



## Focus on the business case throughout the project life cycle

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April 2020

### Introduction

The common perception prevails that the business case for a capital project, or programme, is a formal document which is presented to the authorising body during the capital application process, and then, once authorised, filed in the project file. If this is the practice in your company, please reconsider your approach... Much value can be added by focusing on the business case throughout the project life cycle.

In this article, I illustrate the importance of the business case document and why it remains relevant during all phases of the project. To understand the purpose, reason and focus of the business case during the various phases of the project life cycle, it is paramount to first define and discuss the relevant concepts. The purpose and function of the business case during each of the phases are subsequently discussed.

### Relevant concepts

#### Projects and programmes

The Project Management Institute defines a project as follows (PMI, 2013a): “A project is a temporary endeavour undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end is reached when the project’s objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists.”

Some projects form part of programmes, and some do not. A programme is seen as a “group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually” (PMI, 2013b).

The project life cycle is regarded as the series of phases that a project passes through from its initiation to its closure.

## Business case

According to 20/20 Business Insight Ltd, (2020) the “business case captures the reasons for initiating a project or task.” It thus contains enough information to enable an organisation’s authorisation body to make an informed decision regarding the business fit and desirability to proceed with the project, or not.

The business case therefore documents the justification for the undertaking of a project or programme. It is typically based on the estimated cost of project development and implementation in comparison to the anticipated business benefits and savings to be gained, with due awareness of project and business risks. Irrespective of whether the project business case is termed in your company, be it a project brief, a project charter, a project justification or project economic rationale, the purpose is to present justification for project start-up and initiation.

The business case forms the foundation upon which the project and business plans are subsequently built.

## Role players during the project life cycle

Van Heerden (2018) defines the major roles and responsibilities in the owner project management team using an interrelated triangle, as shown in Figure 1. The four major role players are the business, project, engineering and operations managers.

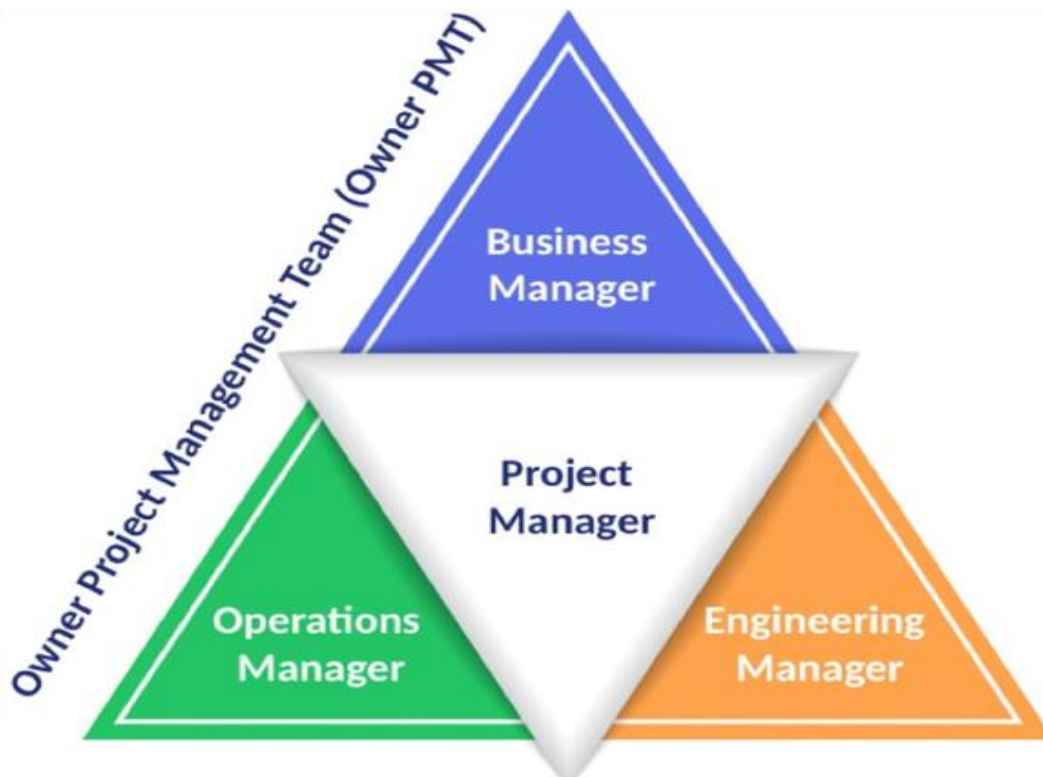


Figure 1: The owner project management team (van Heerden, 2018)

When it comes to the business case, the project sponsor also plays an important role and must be included in the team, as depicted in Figure 2. The sponsor has ultimate accountability for the project and represents the project itself, its nature and character to the external stakeholders (Van der Walt, 2015).



**Figure 2: The role of the sponsor on a capital project** (Van der Walt, 2015)

**Benefits of business case analysis**

Companies frequently use business case development, or business case analysis, for project selection. Business case development analyses how fulfilling the business case for the project will implement the corporate strategy and sustain the competitive advantage of the company (20/20 Business Insight Ltd, 2020).

The business case can be further refined by incorporating additional details, including roles and responsibilities, project schedule, major milestones, market development , etc. to guide your venture through the entire project life cycle. This should include the operating entity as well as the elements required to dispose of the facility at end-of-life.

The project management plan is not complete without the business case as a key component. Following the completion of the implementation phase, a post-project evaluation (PPE) will usually be held to measure the project’s indicated benefits against those set out in the business case.

The business case also forms the basis for implementing the business strategy and the creation of the correct delivery system (Buys, 2018). It is furthermore regarded as the basis for setting the performance metrics of the personnel responsible for delivering the results.

### Composition of the business case

Organisations typically have a standardised approach and format for compiling and presenting a project business case. Key elements of a business usually include:

- **Justification:** Reasons or justification for the project, with emphasis on the implementation of the business strategy;
- **Options analysis:** A brief description of the different options considered and the final recommendation;
- **Benefits:** Benefits expected from the implementation of the venture, expressed in measurable terms against the as-is situation;
- **Risk analysis:** Formal risk management methodology and a summary of key risks and opportunities of the project;
- **Project cost:** Total expected project cost as extracted from the project plan;
- **Schedule:** A summary of the project schedule and major milestones;
- **Metrics:** Financial metrics including ROI, IRR, NPV and Payback Period including a sensitivity analysis of the major variables; and
- **Specific request:** A clear statement of exactly what the authorising body is asked to approve.

### Owner of the business case

The business case is the guiding document for the project sponsor throughout the venture, the engineering manager during the development process and the project manager during the implementation process. It is the justification for their activities and a benchmark against which the project benefits will be measured. As the primary owner of the business case, the sponsor is responsible for ensuring the continued viability of the project and that the benefits defined in the business case are realised.

The business case is also the key document of the project portfolio management process and is the document used by the organisation's project investment committee to ensure that the available capital is optimally employed.

The same business case document becomes the key document for the business manager and the operations manager during the commissioning stage and the operations phase.

## Discussion

### Project life cycle

Let us start by first discussing the project life cycle. We, at OTC, differ from the view expressed in the Project Management Institute's *Project Management Body of Knowledge, or PMBOK®*, (PMI, 2013a) regarding the definition of the project life cycle. From a contractor or construction point of view, the project life cycle can be defined as in the PMBOK® namely: Conception and Initiation, Definition and Planning, Launch or Execution, Performance and Control, and lastly Project Close, as depicted in Figure 3.

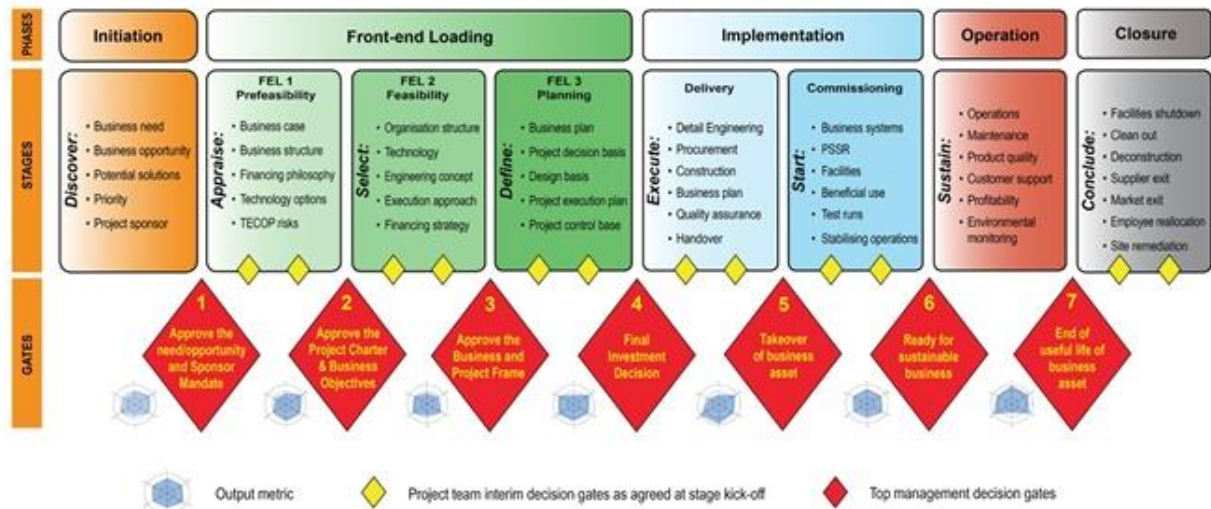


**Figure 3: PMBOK 5 phases of a project** (PMI, 2013a)

However, from a business owner's, or business development, point of view, we realised that one should focus on the whole project life cycle during the development of a project, and not only on the initial capital or construction phase, as is the focus of PMBOK®.

At OTC, we define the project life cycle phases as follows: Initiation, Front-end Loading (FEL), Execution, Commissioning, Operation and Closure, as illustrated in the OTC Stage-Gate Model in Figure 4. In this case, Closure does not refer to project closure, but the decommissioning and dismantling on the project infrastructure at the end of beneficial operation.

The focus and function of the business case during each of these phases are discussed in the sections that follow.



**Figure 4: OTC 5 phases of a project** (Van Heerden and Lourens, 2015)

## Initiation

Virtually anybody in an organisation can initiate a new project. However, it is from a business management perspective that the original business case must be developed, focusing mainly on a needs and opportunity analysis and the long-term sustainability thereof. A sustainable business is one that is profitable, has a minimal impact on the environment and is socially acceptable.

At this stage no definitive information is available and the whole business case will be built on viable assumptions and factored estimates. The focus of the business case during this phase of the project is to answer the question: *Is the idea worth pursuing?*

## Front-end Loading

From Figure 4, the Front-end Loading phase of a project is split into three stages, namely Prefeasibility, Feasibility and Planning. During the three stages of FEL, the business case accuracy is improved as more detail and accurate information becomes available. Nevertheless, at the end of Prefeasibility, the typical capital uncertainty is in the order of plus/minus 50%. The focus of the business case is now on answering the questions:

- *Is this the right business to be in? and,*
- *Have we looked extensively for solutions?*

During Feasibility, various value-creating processes are followed (van Heerden, 2017) and at the end of Feasibility, the uncertainty is reduced to plus/minus 30%. The focus of the business case during this stage is on answering the question: *Do we have the optimal solution for creating value?*

Uncertainty is reduced to plus/minus 10 to 20% at the end of Planning, when the final investment decision is made. The focus of the business case now changes to answering the questions:

- *Do we have the optimal level of scope definition? and,*
- *Are we ready to execute the project?*

During the FEL phase, the most accurate economic model possible is built and the project is optimised for return on investment taking life-cycle costing into account.

For projects that are capital constrained, the project is optimised within these constraints and normally broken up into phases to reach the ultimate objectives while mitigating expenditure.

## Implementation

The Implementation phase consists of two stages, namely Delivery and Commissioning.

During project implementation, the business case is used as a control document for project governance and asset capitalisation, and is used to set up the operating business code of accounts.

At the end of the Delivery stage the only question that must be answered is: *Are we ready for a safe start-up?* And at the end of Commissioning the question that must be answered is: *Do the business and the technical solutions work as designed?*

## Operations

During the Operations phase which typically constitutes 80 to 90% of the lifespan of a project, the original business case is now converted into two documents, namely the business strategy and the budget. The business case is kept up to date and used to justify any changes, modifications or additions to the current business.

The key question to be answered now becomes: *How do we maximise stakeholder value?*

## Closure

Before entering the closure phase of a venture, the original closure plan that was part of the business case needs to be updated with the latest information on the site reuse analysis and reuse plan. Lastly, the business exit strategy needs to be updated and then implemented.

The last questions to answer are:

- *How do we exit the markets that were served during the years of operations? and*
- *How do we close the facility and minimise the negative impact on all stakeholders?*

## Concluding remarks

In this article, we've highlighted the importance of the business case in every project and how the focus shifts during the five phases of the project life cycle. During each of the phases, the business case endeavours to answer the following questions:

- **Initiation:** Is the Idea worth pursuing?
- **Front-end Loading:** Is this the right business to be in and have we looked widely for solutions? Do we have the optimal solution for creating value? Do we have the optimal level of scope definition and are we ready to execute?
- **Implementation:** Do the business and the technical solutions work as designed?
- **Operations:** How do we maximise stakeholder value?
- **Closure:** How do we exit the markets that were served during the years of operations? How do we close the facility and minimise the negative impact on all stakeholders?

By making sure that the correct question or questions are answered at each stage of the project life cycle, the team will ensure that maximum value is added to all stakeholders involved in the project.

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