IT Procurement Framework for Ara ICT

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Abstract

This paper outlines the process and outcomes for the creation of an IT Solution/ Procurement Evaluation Framework for the Ara Institute of Canterbury's Information Communication Technology (ICT) department. The methodology used to achieve this result was interviewing best practices (e.g., nine boxes), in which criteria and requirements were gathered in order to build a wide coverage of evaluation for IT procurement decisions.

Keywords: IT Procurement Framework, Evaluating Information Technology (IT) Solutions, Nine Boxes, Interviewing Best Practices.

1. INTRODUCTION

The current process for determining what IT solutions is implemented at Ara Institute of Canterbury is based heavily reliant on the IT managers experience themselves, with no consistent documentation process

The goal of this project is to create a standardized IT Procurement Evaluation framework that will assist Ara's in-house ICT team to compare potential information technology solutions. This framework will facilitate the creation of documentation to justify IT decisions for auditing purposes, and to increasing awareness for support and handover within the department. The framework is offering a great level of flexibility with regards to its implementation. This is because it enables 5 solutions in total to be evaluated against one another but can successfully accommodate as little as one. There are approximately 600 determined criteria across 26 different categories already to go. But there is also sufficient customizable capacity in which new criteria can be added or changed, with little hassle. All results are automatically calculated requiring little input. Specific functionality with regards to weightings has been added where specific weighting can be customized depending on the current needs. For example, price is worth 10% of the score.

Ease to use has been at the forefront of the design, with the use of multiple-choice boxes and rating on a scale, the use of manual input has been minimised down to a note, naming and description areas. This template has been designed to be used in an entirely online environment with no local software required for use. An inbuild script using office scripts has been attached to the framework for easy resetting, saving the manual resting task of up to 9000 records (assuming 5 solutions used).

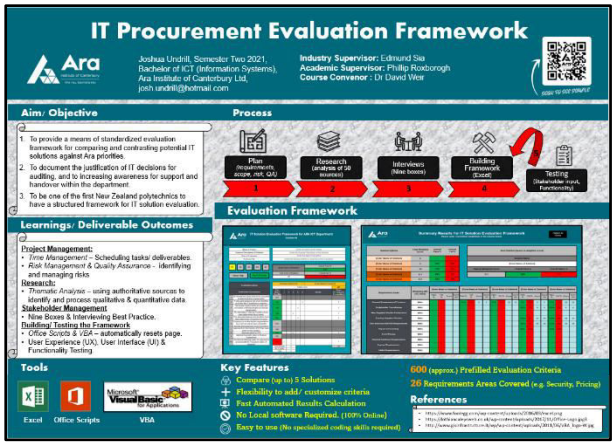

Figure 1: IT Procurement Framework Poster

2. METHODOLOGY

The methodology used for this project consisted of interviewing best practices and the use of nine boxes interviewing technique. This methodology was selected due to strong focus on requirements gathering, as the project centred around gathering specific criteria that IT solutions are evaluated against.

The best practice for interviewing for requirements is far reaching in terms the number of areas. For example, there is a strong emphasis on planning, such as preparing a brief list of prioritized questions, and communicating with stakeholders prior to the interview was essential to a productive outcome. (Ambler, 2021). It is also advised that the use of recording is utilized whenever consent can be established. This is important because it enables an interview to be more of an actively engaged within an interview, as they can focus on processing the response later when more convenient. (Adams, 2015).

The nine-box framework is a technique used during the requirement gathering process to gain a better understanding of a situation within an organisation. The framework looks at questions from two angles firstly level of depth (for example, initial opening questions, specific questions related to opening questions, and then followed by confirmation questions). The second angle looks at a specific area (for example the problem experienced, the impact of the problem, and the desired outcome or solution.) The use of the nine-box framework's two-angle approach facilities a logical flow from the problem to the solution/ desired impact. This is because the framework is set out like a table, in which for each specific area (problem, impact, solution) a different level of question should be asked to get a clearer and more in-depth picture. (Tung, 2009)

3. PROCESS/ DELIVERABLES

Planning – The project began with some initial requirements gathering along with scope, time scheduling risk management and quality assurance planning.

Researching – approximately 50 authoritative sources were then analyzed for this project using a thematic analysis approach. In which industry IT evaluation criteria was sought, then broken down into categories, resulting in approximately 300 extracts.

Interviewing Stakeholders – Four stakeholders were interviewed using the best practice techniques identified in a wide range of IT areas. For example, the service delivery area,

IT managers in the teaching & information systems space & and the ICT director in relation to policy considerations.

Building the Framework – Using the Microsoft Excel tool in combination with the Office Scripts service, a framework template ready for implementation was build, ready to be picked up and used.

Testing – The framework was then tested for to ensure expected values were received. This included from a requirements aspect, so ensuring the framework returns an output which is expected (criteria comprehensive). Tests were then also carried out for the formulas to ensure they were performing as expected (especially as formulas can up to 1600 characters long)

4. CONCULSION/ LEARNINGS

This IT Evaluation framework successfully met the requirements given determined during the scope and project gathering planning. This framework facilities an efficient evaluation of a wide range of IT solution areas. For example, software, hardware, and IT services. The current process used created a heavy reliance on the IT management staff, as without them no one else would have any documentation or foundation to pick up and evaluate a solution. Whereas this solution anyone in that role can utilize to get an outcome that aligns with Ara's priorities/ goal areas.

This structure evaluation tool gives Ara the opportunity and point of difference, to be the first New Zealand Polytechnic to currently make use of a complete structure evaluation tool for their IT procurement decisions.

Making use of the best practice that was gathered from the methodology during the interviewing process, made it clear that preparation and prioritization is the key factor on success of stakeholder interviews. For example, some interviewees were blunter and more direct, so having a list of predetermined questions enabled a more productive and well covered (in terms of areas) interview.

The duration of some interviews ranged from 45 minutes up to 1 hour, so the use of a recording device as recommended in the methodology, as suggested allowed the focus to move from note taking and more towards active participation within the interview.

The use of nine boxes in practice was not as structured, with the order of events often occurring in a different order. For example, the impact may be bought up before the problem. Concluding that the process does not necessarily need to be in its intended order for a successful outcome.

5. REFERENCES

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