sequence of screens that need designing. It was made in regular interaction with the Client of which is important because as the designer you need to know how they will use the system, not how I would use it.

The highest level view of the IPOP process involves the Excel applications interacting with the closed applications in three folders, each closed business case stores its own individual project data so each folder is essentially a database, accessing the data needed from the portfolio folder (Figure 2).

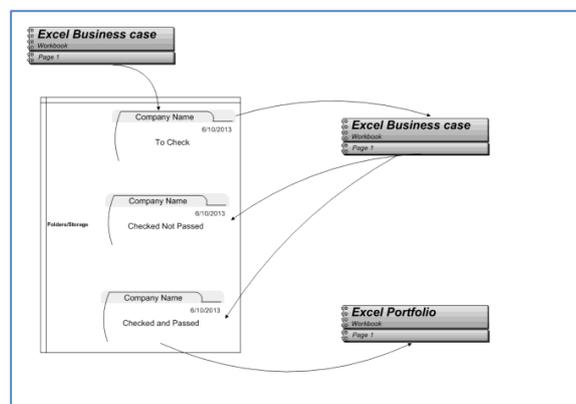


Figure 2

The One DCC project has had many business technicalities, the biggest technical highlights would be to implement the sending of business cases through email, gathering of data from closed workbooks in Folders.

To automate as much as the IPOP process as possible and help eliminate User error One DCC implemented the sending of the partial or finished business cases as email attachments to BIS for checking or help to finish. Researching ways to accomplish this found that VBA and Collaboration Data Object (CDO) could work with no errors which usually pop up to warn the Users.

The automated gathering of data needed for the portfolio from a folder of closed Workbooks required the use of VBA and ActiveX Data Objects (ADO). An example of this is in my View portfolio projects worksheet where the user can click on and highlight a project to view and then choose different parts of the project to view each time getting this data as a selection target a worksheet event.

This report has shown how One DCC has worked with their Client to provide a business process called IPOP, this process has the potential for successful business change as the Auditor General states "Business benefits are derived when people enabled by technology do things differently"<sup>26</sup> and these benefits come in the form of saving time and money with supplementary benefits such as improved customer service and increased moral.

The most exciting feature to the One DCC project is that it is such a simple, robust and scalable process. This allows it to naturally fit with Cloud technology, in the future it could become a central Software as a service in the IT or general portfolio arena. Furthermore my Client has asked about using it throughout the DCC for general project requests and optimization with Decision Support.

The One DCC project would like to continue work into expanding IPOP, taking into account synergies, and putting a dollar value on things like risk and intangible benefits.

The One DCC project has seen that ITPM needs to be done better, current frameworks and software are heavy and have high overheads, IPOP is a process with a lightweight framework to give an organization the support they need to make informed and important decisions.

We have been working closely with the Council to help them realize exactly what the problem that needed to be addressed was, and then forming the IPOP process around this, which is being used for the next year's budget to support future decisions. This brings projected benefits of saving time (624+hrs per Year) and increase portfolio value by 20% (Projected \$400,000increase) with additional benefits such as improved customer service.