

# Project Portfolio Management (PPM): Practices, Challenges, and Solutions in SMEs

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## Abstract

This paper aims to review the theory behind project portfolio management in the areas of practices, challenges and solutions. An unstructured literature review is performed under the definitions of project portfolio management and different methods that could help formulate its approach in SMEs. As the industry of Project Management grows and proves needed to build structured success, professionals are looking into methods to conduct project portfolio management in a systematic approach to increase strategic success. This paper discusses the application of such framework in a company that delivers employee support services, Company A; highlighting the strong side of the approach along with its short-comings.

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## 1.0 Introduction

Project Management is an ever growing industry that brings value to organisations ever since 1969 when Project Management Institute (PMI) was founded. Through collaboration, global advocacy, education and research, over 2.9 million professionals are supported (PMI 2017). Standards have been published to aid a successful completion of a project within three main pillars of scope, time, and cost as defined in the Project Management Book of Knowledge PMBOK Guide 5th edition. This global movement led to the necessity to have a structured approach to have projects related to each other to achieve a better value. Projects, portfolios and strategies thus become an integrated part that continues to be researched and defined.

There is a number of research conducted in Project Portfolio Management. Some scholars apply methods to determine the best approach for PPM. For example, PMI (2015)

states that a portfolio refers to projects, programs, sub-portfolios, and operations managed as a group to achieve strategic objectives. Similarly, Moustafaev (2017) explains that Project portfolio management is the management of the organisation's projects to maximise the contribution of projects to the welfare and success of the enterprise. All of the available research elaborates on the necessity for SMEs to select their projects in a systematic way and potentially have a numeric value; or a mathematical equation, that can help in the selection process.

The task of project portfolio management (PPM) is to carry out a set of projects under the sponsorship of a specific organisation, whereby the projects share and compete for scarce resources (Archer and Ghasemzadeh, 1999). So how do SMEs implement and benefit from project portfolio management? This paper presents literature review and is organised as follows: Section 2 describes the practices of PPM followed by the challenges

of PPM in SMEs in section 3. Section 4 talks about some of the proposed solutions followed by section 5 presents the recommendations of PPM implementation in SMEs, while section 6 presents the conclusion.

## **2. PPM Practices**

Project portfolio management is applied and practiced within a framework that continues to be defined under research. Large companies have been practicing PPM for a while to obtain value from the overall project/portfolio performance. This has not yet cascaded properly or been adopted by SMEs. Several authors proposed a framework that focuses on the methodology of R&D projects/portfolio selection and evaluation, in early research (Patanakul, Curtis, & Koppel 2013). In addition, anything that can be measured can be improved (Moore, 2010). With the assumption that SME have a strategy in place, the above explains how the a project/portfolio should be evaluated.

Having a process to evaluate the output of the portfolio would undoubtedly lead to enhanced value. The European Standard defines the importance of having a process approach in a quality management system as necessary for continual improvement based on objective measurement (CEN, 2008). The three pillars that constitutes PPM are value, a balanced portfolio and a strategic fit as defined (Mustafaev, 2017). This ties in nicely with the definition from the European standard that an organisation should have a strategic decision to deploy a quality management system with the potential benefit of facilitating opportunities to enhance customer satisfaction (CEN, 2015). Similarly, firms should adopt a proactive approach to ensure that customer percep-

tion of the service is positive (Tan, 2011). This proactive approach can also be accompanied by a structured methodology. The Scoring Model is one of the common methods and models for Project Portfolio Selection (Benaija, K.; Kjiri, L., 2015). While the scoring model has some limitations as identified by Jeffrey Pinto (2012), it is still considered a valuable model for prioritisation or decision support (Cooper, R., Edgett, S. and Kleinschmidt, E., 2001). It is found that a structured method that gives guidance to top management in decision making is always welcomed.

At Company A, the project portfolio management is managed top down. The organisation focuses on customer satisfaction and shapes its strategy around this important metric. The CEO and COO set the vision for the company. The top management then collectively agrees on five business goals to achieve the vision. Each functional head then comes up with a list of objectives that ties into the five business goals. And because the continuous evaluation of metrics that are measured potentially leads to improvement (Moore, 2010; CEN, 2015), a governance committee has been formed. This committee helps each function break down their objectives into projects. Each project must have a high level estimated benefit that ties into the business goal. Then projects are then aligned with the resource availability in the operations side of the organisation, and a priority is set of the top projects to move forward in line with customer requests. Of course this approach has paused some constraints and challenges which some scholars have already identified.

### 3. PPM Challenges

One size does not fit all. And because business circumstances change constantly, having of the shelf framework would pause its own challenges. This research has identified two main challenges within PPM practice: organisations resources are not being aligned with the business goals, and the impact of a non evidenced non rational decision making processes have.

Resources are not always aligned with the business strategic objective. Some departments could have their entire teams working on a project that does support the enhancement of an organisation's strategy. More than 50% of organisations say their projects and resources are not well aligned with business goals is the first stat Tushar Patel shared in his article about the 5 Portfolio Management findings (PMI, 2015). This is a major problem when organisation continue to seek efficiencies and value. Similarly, organisations are having to adapt and evolve more quickly than ever before in response to shifting demands by customers, challenges from competitors, and opportunities created by emerging technologies as stated by Andy Jordan (PMI, 2017). Equally, a strong framework can only lead an organisation so far (PWC, 2012).

In the same way that resources are not aligned to strategic projects is detrimental to the success of a portfolio, lack of factual decision making process is another challenge that faces portfolio. One explanation was provided that human beings have cognitive limitations when analysing and interpreting information, and that, in practice, they operate under the absence of complete information (Gutiérrez E, Magnusson, M. 2014). A level of discipline will demand standard-

ised key performance indicators (KPIs) and powerful analytics to deliver objective insight for proactive decisions (PWC, 2012).

At Company A, both of those challenges translate true. Prior to the organisation deciding to implement a PPM, each function determined its own objectives in silo based on their own interpretation of value and success. The dilemma of contributing to the strategy while still responding to client requests has led to significant changes that were not based on factual decisions. With the absence of readily available data highlighting information of strategy and each of the portfolios, in the moment decisions were made to accommodate isolated circumstances.

This expresses the true challenge project portfolio management faces. When there is no specific measure for success in a portfolio, it is difficult to define success. In a study made on five companies that deploy project portfolio management in different degrees, there was still a lack of specific measure that determines a portfolio's success. Each company focused on the success of a specific project within a portfolio (Patanakul, Curtis, & Koppel 2013). And that is exactly what Company A did.

When PPM was introduced, there had to be stakeholders consensus on what success looks like in terms of KPIs for the strategy as a whole, as well as availability of resources to support these objectives. This process required a robust governance approach that would commence at the very first stage of planning.

## 4. PPM Solutions

Companies need to be able to see their vast portfolio of projects in order to tend to projects that are working on the organisations most critical needs (EPMA, 2014). A systematic decision making process can help achieve better results in project portfolio management. The European Standard promotes the PDCA (see Fig 1: PDCA cycle) approach which can be applied to any process. It is defined as Plan: establishing the objectives, policies, procedures; Do: implementing what was planned; Check: monitoring and measuring the processes and the outputs and reporting on them; and Act: taking action to improve on performance where necessary (CEN, 2015). But who will perform such duties?



Fig. 1: PDCA Cycle

Having a PfMO can have benefits on companies. The optimal PfMP solution in specific situations will depend on number of factors, one of which is governance and decision making structures as explained by Shan Rageopal (2013). Rajegopal continues that PfMO will provide information, analysis, and insights to help ensure that executives and governance boards have visibility and control over delivery of overall portfolio to

achieve business objectives. This approach means that an organisation would have dedicated resources to carry on the duties for the PfMO.

When making resources available to carry on the duties of PfMO, a high level of Leadership support is required. As Mark Perry presents (2011, p42) “While it is true that PPM requires a high degree of process adherence, also required are reserved powers for key members of the leadership team and especially the executives who presides over the organisation.” This compliments what Rajegopal stated (2013, p15-16) “On the commitment side are sponsorship and cultural change; funding and risk taking; and rewards and recognition.” This is needed to ensure that a potentially successful solution is implemented. Because as an action research with a transport solutions firm (Olsson, 2008) identified that top managers need visibility to risk commonalities and trends in the portfolio. A risk in one project may mean opportunity for another (Martinsuo, 2013). So there has to be an office in place overseeing the data that is coming from different projects to ensure evidence based decisions can take place by the executives for a successful strategy.

Similarly, The UK government published a book on the topic of programme management called *Managing Successful Programmes* (The Stationary, 2003). The book breaks down programme management in simple terms to three facets, of which the first one is Project Portfolio Management. The publications explains that PPM is process where all ideas for project are analysed in a consistent and thorough manner before any work commences (Reiss, 2007). This analysis

would need to be carried out by resources that have access to the data.

At Company A, the executives wanted to make fact-based decision but lacked access to continuous data. In a fast growing company, lack of data visibility to the portfolio becomes a hinderance. That is when an approval came to appoint someone who can make this data available. The approach was followed in two facets:

1. A resource is available to produce regular reports to all stakeholders involved on

## 5. Recommendations of PPM Implementation in SMEs

The methodologies presented to manage a successful project portfolio management environment continue to being explored. While various practices are defined, the application of it is highly dependant on the context and the culture of the organisation. The practice in real life is messier than the theory (Martinsuo, 2013). Organisation must obtain and customise their own framework to better drive results from their portfolio. A set of best practices layered on top of a strong framework is needed to ensure execution excellence and an optimised ROI (PWC, 2012). What David Lavinsky mentioned in his book Start at the End (2012), once a company has a vision, it can apply it to reverse engineer a business plan to achieve it. This approach is found more valuable to an SME. Once the end goal is obtained, applying this reverse engineer would help SME determine the milestones and/or KPIs to get to the end goal. It will also help them define the level of resources needed to get there while maintaining and running the day to day operations.

intervals of quarterly basis. This approach replaced a bi-annual conference.

2. A platform that encourages collaboration and increased visibility for those intervals when reports are not yet available. All relevant stakeholders have access to the platform and the appointed resource ensured that any customised adhoc reporting is available as a default search option for them.

At Company A, the company applied this reverse methodology by identifying the end goal at the end of five years. Objectives were then created collectively with each functional head to help the company achieve the end goal. All Objectives were then mapped across all 5 years and a list of projects were identified. Figure 1: Order of planning shows the order. Once the list of projects is identified, the level of involvement from each function is then determine to start mapping out the resources needed. Once the maximum capacity of resources is reached, additional projects are added to the on hold list to revisit when when a project completes. All of this happened with the support of an established governance and a platform that makes data available and visible to all relevant stakeholders.

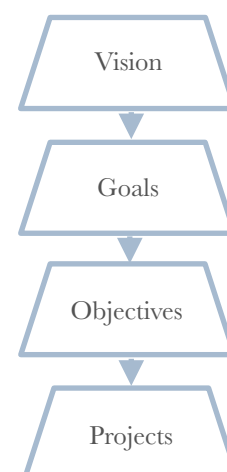


Fig. 2: Order of strategic planning

Governance, which ensures that all organisation requirements are reflected in operational frameworks, policies, processes and plans, and that these meet all stakeholders requirement (The CQI, 2017), was set up in the form a steering committee. The committee supports the leadership team in deploying the framework to all functions, review resource availability, project delivery and value. All of this information had to be made available to the management at every review meeting to make fact-based decisions for any changes that would impact the portfolio.

The research has identified that while the framework applied at the organisation of Company A is customised and supports governance and resource allocation, the ap-

proach to scoring model is missing. Scoring model shows that it allows the business to have certain KPIs that they deem necessary as defined in section 2. Because, in an organisation, not all departments are staffed in an equal capacity, having KPIs to rate projects helps the company be more focused. When the executives hold an strategic retreat, one solution could potentially involve a collaborative determination of the KPIs that are deemed necessary. Once the KPIs are determined, the Project Management Office will then list all the identified projects against the agreed KPIs and ask the stakeholders to vote.

An example of the KPIs that could be considered (table 1) and the weighting relevant to it (table2):

Table 1. Five KPIs to be used for scoring projects

Project Name \ KPI	Innovation	ROI	Cost Cutting	Competitive Advantage	Employee Engagement
Project 1					
Project 2					
Project 3					
Project 4					

Table 2. Weighting defined per each KPI

KPI \ Weighting	1	3	5
Innovation	Low	Medium	High
ROI	1%-10%	11%-20%	21% and more
Cost Cutting	<\$100,000	\$100,000> <\$250,000	\$250,000>
Competitive Advantage	Low	Medium	High
Employee Engagement	5% retention	5%-15% retention	15%> retention

## 5.0 Conclusion

The objective of this study was to provide a stock of the practices of project portfolio management and some of the challenges

and solutions that can be implemented in SMEs. The Project Portfolio Management in SMEs continues to be a subject for research and application. Drawing on the re-

search performed, the PPM practices has been established in large organisations. The practice involves having a method in place to evaluate the selection process of a portfolio, the output of the portfolio, and the impact the portfolio has on the positive perception of customers. All of this requires to happen in a proactive approach.

For SMEs to adopt these practices, they need to ensure that they have resources available to carry on such practices. Some studies highlight that a large number of organisations do not utilise their workforce in alignment to the strategy. When resources are not aligned strategically, decisions that are situational based rather than evidence based become easier to make, thus, potentially deviating the organisation from achieving its overall strategy. The importance of having factual and evidence based decision is always flagged as detrimental for a company's success.

For decisions to be based on facts and evidence, having a function of Project Portfolio Management is one of the proposed solutions. This requires leadership support to be carried out. This leadership support would then be extended to ensure that resources (human and non human) are available to enhance the process of data collection and analysis. Hence, a platform that makes the data available could be perceived as a solution.

Based on the field research that was made, it was found that the process is entirely driven by the leadership commitment. The vision, goals, objectives are defined; then in turn, supporting the selection of projects. The definition of what success look like becomes

very valuable to ensure that all functional departments are working in collaboration with the aim to achieve the company's strategy.

Limitations and constraints:

This study has paused several questions in the lifecycle of project portfolio management which were not covered in this research.

1. What triggers the need in an organisation to have a PPM approach? Is it failure, lack or direction, or the need to grow?
2. If resources are to be made available in SMEs, how will organisations make funds available if they had no previous exposure to the benefits of PPM?
3. SMEs that are in the start up phase, and with the assumption that they have a strategy in place, how will resources (human and non human) be made available to continually evaluate the progress of the strategy and its portfolio?
4. If an SME decided to adopt the PPM approach for the first time, what process will be applied to help stakeholders identify the desired benefit realisation and the KPIs that progress will be measured against.

These limitations pause a potential need for research to identify the practices and proposed solutions to address them. The new research could potentially help in establishing an approach that shapes the PPM from the infancy stage in SME. Because the key benefit of stakeholder engagement is to increase support and minimise resistance to achieve success (PMBOK Guide, 2015).

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