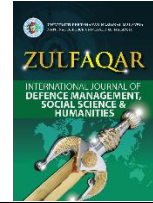




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Identification of Need in Capital Asset Procurement

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ABSTRACT

The main objectives of procurement are to acquire the right product with the right quantity. The procurement office gathers all the requirements and identifies possible suppliers. This involves obtaining the lowest purchase price for high quality products, ensuring suppliers reliability and maintain transparency in the procurement process. This paper reviews the current study of procurement process and explored the prerequisite in identifying the need before the procurement process begins based on qualitative studies through semi-structured interview and document analysis in the perspectives of Defence landscape. The findings revealed that the current procurement process should include the concept and requirement analysis before making decision on purchasing the capital asset. Based on the study, findings it will be benefitted to the ministry and other government agencies on requirement to be consider before purchasing a new capital asset.

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Introduction

Procurement is a process of buying products or services beginning from getting requirement from user until receiving the product or services from the supplier (Eyaa & Oluka, 2011). The procurement process seeks to achieve the best product with the highest quality, however it does not necessarily mean to buy with the lowest cost. Procurement for capital asset need to go-through a more detail process which include identifying technical specification and financial analysis (El-Akruti & Dwight, 2013). It is crucial to implement especially with limited budget, besides prescribing a time frame that adheres to technical specification (Gelderman, Semeijn, & Vluggen, 2017, Schuman & Brent, 2005). Capital asset acquire need to be in-service, operational, maintain and used for decades (Glas, Hofmann, & Eßig, 2013; Stenstrom & Parida, 2014), therefore the procurement process should be plan meticulously.

According to Arena et al. (2014), there are four stages involved in capital asset acquisition which must be carried out in a very disciplined manner.

- a. Planning - In the planning stage, the user needs to define the requirement and formulate the concept of the capital asset design. The said process begins with evaluation of requirement and purpose before arriving at the decision to procure the asset (Spires, 1996).
- b. Design - The design stage involves engineering drawings, specifications and calculations to support the experimental testing phase.
- c. Contracting and Financing - This stage involves expertise of professionals in the areas of commercial bidding, negotiating, contracting and financing.
- d. Manufacturing and Building -This stage involves activities that complete the project. Physical acceptance is also embedded in this stage.

Capital asset procurement are parallel with the organisation requirement in which to fulfil organisation function (Barreca, 2012). After determining the requirement, organisation have to looked into the budget allocation in order to maintain and sustain the asset life through-out it service. Procurement process is lengthy. Organisation required the best asset they could procure with their limited budget indeed value for money (David & Burn, 2008). Besides, many suppliers in the market could provide capital assets that fulfil organisational requirement, however this depends on the choice made by organisations in deciding the best deal that can be offered by the supplier such as warranty on the asset for a certain duration (Arena et al., 2014). After an organisation has chosen the best offer proposed by the supplier, the process is continued with tendering process. Lastly, the procurement process ends with installation, which also involves the acceptance process.

In ensuring the organization obtains the capital asset as required, understanding the needs and the function of the assets is essential. This requirement should be identified before the procurement process begins. Many issues on asset procurement were related to:

- a. Purchase asset that failed meet the organization operation (Liang, Jia, Lian & Li 2016, May).
- b. Purchase asset does not fulfil specifications (Engebø, Lohne, Rønn, & Lædre . 2016).
- c. Purchasing non function asset with a very long down time (Pati., Patil, Jaltade, & Gupta, 2015)

Since asset is expensive and will be long in service, therefore organisation could not afford to purchase asset that could not function or do meet the organization required. Thus, this paper focuses on identifying the needs and requirement before capital asset procurement .

Methodology

This research is to understand the initial process before procuring capital asset using Qualitative Research Techniques. In the earlier stage of this research, the Researchers has analysed documents related to user specification on capital asset procurement. Vast number of documents were being study to develop understanding (Meyer, 2011) and it is useful as a guide during the interview session. The Researchers has to choose not only capital asset specification but also reviewing the user need analysis. These documents are vital in counteracting the biasness during the interview session. It is also useful in triangulating the data collected.

The researchers undergo the interview with the Subject Matter Expert personnel who involved directly in the capital asset procurement. This interview being conducted to explore the process involved before the capital asset procurement begins. Ministry of Defence were chosen for this study since the frequency of this Ministry to procure capital item were frequent compares to other ministry. The purposive sampling were used in order to collect accurate data compare to random sampling (Miles, Huberman, & Saldaña, 1994). A total of 29 respondents involves directly with the ministry procurement were interviewed to understand how ministry identify the capital equipment requirement and need before proceeding with the procurement.

Findings

Based on the document review and analysis besides interviews conducted, it is found that there are many preparations involved prerequisite before capital asset being procure. Previous study on procurement

management was only focuses on the procurement process. The process of procurement begins when user need is established and registered the requirement. The procurement process as shown in Fig. 1.

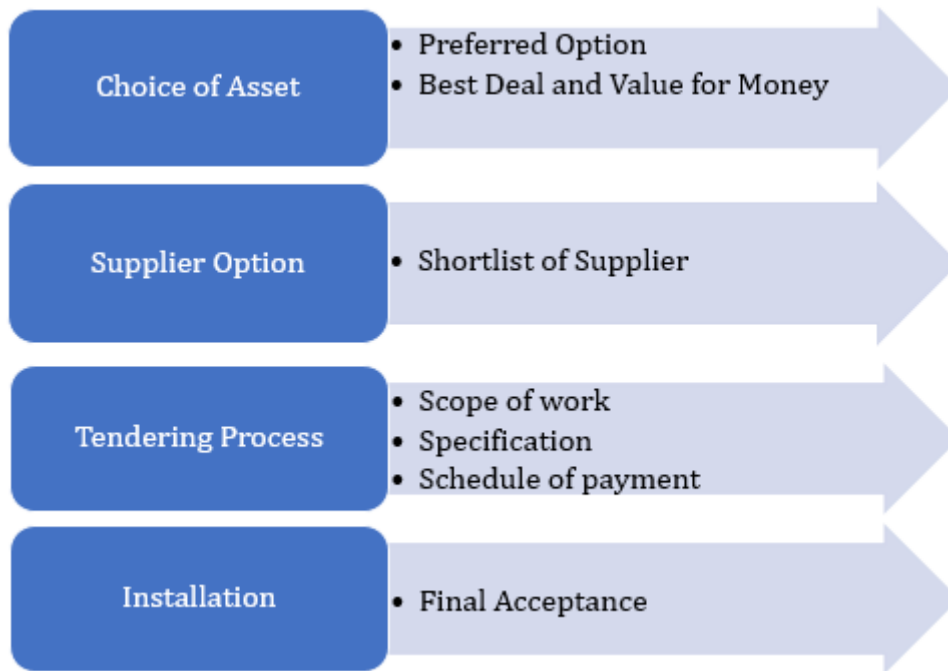


Fig. 1: Capital Asset Procurement Process

However, during the interview session the Research Participant has explained when the ministry has identified their needs on having a new capital asset, the user will formulate the capital asset requirement. Ministry conducted feasibility study to determine advantages and challenges in having a new capital asset in service before formulating the capital asset concept requirement. The ministry conducted SWOT analysis in identifying their advantages and challenges as in Figure 2. The ministry exploits their strengths, uncover opportunities, improve weakness and eliminate threats. Furthermore, ministry has carried out study not only on their needs but also several factors like organisations capacity and risk.



Fig. 2: SWOT Analysis in identifying the organisation needs

In addition, the Ministry used Return on Investment (ROI) Analysis as an activity in assisting Ministry in decision making regarding asset acquisition as in Figure 3. Thus, the ROI Analysis applied in assessing returns in terms of value such as purpose, impact and benefit from the investment in procurement of capital asset. Such analysis leads to decision on what asset the ministry should purchase. The ministry measures the value of Returns compared to investment of asset to be procured. Although the ministry may have implemented SWOT analysis, the decision to procure an asset may become challenging when the Ministry being cut-off their allocation from procuring new capital assets. Hence, with the ROI Analysis, the ministry should be able to rank the list of assets priority based on benefits and return to the ministry.

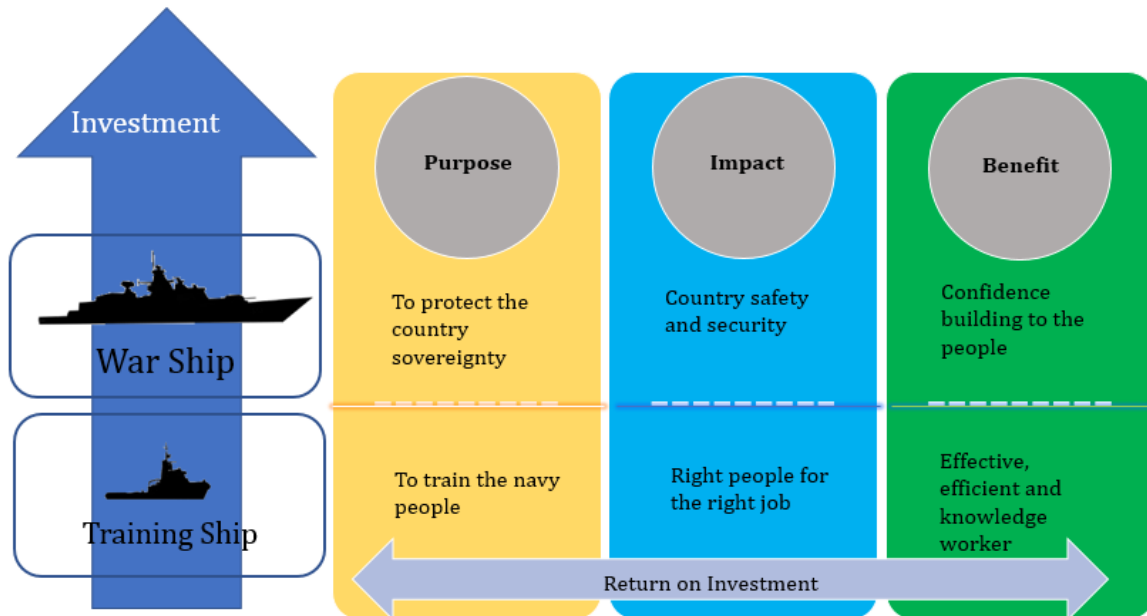


Fig 3: Return on Investment

Conclusion

The above prerequisite preparations used in the Ministry were not being theoretically discussed in previous studies. All the prior study only focusses on the procurement process from purchasing option until installation/acceptance of capital asset. However, in this study the Researchers found that the procurement process being implemented in the Ministry was structured and organised. Therefore, the SWOT Analysis and ROI Analysis used prerequisite before the procurement process is pertinent it is essential to identify the requirement of capital assets before deciding on procurement of the asset.

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