# An investigation of sponsor attributes on six megaproject cases

Willem Louw

Business School, Faculty of Economic and Management Sciences, Stellenbosch University, Bellville, South Africa

Herman Steyn Engineering and Technology Management, University of Pretoria, Pretoria, South Africa

Jan Wium Civil Engineering, Faculty of Engineering, Stellenbosch University, Stellenbosch, South Africa

Wim Gevers Business School, Faculty of Economic and Management Sciences, Stellenbosch University, Bellville, South Africa

## Abstract

**Purpose** - Executive sponsors play a significant role in the success of megaprojects which, in turn, affect national economies and millions of people. However, the literature on the requisite attributes of project sponsors on megaprojects is still sparse. The purpose of the paper is to provide guidelines to company boards and executives who are tasked to appoint suitable executive sponsors to megaprojects. Thus, the paper contributes to the sparse literature on megaproject sponsors.

**Design/methodology/approach** - A total of 26 senior managers, with experience in megaprojects ranging from 8 to 15 years – and who were involved in 6 recent megaprojects with a combined value of US\$13.75bn – were interviewed on the attributes of megaproject sponsors. Transcriptions of semi-structured, open-ended interviews were analysed with computer-assisted qualitative data analysis software (CAQDAS).

**Findings -** The study identified the most essential attribute as appropriate seniority, being empowered and accountable, with appropriate seniority, being empowered and accountable, with apposite credibility and with both personal and positional power. The study also uncovered 13 attributes – all components of "competence" – which have not previously been explicitly identified in literature as elements of sponsor "competence".

**Originality/value -** In the current study guidelines are provided for the selection and appointment of appropriate megaproject sponsors.

Keywords: Megaproject, Megaproject success, Executive sponsor, Project sponsor

attributes

Paper type: Research paper with practical focus

### 1. Introduction

The global drive for investment in infrastructure by governments and the private sector is continuing unabated; and these investments often result in the implementation of megaprojects (Drouin, 2018). The impact of these megaprojects is not limited to the return of the financial investment; the projects also have a direct influence on the wellbeing of the society that they are intended to benefit (Fischer and Amedkudzi, 2011; Flyvbjerg, 2014). Unfortunately, megaprojects fail at a rate that affects national economies, and millions of people are also affected as a result (Flyvbjerg, 2014; Merrow, 2011). It has become clear that greater attention to management practices is required to ensure that the economic growth and societal change that is anticipated in business cases indeed materialises. The solution to failing megaprojects partly resides in management practices that deliver intangible benefits (Drouin, 2018).

Implementing an approach in which the attributes of potential megaproject sponsors are considered, and the sponsor is appointed accordingly, is not a very difficult or costly process. It is, however, no 'silver bullet' solution to a very complicated problem – the failure of megaprojects – but it does have the potential to impact the return on the significant investment made in megaprojects.

The identification of these attributes, and their effective application, should contribute to a higher probability of megaproject success, and also to the sparse literature on the topic.

### 2. Literature review

In this paper, the descriptors *project-based programme* and *megaproject* are included in the term 'project'. Likewise, the descriptors *project director*, *programme manager*, and *programme director* are included in the term 'project manager'. The project sponsor is the representative of the owner organisation, and should not be confused with an investor or funder in the financial services sector – terms that describe a financial institute supplying funding for a project. He or she is responsible for the benefits realisation of a project, including the development of the business case. The sponsor role includes the appointment of the project manager, and he/she also acts as chairperson of the governance/steering committee of the project (APM, 2009, 2018). The Project Management Institute (PMI, 2014) states that sponsors from the *executive level* are typically allocated to strategically important projects. These projects are normally large-scale and complicated, take many years to develop and build, carry a certain degree of risk (multiple stakeholders from the public and private sectors are involved), have a high profile, are transformational (millions of people are affected), and have very sizeable budgets (US\$1 billion plus) allocated to these projects. Where a *sponsor* for a megaproject is referred to in this paper, it implies an individual with executive status in the organisation.

In the private sector, the sponsor for a megaproject will typically be a senior executive in a corporation (often at or just below board level) who is responsible to the business for the success of the project. In a private-sector organisation, it is possible to select a single individual as sponsor who will take responsibility for the success of the project (Remington, 2011). If the sponsor is at or just below board level, he/she will interact directly with the board on project-related matters. However, in the public sector the same arrangement for a sponsor has been less attainable because of a multi-layered executive leadership structure (Remington, 2011). An example of an extremely senior sponsor in the public sector is the hands-on sponsorship role that the president of Turkey played in the management of Istanbul's grand airport megaproject (Eren, 2019). The problem investigated in this paper concerns the very poor global track record of megaprojects, and the fact that the literature is sparse on the required attributes of

megaproject sponsors. Sponsor attributes identified in previous research are also so wide-ranging that it is unlikely that all these attributes could be found in a single person. This paper provides empirical information about the importance of specific attributes that are required of megaproject sponsors. Some are more important than others, and are considered essential for project success. This information was obtained from semi-structured interviews conducted with 26 senior individuals who had megaproject experience that ranged from eight to 15 years each.

The sponsor role was recognised in the literature as a crucial component of any project. The sponsor was also recognised as making a very distinct contribution to the successful or failed outcome of the project (APM, 2018, 2009; Barshop, 2016; Bourne, 2015; Kloppenborg and Tesch, 2015; Van Heerden *et al.*, 2015; PMI, 2014; James *et al.*, 2013; Morris, 2013; Kloppenborg *et al.*, 2011; Remington, 2011; West, 2010; Kloppenborg *et al.*, 2009; Crawford *et al.*, 2008; Helm and Remington, 2005).

Although the sponsor role has been recognised as a crucial component of any project, several other factors are also important for project success. Research by the Association for Project Management (APM, 2014) concluded that it was critical to have a supportive organisation to improve project outcomes. This was in addition to the critical success factors identified in the same research – namely, capable sponsors, effective governance, alignment with corporate goals and objectives, and stakeholders such as end users and operators seamlessly accepting the changes and benefits delivered by the project.

Standards on project management namely PMI (2017), IPMA (2015), APM (2019), and AXELOS (2017) do not provide any mutually agreed description of the role of the sponsor. However, there is general agreement (albeit implied) that the sponsor or sponsorship role might be carried out by an individual or by a group of people such as a sponsoring group, project board, executive committee, or steering committee.

The governance board for a programme (a committee of senior managers at an executive level) plays a number of roles and has responsibilities, *inter alia*, for strategic alignment, oversight, providing direction, and the creation of an enabling environment for the programme (Crawford *et al.*, 2008; Remington, 2011; Nicholas and Steyn, 2021).

Bryde (2008) specifically states that the predominant trend in the literature has been that a project sponsor should be an individual. In addition, reference to the sponsor as an individual was made by the APM (2018, 2009), Barshop (2016), Bourne (2015), James *et al.* (2013), Morris (2013), the majority view of the PMI (2014), Van Heerden *et al.* (2015), and West (2010). This paper therefore considers the sponsor to be an *individual*.

There was clear congruence in the literature on the use of the term 'accountability' for the sponsor. The sponsor, functioning in an executive role, represented the interests of the client (that is, the owner) at the interface between the client and project organisations, and was accountable for the following (APM, 2018, 2009; Barshop, 2016; Crawford *et al.*, 2008; Englund and Bucero, 2006; James *et al.*, 2013; Kloppenborg and Tesch, 2015; Morris, 2013; Nicholas and Steyn, 2021; PMI, 2014; Van Heerden *et al.*, 2015; West, 2010):

- Owning the (robust) business case of the project, driving the realisation of its intended benefits, and recommending cost/benefit opportunities;
- Providing direction by, among other things, developing a vision for the project, ensuring alignment of the project with company strategy, and building project team commitment to the project;
- Establishing values, and creating a value-based culture and environment that ensures success;
- Managing barriers or problems outside the remit and control of the project manager,

to ensure the capture of the intended project value; and

• Giving direction and clarifying the framework for effective governance.

Various authors expressed the view that project success (or failure) should not be evaluated only in terms of the 'triple constraint' or 'iron triangle' of time, cost, and quality at project closure. The future potential that the project offered in achieving desired business objectives and generating new business or opportunities should also be considered (Pinto, 2004). Dvir, Lipovetsky, Shenhar and Tishler (1998), Kloppenborg *et al.* (2009), Kloppenborg, Tesch, Manolis and Heitkamp (2006), the OGC (2007), Sewchurran and Barron (2008), Shenhar, Dvir, Levy and Maltz (2002), and Turner and Zolin (2012) all supported this view.

Pinto (2004) described four dimensions that were relevant in measuring project success or failure: project efficiency, impact on the customer, business success, and future potential.

Thus far, the materialisation of promised benefits over the longer term (as proposed above) has not been visibly incorporated into the measures of success of megaprojects; the 'iron triangle' of delivering the promised benefits within budget and on time (Flyvbjerg, 2017, p. 11) still rules the discourse on project success – megaprojects included.

The criteria for the success or failure of megaprojects are accordingly limited in this paper to the 'triple constraint' or 'iron triangle' notion of time, cost, and operational performance (promised benefits), as described by Merrow (2011).

A broad framework of 32 attributes of project sponsors was developed from the literature, and is summarised in Table I. The attributes were also reported by Louw *et al.* (2018a).

Description of attribute	References
Has a certain seniority level in the organisation, is credible and has both personal power and positional power. <sub>1</sub>	Crawford <i>et al.</i> , 2008a, 2008b; Helm and Remington, 2005; Van Heerden <i>et al.</i> , 2015; APM, 2009, 2018.
Is able and willing to objectively direct the project team to make sure the project assumptions are still valid. <sub>1</sub>	Barshop, 2016; Helm and Remington, 2005; Remington, 2011; Van Heerden <i>et al.</i> , 2015.
Is competent to fulfil the role. This implies that the individual has the required mix of skills, knowledge and personal attitude for the role.	APM, 2009, 2018.
Understands the basic principles of project management and is capable to comment in a constructive manner and at a conceptual level on key project criteria. <sub>1</sub>	Barshop, 2016; Remington, 2011.
Can think holistically.1	Barshop, 2016; Remington, 2011; West, 2010.
Has the skill to think critically. This includes the proficiency to deal with ambiguity specifically when handling projects of a complex nature. $_1$	Barshop, 2016; Crawford <i>et al.</i> , 2008a, 2008b; Helm and Remington, 2005;
	Remington, 2011; Van Heerden <i>et al.</i> , 2015.
Can demonstrate advanced negotiation skills specifically when having to secure the provision of an array of resources on behalf of the project manager.	APM, 2009, 2018; Barshop, 2016; Bourne, 2015; West, 2010.
Can motivate the project team to deliver the vision for the project, even under trying circumstances. <sub>1</sub>	Crawford <i>et al.</i> , 2008a, 2008b; Helm and Remington, 2005.
Can provide clear direction for the project team. Contextually this includes the ability to develop a vision of a compelling nature for the project.	APM, 2009, 2018; Bucero and Englund, 2007; Englund and Bucero, 2006.
Creates an atmosphere built on trust and open communication with the project manager.	Barshop, 2016; Bucero and Englund, 2007; Englund and Bucero, 2006.
Understands how the business case is developed.	Barshop, 2016; West, 2010.
Has adequate knowledge of the business, its operations, market and industry.	Barshop, 2016; Bourne, 2015; West, 2010.
Can engage by being loyal, motivated and committed.	APM, 2009, 2018.
Knows the politics of the organisation and is politically shrewd.	Crawford <i>et al.</i> , 2008a, 2008b; Helm and Remington, 2005; Van Heerden <i>et al.</i> , 2015.
Can act swiftly and decisively when making decisions.	Barshop, 2016; Bucero and Englund, 2007; Englund and Bucero, 2006; Pacelli, 2005.
Needs to be continuously present on the project.	APM, 2009, 2018.

# Table I: Summarised broad framework for sponsor attributes

Understands the strategy of the organisation and conveys a need to be regularly updated how the project is contributing to the organisational strategy.	West, 2010.
Is willing to partner with the project team (in particular the project manager) to enable the delivery of the project objectives. <sub>1</sub>	Remington, 2011.
Can appropriately delegate authority and provide support when necessary to the project manager instead of micromanaging. <sub>1</sub>	Crawford <i>et al.</i> , 2008a, 2008b; Helm and Remington, 2005; Remington, 2011.
Can lead for results and achieve success by ensuring that the focus of the project team is placed on what matters most.	Remington, 2011; Bucero and Englund, 2007; Englund and Bucero, 2006.
Is able and willing to make a decision when the issue is beyond the authority and mandate of the project manager.	Bucero and Englund, 2007; Englund and Bucero, 2006.
Can consistently provide leadership in line with the organisation culture and the values that are organisationally ascribed to.	APM, 2009, 2018.
Can communicate issues of a diverse nature to different organisation levels. This includes possessing the skill to listen and communicate. <sub>1</sub>	Crawford <i>et al.</i> , 2008a, 2008b; Helm and Remington, 2005; Remington, 2011; Van Heerden <i>et al.</i> , 2015.
Can demonstrate tenacity in breaking down barriers where they exist on the project.	West, 2010.
Understands the role, can explain its significance, and why there is a need to create alignment between the project and the objectives of the organisation.	APM, 2009, 2018.
Understands and is able to respond to independent review results of the project. This includes holding the project team accountable for the outcome of the review.	Barshop, 2016; Pacelli, 2005.
Can develop and nurture connections between the organisation and the project team at the appropriate level. <sub>1</sub>	Bourne, 2015; Helm and Remington, 2005; Remington, 2011; Van Heerden <i>et al.</i> , 2015.
Can understand and is willing to explore the levels of complexity present in the project. <sub>1</sub>	Remington, 2011.
Can manage him/herself i.e. is able to manage his/her agreed time commitments to the project effectively.	Crawford <i>et al.</i> , 2008a, 2008b.
Promotes the creation of knowledge and learning and the reuse thereof.	Barshop, 2016; Bucero and Englund, 2007; Englund and Bucero, 2006.
Exhibits a high propensity for self-reflection. This includes being willing to interact with experts in the process of problem-solving. <sub>1</sub>	Remington, 2011.
Can demonstrate that he/she is compatible with other key individuals in the organisation and the project team. <sub>1</sub>	Crawford <i>et al</i> , 2008a, 2008b; Helm and Remington, 2005; Remington, 2011; Van Heerden <i>et al.</i> , 2015.

Note 1: Attributes identified by Remington (2011) refer specifically to complex projects

Several descriptors are used in the literature for the factors influencing the sponsor's effectiveness. For the purposes of simplicity and consistency, it was decided to use the term 'attributes'. Helm and Remington (2005) used this term, and multiple authors then followed suit (Walker, 2012; Kloppenborg *et al.*, 2011; Kloppenborg *et al.*, 2009; Cooke-Davies *et al.*, 2006; Sutterfield *et al.*, 2006).

The attributes identified from the literature were not all specifically for megaprojects. There were sources, however, that did reflect on the inclusion of large or megaproject sponsors when attributes were discussed (Helm and Remington, 2005; Remington, 2013; APM, 2018, 2019). The array of sponsor attributes identified from the literature thus included those considered for megaprojects.

The large number of attributes mentioned in the literature suggests that a single individual cannot have the full spectrum of attributes. Remington (2011) supported this with a comment that the right *team* could have all the attributes. James *et al.* (2013) shared this perspective, and De Klerk (2014) stated that the list of recommended leadership characteristics and traits prescribed in the literature were unrealistically comprehensive and optimistic.

According to the APM (2009, 2018), the effectiveness of the sponsor is seen as the single best predictor of project success or failure. Furthermore, the personal attributes of the sponsor directly influence his/her effectiveness (APM, 2009, 2018; Barshop, 2016; Bucero and Englund, 2007; Crawford *et al.*, 2008a, 2008b; Englund and Bucero, 2006; Helm and Remington, 2005; Morris, 2013; PMI, 2014; Remington, 2011; Van Heerden *et al.*, 2015; West, 2010). The linkage between sponsor attributes, sponsor effectiveness, and project success is novel, and has only recently been documented (Louw *et al.*, 2018b, 2020).

While the current literature provides an unrealistically optimistic and comprehensive list of sponsor attributes, this paper aims to provide a concise list of attributes that are important or even essential for project success. The identification of specific essential attributes and important attributes provides guidelines to company boards and executives who are tasked with appointing suitable executive sponsors to megaprojects. The remainder of this paper contributes to the scant literature on project sponsors for megaprojects by (i) explaining the relationship between personal attributes, effectiveness, and project success, (ii) providing a concise list of essential and important sponsor attributes, and (iii) providing guidelines for appointing sponsors.

## 3. Research methodology, methods, and data

### Research framework

Figure 1 indicates how research questions were developed from propositions that were derived from the literature. Essential attributes and important attributes that an executive sponsor of a megaproject should possess were identified by answering the research questions.

Research aim	Research questions	Propositions
	How is the potential megaproject sponsor identified and appointed and what are the attributes that he/she should possess'	Sponsors need to be identified and appointed from executive/ senior management for megaprojects informed by the attributes they possess.
//	<b>How</b> do professionals in the field rank the relative importance of the attributes c <sup>+</sup> megaproject sponsors (assuming not the attributes are equally important)?	All the attributes of a sponsor on a megaproject are not equally important when measured relative to each other.
To identify th€ important and essential attributes of a sponsor on a megaproject ←	Why are certain attributes of the sponsor on a megaproject considered as important?	Certain attributes of the sponsor on a megaproject are defined as important to be possessed i.e. critical for the sponsor to be effective in the role.
	Which important attributes of a sponsor on a megaproject are considered as essential for the project to be a succe:	Certain important attributes of the sponsor on a megaproject are considered as essential i.e. if not possessed by the sponsor it could lead to project failure.
	Which psychometric and other tests can reliably assess important attributes of potential megaproject sponsor?	The determination of which attributes a potential sponsor on a megaproject possesses can be performed with a full array of psychometric and other tests
$\setminus$	What should the level of active participation of a megaproject sponsc ideally be in order to make a decisive impact on the success of the project?	An active megaproject sponsor during the lifecycle of the project makes an essential contribution to project success.

Figure 1: Research aim, research questions, and propositions

## The research design

From the five possible research designs for qualitative content analysis – explorative, descriptive, correlational, causal, and mixed designs (Mayring, 2014) – the *descriptive* design best suited the research objectives, and a multiple-case-study approach was adopted, using open-ended semi-structured interviews with the project participants.

A qualitative content analysis was performed on the data that emanated from the semistructured interviews. Mayring (2014) describes 'content analysis' as a methodical way of allocating categories to parts of text. Content analysis is typically used in the analysis of verbal, visual, or visual communication messages (Elo and Kyngäs, 2008).

A distinction was made between essential and important attributes. The assumptions made in this regard were that (i) not all 32 listed attributes in Table I were equally important, (ii) a normal human being has a limited capacity, and can accommodate

only a certain number of attributes, and (iii) the sponsor needs to possess a certain number of very important attributes in order to improve the probability of project success. These 'very important' attributes are referred to as 'essential' attributes. *The six cases* 

Ten projects from multiple sites were initially identified for possible investigation, from which six were selected, based on the accessibility and availability of senior managers. The selection consisted of three private and three public sector megaprojects, each with a value greater than US\$1 billion at the time of sanctioning funds. All had been completed since 2006. The six cases were within the range of four to 10 case studies required for multiple-case-study research (Easton, 2010; Eisenhardt, 1989).

The public sector typically delivers infrastructural megaprojects, while the private sector delivers industrial megaprojects. Infrastructural megaprojects often also have a profit motive. Examples of such infrastructural megaprojects are electricity generation projects, multi-purpose pipelines, the installation of fibre-optic broadband networks, tolled-road construction projects, and other transport systems. Capital-intensive mega-manufacturing projects, typically delivered by the private sector, are categorised as industrial megaprojects.

Using the cost, schedule, and operability information that was available in the public domain, four failed and two successful megaprojects were included in the multiple-case study.

Table II shows the megaprojects included in the multiple-case-study design, while further information is provided in the Appendix.

Title of project	Owner	Final Cost (US\$1 billion)
1. Pumped-storage scheme project	National electricity utility	3,59
2. Rapid-rail link project	Provincial Government through a Management Agency	2,81
3. New multi-purpose pipeline project	State-owned port-, rail- and pipeline-company	3,04
4. Doubling hard wax capacity project	Global petrochemicals group	1,36
5. Growth programme for synthetic fuels facility	Global petrochemicals group	1,42
6. Collieries replacement/ expansion programme	Global petrochemicals group	1,53
		13,75

#### Table II: Megaprojects included in research

#### The interviews

In total, 26 senior individuals who performed the roles of project manager (or project director), project sponsor, and executive manager were interviewed. Interviewee experience in megaprojects ranged from eight to 15 years each. These individuals – all executives in their own right – played key roles in the six South African megaprojects included in the research.

## Methods of data collection and protocol for the interviews

For each case (megaproject), data was collected via semi-structured interviews at three organisational levels – namely, (a) board or executive management, (b) sponsor, and (c) project manager.

Different interview guides were developed for the respective organisational levels. Half of the questions in the interview guides explored the important attributes and the essential attributes of a sponsor of a megaproject in general; they were not projectspecific. The other half of the questions solicited the views of the interviewees for projectspecific issues such as:

- How the potential sponsor was identified and appointed;
- The reaction of the sponsor to unforeseen circumstances;
- Psychometric and other tests that could be used to reliably assess the important attributes of the sponsor;
- The level of active participation and continuity of the sponsor while on the project; and
- The success (or failure) of the project, measured by the cost, schedule, and operability criteria described by Merrow (2011).

### 4. Analysis and results

### Data analysis using ATLAS.ti application

During qualitative analysis, ATLAS.ti software assists the researcher who is analysing the data to investigate its complicated and hidden facets (Friese, 2019).

There were 25 interviews involving 26 interviewees, as one of the interviews was held with two interviewees. The transcribed interviews were coded by assigning labels to phrases related to sponsor attributes. The transcriptions recorded what each individual said separately, leading to 26 separate participants – a number that met the criterion for saturation described by Guest *et al.* (2006).

The process of assigning labels to quotations is known as 'first cycle coding' (Saldaña, 2010). The assigning of the labels, henceforth described as *coding*, was assisted by using a list of attributes derived from the literature.

Each quotation was also provided with a label that indicated whether it was considered by the interviewee to belong to the 'essential' category or the 'important-but-nonessential' category. If a quotation was given an *essential* code, it meant that the quotation belonged, by default, also to the *important* category. Certain quotations, however, belonged to the important (but non-essential) category only.

Groups of codes were structured to indicate quotations belonging to the 'essential' or 'important' categories. Saldaña (2010) described this as 'axial coding', which is based on the understanding that an axis pulls together a group of codes. Miles and Huberman (1994) view 'data analysis' as the occurrence of three concurrent flows of activities: *data reduction, data display,* and *conclusion drawing and verification*. The drawing of conclusions and noting of structures, patterns, relationships, etc. had already begun at the start of the data collection (Robson, 2002). Early in the process of conducting the interviews, a number of differing perspectives on the attributes of the sponsor materialised. As a result, the wording describing various attributes was refined.

Please note that the term 'code' is used interchangeably with 'attribute' until midway through the *Results* section of this paper.

## Results from ATLAS.ti application

The first-cycle coding exercise with ATLAS.ti resulted in the generation of 66 codes. The codes were thoroughly scrutinised for duplications and for the use of multiple codes with the same meaning. This reduced the number of codes from 66 to 37. Enhanced wording, resulting from the actions of integration, inclusion, and collapsing, was provided for the descriptions of the codes.

ATLAS.ti was used to rank the 37 codes obtained from the interviews, based on the number of times that a code (essential or important) was registered. The results are presented in Table III and Figure 2.

A potential concern about such graphic portrayal (using the number of times a code is registered) was that an interviewee could have mentioned a certain code multiple times during an interview, thereby leading to an over-emphasis on the code during coding.

However, the researchers took particular care in registering the codes and the frequency with which each was used, to ensure that a code was not simultaneously registered as both 'essential' and 'important-but-non-essential'.

The wording of the codes in the list of 37 codes was compared with the wording of the codes in the list of 32 attributes identified from the literature, as indicated in Table I. This created the list shown in Table III. The wording of attributes not previously explicitly encountered in the literature is indicated with an asterisk (\*) and in bold italics.

 Table III: Consolidated list of attributes identified from interview data and ranking of codes based on number of times a code was registered

Description of attribute	Ranking
Has a certain seniority level in the organisation, is credible and has both personal power and positional power.	1
Being accepted as suitable for the role by the organisation and stakeholders defines 'is credible'. Personal power is understood as the ability to influence others where the source of influence resides in the person instead of being vested by the position he/she holds.	
Understands the business, business case development, customer (market) or operations to enable informed decision-making.	2
Is able and willing to objectively direct the project team to make sure the project assumptions remain valid. This includes driving for meaningful alternatives to maximise value in a complex or complicated environment.	3
Can engage, through a willingness to demonstrate personal ownership and by being loyal, motivated and committed thereby reflecting a drive for the wellbeing of the organisation in the long-term.	4
Can provide clear direction for the project team. Contextually this includes the ability to develop a vision of a compelling nature that is aligned with the strategic perspectives of the organisation.	5
This includes understanding the strategy of the organisation, appreciating the linkage between business or project objectives and the corporate strategy, and maintaining the focus on results.	
Understands the role, can explain its significance, and why there is a need to create alignment between the project and the objectives of the organisation.	6
Understands the basic principles of project management and is capable to comment in a constructive manner and at a conceptual level on the key project criteria. These criteria typically include the management of costs, schedule, scope and risks of the project. It is preferable for the sponsor to have project (preferably megaproject) experience.	7
Knows the politics of the organisation and is politically savvy and astute in a politicised South Africa, particularly on public sector projects.	8

Can think holistically, often referred to as having the ability to see the 'big picture' and can engage/take advice from others for key decisions.	8
Can communicate issues of a diverse nature to different organisation levels. This includes possessing the skill to listen and communicate organisational issues of relevance to the project team.	10
*Can demonstrate tenacity in breaking down barriers where they exist on the project. This includes demonstrating attitudes like determination, ability to drive, and courage or resilience in leading for results and success.	11
Can identify, select and keep the key project players whilst also assisting the project manager to select/keep the right people at lower levels in the team.	11
*Can integrate, coordinate, organise or facilitate key issues on the project from a leadership perspective	13
Has experience in and knowledge of the industry domain of the project, from a technical, contractual and institutional perspective	13
Can delegate authority appropriately, support the delegation, provide support to and keep the project manager accountable when required, and not micromanage.	13
*Can use judgment and deal with compromises or trade-offs based on experience	16
*Can create and maintain an atmosphere built on trust, and open and transparent communication with the project team.	17
*Can remain calm in a complex or complicated environment in pressurised conditions	18
Believes that continuity of the sponsor is important or essential throughout the lifecycle of the project.	19
Can develop and nurture connections (networking) between the organisation and the project team at the appropriate level whilst demonstrating compatibility with individuals in the organisation important to the project.	19
*Can follow a structured thinking process and ensure that governance for the project is in place	21
*Has a critical mass of business, legal, financial and commercial acumen and astuteness to ask and respond to probing questions in the broader stakeholder community.	21
*Can identify, map and manage stakeholder expectations, both internally and externally	23
Can be the person that serves as the single point of entry when decisions need to be made that are not within the delegated authority level of the project manager. He/she also needs to act as 'barrier buster' when required.	23
*Can act swiftly and decisively when making decisions, takes responsibility for the decisions and holds individuals accountable for the outcomes of the decisions.	25
Is competent to fulfil the role. This implies that the individual has the required mix of skills, knowledge and personal attitude for the role.	26
Can grasp (at the appropriate high level) the technology or engineering and other technical aspects involved in the project	27

Can provide leadership in the context of the culture and values of the organisation.	27
Can manage self and own skills set, exhibit high capability for self-reflection, be open to learning from independent project reviews, engage other experts in problem-solving and adopt best practices where appropriate.	27
*Can sell the business case for the project	30
Is willing to partner with the project team (in particular the project manager) to enable the delivery of the project objectives.	30
Can motivate the project team to deliver the vision for the project, even under trying circumsatances.	32
*Can understand and manage safety and risk, both externally on and internally to the project	33
Has the skill to think critically and interpersonally. This includes the proficiency to deal with ambiguity specifically when handling projects of a complex nature.	33
Demonstrates advanced negotiation skills specifically when having to secure the provision of an array of resources on behalf of the project manager.	35
*Can manage conflict, particularly with those parties outside the authority of the project manager	35
*Can celebrate also the smaller successes on the project at a regular frequency	37

It was evident from the additional codes in Table III that most of them could be found in the broad definition of 'competence', understood as the required mix of skills, knowledge, and personal attitude for the role. It is possible that the interviewees did not necessarily think about 'competence' as an inclusive concept, but rather focused on the building blocks of competence during the interviews.



Figure 2: Ranking of codes identified from interviews

Figure 2 shows the ranking of codes identified from the interviews, and depicts the cumulative number of times a code was registered either as essential or important-butnon-essential. It appears that there is a practical drop-off point after 10 codes on the vertical axis, reading from top to bottom, in Figure 2. This number was arrived at by giving more consideration to the capacity of the sponsor to accommodate the attributes associated with the code descriptions than to the quantum of the drop-off at that point. A practical drop-off point was found where the rate of reduction (in registrations per attribute) exceeded at least two, and the number of attributes did not exceed the upper end of the range of five to 10 attributes that a sponsor could reasonably be expected to possess. The number of attributes that can be expected from an individual is in the range of five to 10; seven appears to be a practical number (APM, 2018, 2009; Barshop, 2016; Bourne, 2015; De Klerk, 2014; PMI, 2014; West, 2010; Valencia, 2007; Englund and Bucero, 2006; Helm and Remington, 2005; Pacelli, 2005; Zaccaro et al., 2004).

Decision-makers involved in the process of appointing a sponsor are accordingly directed to the 'top 10' attributes emanating from the interview analysis, as found in Table III. The descriptor 'code' is replaced from here on by the term 'attribute', as the researchers are mindful of the research aim to be achieved. The number of attributes that were used for analysis purposes from this point onward was 37.

The interview data was also analysed for (i) the cumulative number of interviewees who indicated the *essential* category for the identified attributes; and (ii) the cumulative number of interviewees who indicated an *important-but-non-essential* category or an *essential* category for the identified attributes.

By evaluating the above categories, it appeared that 10 attributes was a practical cutoff point to use to determine the essential attributes for further consideration. It did not necessarily imply, however, that all 10 attributes would be identified as essential for the sponsor to have – only those attributes that were common to the top 10 of *both* categories were regarded as essential.

The outcome of the analysis is provided in Figure 3, depicting the top eight essential attributes – namely, those attributes that originated from the interview data that were common to both (a) the 'essential', and (b) the 'essential plus important-but-non-essential' categories. Eight attributes were common to both categories, and two attributes from each category were not common to both. The four attributes that were not common to both categories are shown on the right-hand side of Figure 3.



Figure 3: Top eight common attributes identified after comparing essential and essential plus important-but-non-essential attribute groupings

\* Attributes common to the top 10 practical cut-offs for both groupings.

#### Comparison of results

In this section, three sets of data are compared to study the differences in the perspectives of the interviewees about the top eight essential attributes. The differences in the responses include (i) individuals in the public sector versus individuals from the private sector; (ii) executives versus sponsors, versus project managers; and (iii) individuals involved in failed projects versus those involved in successful projects.

### Public versus private sector projects

The distribution of the top eight votes from the interviewees on private sector (N=15) compared with public sector (N=11) projects is shown in Figure 4. The top eight essential sponsor attributes shown by interviewees on private sector projects are indicated by '(a)' and on public sector ones by '(b)'. The black lines in Figure 4 connect the percentage of interviewees (as a percentage of the total number of interviewees)

that registered an essential attribute from the private sector – the (a)s – compared with those from the public sector – the (b)s.



Figure 4: Top eight attributes registered by interviewees from private (N=15) and public (N=11) sector projects Format: Stacked 100%; (a) = private sector and (b) = public sector.

From Figure 4 it follows that there is a strong focus in the private sector on understanding the business and on the development of the business case. This is not surprising, given the profit motive that drives behaviour in the private sector, as well as the sponsors' ownership of the business case. It also follows that the attributes '*ability to provide clarity and direction*', '*understand basic project management*', and '*select key individuals for the team*' rated visibly higher in the private than in the public sector. Regarding the attributes '*ability to take a holistic view*' and '*ability to communicate effectively and listen well*', Figure 4 indicates that they weighed much heavier for sponsors in the public sector than for sponsors in the private sector. The importance of communication in the public sector was not surprising, given that communication within and between organisational levels in the public service – with its distinct levels

of bureaucracy – was very often a major cause of frustration. A sponsor with good communication skills, including the ability to listen, should therefore be a very valuable asset for a public sector megaproject.

Although not part of the identification of 'essential' attributes, the interviewees from the public sector (particularly the sponsors) made several comments on the need for political savvy. The attribute '*knowledge of politics of the organisation, being politically savvy and astute in a politicised South Africa*' is one that would always stand the sponsor in good stead, particularly on public sector projects.

#### Executive management versus sponsors versus project managers

A comparison of the top eight essential attributes, obtained from feedback by executive management, sponsors, and project management, is shown in Figure 5.





In Figure 5 it is noted that individuals in all three organisational roles rated seniority and power as the most often registered essential attribute of the sponsor. It can also be seen that the project managers rated the ability of the sponsor '*to select key individuals for the team/keep the right people*' as the second-least registered essential attribute, probably indicating that project managers are often fearful of sponsors interfering in their projects. A sponsor selecting key individuals for the team could – unless it is carefully managed and done in a mature fashion – lead to friction between the sponsor and the project manager.

For understandable reasons, the project managers regarded the sponsor's ability to communicate and listen well at all levels as quite a significant attribute. The reasons for this probably related to the wide communication spectrum, with information flowing to and from the sponsor, and to the need for the sponsor to contextualise the communication to the project manager and team. This attribute, along with '*understanding the business and being able to provide objectivity to and challenge the team*', was rated second most frequently by the project managers.

Last, the individuals in all three roles registered '*understanding of the business, business case, operations and the market*' second most frequently.

#### Successful versus failed projects

The executive managers, sponsors, and project managers assessed the top eight essential attributes for two separate groups – namely, 'successful' and 'failed' projects. A comparison was made of the responses by the participants from the two successful projects, and by the participants from the four failed projects. This is represented in Figure 6.

For simplicity of assessment, and for the purposes of this study, the criteria for the success or failure of megaprojects were limited to the 'triple constraint' or 'iron triangle' notion of time, cost, and operational performance (promised benefits), as described by Merrow (2011).

The two successful projects were the rapid rail link project and the collieries replacement/expansion programme. The other four projects were considered to have failed. The information in Figure 6 was obtained from nine interviewees from the successful projects and 17 from the failed projects.



Figure 6: Top eight attributes registered by interviewees from successful and failed projects Format: Stacked 100%

From Figure 6, it is clear that the interviewees from both the successful and the failed projects registered '*seniority and power*' most frequently. It is also clear that all of the interviewees registered '*understanding of the business, business case development, operations, and the market*' second most frequently. This was not surprising, as it pointed directly to an attribute that should be key in the profile of the sponsor, particularly as it concerns his/her ownership of the business case. Last, it is noteworthy that the interviewees on successful projects registered '*ability to provide clarity of direction*'

markedly less frequently as 'essential' than the interviewees on the failed projects. A possible explanation for this is that, for failed projects, a need for the sponsor to provide clarity of direction often exists, while this is probably not the case for successful projects.

### 5. Discussion

It was found that no formal assessment process that took mandatory attributes into consideration was used to identify or select the sponsors in any of the six cases. The sponsors of all six projects, however, were from the executive management levels of their organisations and, in all six cases, the sponsor was the originator, developer, or owner of the business case.

The extensive managerial experience of the respondents enabled them to rank the relative importance of the attributes with ease. They primarily made use of their prior experience to differentiate between the essential and the important attributes of a sponsor. Thirteen attributes that were not previously explicitly mentioned in the literature as elements of 'competence' are included in bold text and ranked in Table III.

As indicated earlier in the paper, an analysis was performed on the interview data to distinguish between 'essential' attributes and 'important-but-non-essential' attributes. The interviewer explained in detail the difference between these attributes to the respondents. It was also stressed that, in the 'important' category, some attributes were more important than others, and that only those attributes were considered as 'essential'. It was also highlighted that not all attributes could normally be accommodated in the persona of one individual.

The presentation of the results in Figure 3 assisted in determining why certain attributes were defined as 'essential', while others were considered 'important-but-non-essential'.

Only a limited number of attributes were required to be effective in the sponsor role (APM, 2018). The literature recommended a range of five to 10 attributes, of which seven

appeared to be a practical number, and it seemed sensible to limit the essential attributes to eight.

Figure 3 was arrived at by graphically portraying the common top eight essential attributes as vertical bars constituting both the essential and the important-but-non-essential components of the number of interviewees that registered an attribute, and sorting the essential components from left to right. A more comprehensive description of the essential attributes follows:

- Has a certain level of seniority in the organisation, is credible, and has both personal power and positional power. Being accepted as suitable for the role by the organisation and stakeholders defines 'is credible'. Personal power is understood as the ability to influence others, where the source of influence resides in the person instead of being vested by the position he/she holds.
- 2. Understands the business, business case development, customer (market), or operations to enable informed decision-making.
- 3. Is able and willing to objectively direct the project team to make sure that the project assumptions remain valid. This includes seeking meaningful alternatives to maximise value in a complex and complicated environment.
- 4. Can provide clear direction for the project team. Contextually this includes the ability to develop a vision of a compelling nature that is aligned with the strategic perspectives of the organisation. This includes understanding the strategy of the organisation, appreciating the linkage between the business or project objectives and the corporate strategy, and maintaining the focus on results.
- 5. Can think holistically, often referred to as having the ability to see the 'big picture', and can engage/take advice from others for key decisions.
- 6. Understands the basic principles of project management, and is capable of

commenting constructively and at a conceptual level on the key project criteria. These criteria typically include the management of the project's costs, schedule, scope, and risks. It is preferable for the sponsor to have project (preferably megaproject) experience.

- Can communicate issues of a diverse nature to different organisational levels. This includes possessing the skill to listen and to communicate organisational issues of relevance to the project team.
- 8. Can identify, select, and keep the key project players while also assisting the project manager to select/keep the right people at lower levels in the team.

As previously explained, the four attributes that were not common to both categories (essential and important-but-non-essential) are shown on the right-hand side of Figure 3. The attribute '*Can engage, through a willingness to demonstrate personal ownership and by being loyal, motivated, and committed, thereby reflecting a drive for the well-being of the organisation in the long term*' was the most frequently registered attribute in the 'important-but-non-essential' category, with thirteen interviewees registering it. Seven of these interviewees considered it an essential attribute. It was decided not to include it as a ninth attribute on the list of 'essential' attributes.

Some of the attributes that should feature prominently in a list of 'important-but-nonessential' attributes could in fact be regarded as *borderline essential* attributes. Such a list could assist executive management during the assessment of candidates for the sponsor role. The important-but-non-essential attributes that missed the cut-off for being deemed essential were:

- 1. Ability to engage, through a willingness to demonstrate personal ownership and by being loyal, motivated, and committed, thereby reflecting a drive for the well-being of the organisation in the long term (reflected in Figure 3)
- 2. Experience in and knowledge of the industry domain of the project, from a technical, contractual, and institutional perspective (reflected in Figure 3).

The breadth of understanding and experience that a sponsor should have of the type of industry that a megaproject pertained to was quite vividly sketched by the following quotation:

The person must understand the background of the engineering function – for example, it is nuclear, [it is] not coal. It's a big difference. And then [at] a high level, the person must understand something like "[power] generation". It is important that you've got that. (Sponsor)

3. Is competent to fulfil the role. This implies that the individual has the required mix of skills, knowledge, and personal attitude for the role.

This attribute includes several competence dimensions that were raised as individual attributes but were not part of a common 'competence' repository. The competency list included, *inter alia, judgement (reflected in Figure 3)*, tenacity, determination, ability to integrate or coordinate, fostering of trust, *understanding the role (reflected in Figure 3)*, business, commercial and financial acumen, and ability to make decisions and hold others accountable.

4. Knows the politics of the organisation, and is politically savvy and astute in a politicised South Africa, particularly on public sector projects.

Although not part of the identification of the important-but-non-essential attributes (as reflected in Figure 3), the interviewees from the public sector (particularly the sponsors) made a number of comments about the ability of the sponsor to deal with politics and the need for the sponsor to be politically savvy. This was specifically in relation to

interfaces with national, provincial, and local government (individuals and departments). It was considered an attribute that would always stand the sponsor in good stead.

The following quote makes the point:

But ... the complexities of the relationships between our politics and things like that, within the context of a public megaproject, ... if the guy is not capable of handling that, and understanding that, then he will never make it. (Sponsor)

The resultant output from the interview analysis was a configuration that contained eight 'essential' and four 'important-but-non-essential' attributes.

A number of other questions were also posed during the interviews. The common threads that crystallised for each of the questions were as follows:

#### Practices followed

While Louw *et al.* (2018b) suggested a framework for using certain psychometric and other tests to ascertain the (i) style of leadership of the potential sponsor, and (ii) the important attributes of a candidate, none of the interviewees indicated that psychometric or other tests were used to determine the suitability of the individual for the sponsor role.

The following quotation provided a clear indication of the lack of consideration given to formalising the evaluation of the sponsor prior to his/her appointment on the project:

No, I think it was mostly because I had success in many of the areas that make up a megaproject management..., *ja* [yes]. But no, there was no formal evaluation. (Sponsor)

#### Active participation

Active participation by the sponsors was confirmed on all of the case study projects. According to the project managers, the active and positive participation of sponsors should include (i) a focus on governance; (ii) consistently ensuring that the project supported the business case; and (iii) stakeholder management. In contrast, executive management considered 'active participation' as knowing what was happening on the project through frequent contact with the project team, often shortly before reporting to a steering committee or board.

In one case, the sponsor was considered to be perhaps too involved – to his own detriment. In another case, the sponsor reflected that active participation varied from person to person, depending on the stage of the project lifecycle. As mentioned in the next quotation, there is a clear risk that the sponsor might not be effective in the role because of over-involvement in the details of the project.

I think he participated very actively, probably too actively, and I think he in the process perhaps got too close to the detail and did not play his sponsor role. In my book the sponsor is not a super project manager. (Executive manager)

#### Success or failure

Four of the six megaprojects exceeded one or more of the thresholds for failure. It should be noted that, for one of the failed projects, the owner (not the sponsor) of the project did not agree that the project was a failure, even though it had not met the thresholds for either cost or schedule advocated by Merrow (2011).

## 6. Conclusions

In summary: this study is the first to identify and rank the 'essential' and 'importantbut-non-essential' attributes that are perceived to be required for sponsors of megaprojects. The most essential attribute was *appropriate seniority, being empowered and accountable, with apposite credibility and with both personal and positional power.* 

The analysis of interview data suggests eight 'essential' and four 'important-but-nonessential' attributes. The interview data also uncovered 13 attributes – all components of the broader repository of 'competence' attributes – that were not previously explicitly mentioned as such in the literature. Table III provides the details.

The fact that the attributes were identified by professionals who were very knowledgeable in the field of megaprojects (not projects in general) gives credibility to the results. Using the data responsibly to construct plausible explanations of the attributes certainly supplements a domain where the contribution to project success by the sponsor has not yet been fully appreciated.

Recommendations for future studies include the following:

- Because the cases were limited to South African megaprojects that involved construction, further investigation of cases that are not related to construction (e.g., IT system implementation) should be undertaken and the attributes compared.
- Determining the optimal mix of skills, knowledge, and personal attitudes to be included in the attribute 'competence for the role'.
- An investigation into the suitability of non-parametric statistics, to detect which attributes were more important than others and therefore considered to be essential.
- A potentially onerous yet value-adding task of correlating the project success of a larger number of megaprojects globally with essential sponsor attributes.

As mentioned in the introduction, specifying the required attributes of a potential megaproject sponsor – preferably very early in the lifecycle of the project – is not revolutionary, nor is it a difficult or costly process. This is not claimed to be a 'silver bullet' solution to a very complicated problem – the failure of megaprojects. It does reveal, however, that the appointment of a sponsor with appropriate attributes should increase the probability of achieving a successful project outcome.

## References

- Association for Project Management (2009), Sponsoring change: a guide to the governance aspects of project sponsorship, 1st ed., APM Knowledge Specific Interest Group, Buckinghamshire, England.
- Association for Project Management (2014), *The factors which contribute to successful projects: qualitative research findings*, Bostock Marketing Group for APM, Birmingham, England.
- Association for Project Management (2018), Sponsoring change: a guide to the governance aspects of project sponsorship, 2nd ed., APM Knowledge Specific Interest Group, Buckinghamshire, England.
- Association for Project Management (2019), *APM body of knowledge*, 7<sup>th</sup> ed., Association for Project Management, Buckinghamshire, England.
- Barshop, P. (2016), Capital projects: What every executive needs to know to avoid costly mistakes and make major investments pay off, John Wiley and Sons Inc., Hoboken, NJ.
- Bourne, L. (2015), *Making projects work effective stakeholder and communication management*, CRC Press, Boca Raton, FL.
- Bryde, D. (2008), "Perceptions of the impact of project sponsorship practices on project success", *International Journal of Project Management*, Vol. 26 No. 8, pp. 800-809.
- Crawford, L., Cooke-Davies, T., Hobbs, B., Labuschagne, L., Remington, K. and Chen, P. (2008), *Situational sponsorship of projects and programs: an empirical review*, Project Management Institute Inc., Newtown Square, PA.
- Cooke-Davies, T.J., Crawford, L., Hobbs, J.B., Labuschagne, L. and Remington, K. (2006), "Exploring the role of the executive sponsor", published research

report, Project Management Institute, Newtown Square, PA.

- De Klerk, M. (2014), "Project management or project leadership?", Du Plessis, Y.
  (Ed.), *Project management: a behavioural perspective*, Pearson, Cape
  Town, South Africa, pp. 61-96.
- Drouin, N. (2018), "Editorial", International Journal of Managing Projects in Business, Vol.11 No.1, pp. 2-6.
- Dvir, D., Lipovetsky, S., Shenhar, A. and Tishler, A. (1998), "In search of project classification: a non-universal approach to project success factors", *Research Policy*, Vol. 27, No. 9, pp. 915-935.
- Easton, G. (2010), "Critical realism in case study research", *Industrial Marketing Management*, Vol. 39 No. 1, pp.118-128.
- Eisenhardt, K.M. (1989), "Building theory from case study research", *The Academy* of Management Review, Vol. 14 No. 4, pp. 532-550, available at: https://www.jstor.org/stable/258557?seq=4#metadata\_info\_tab\_contents (accessed 5 December 2018).
- Elo, S. and Kyngäs, H. (2008), "The qualitative content analysis process", *Journal* of Advanced Nursing, Vol. 62 No. 1, pp. 107-115.
- Englund, R.L. and Bucero, A. (2006), *Project sponsorship: achieving management commitment for project success*, Jossey-Bass, San Francisco, CA.
- Eren, F. (2019), "Top government hands-on megaproject management: the case of Istanbul's grand airport", *International Journal for the Management of Projects in Business*, Vol. 12 No. 3, pp. 666-693.
- Fischer, J.M. and Amekudzi, A. (2011), "Quality of life, sustainable civil infrastructure, and sustainable development: strategically expanding

choice", *Journal of Urban Planning and Development*, Vol. 137 No. 1, pp. 39-48.

- Flyvbjerg, B. (2014), "What you should know about megaprojects and why: an overview", *Project Management Journal*, Vol. 45 No. 2, pp. 6-19.
- Friese, S. (2019), *ATLAS.ti 8 Windows user manual*, ATLAS.ti Scientific Software Development GmbH, Berlin, Germany.
- Guest, G., Bunce, A. and Johnson, L. (2006), "How many interviews are enough? an experiment with data saturation and variability", *Field Methods*, Vol. 18 No. 1, February, pp. 59-82.
- Helm, J. and Remington, K. (2005), "Effective project sponsorship: an evaluation of the role of the executive sponsor in complex infrastructure projects by senior project managers", *Project Management Journal*, Vol. 36 No. 3, September, pp. 51-61.
- International Project Management Association (2015), *Individual competence baseline (ICB)*, 4th ed., International Project Management Association, Amsterdam, The Netherlands.
- James, V., Rosenhead, R. and Taylor, P. (2013), *Strategies for project sponsorship*, Management Concepts Press, Inc., Tysons Corner, VA.
- Kloppenborg, T.J., Manolis, C. and Tesch, D. (2009), "Successful project sponsor behaviours during project initiation: an empirical investigation", *Journal of Managerial Issues*, Vol. 21 No. 1, pp. 140-159.
- Kloppenborg, T.J., Tesch, D. and Manolis, C. (2011), "Investigation of the sponsor's role in project planning", *Management Research Review*, Vol. 34 No. 4, pp. 400-416.

- Kloppenborg, T.J., Tesch, D., Manolis, C. and Heitkamp, M. (2006), "An empirical investigation of the sponsor's role in project initiation", *Project Management Journal*, Vol. 37 No. 3, pp. 16-25.
- Kloppenborg, T.J. and Tesch, D. (2015), "How executive sponsors influence project success", *MIT Sloan Management Review*, Vol. 56 No. 3, pp. 27-30.
- Louw, W., Steyn, H., Wium, J. and Gevers, W. (2020), "Executive sponsor attributes and megaproject success", *International Journal of Project* Organisation and Management, Vol. 13 No. 1, pp.1-30.
- Louw, W., Steyn, H., Gevers, W. and Wium, J. (2018a), "The executive sponsor as key factor in megaproject success an exploratory study", Nunes, B.,
  Emrouznejad, A., Bennett, D. and Pretorius, L. (Ed.s), *Towards sustainable technologies and innovation: proceedings of the 27<sup>th</sup> Annual Conference of the International Association for Management of Technology*, April,
  Operations and Information Management Group, Aston Business School,
  Aston University, Birmingham, United Kingdom.
- Louw, W., Wium, J., Steyn, H. and Gevers, W. (2018b), "The megaproject sponsor as leader", *South African Journal of Industrial Engineering*, Vol. 29 No. 3 (Special edition), November, pp. 173-187.
- Mayring, P. (2014), *Qualitative content analysis: theoretical foundation, basic* procedures and software solution, Klagenfurt, Germany, available at: https://www.ssoar.info/ssoar/handle/document/39517 (accessed 6 March 2018).
- Merrow, E.W. (2011), *Industrial megaprojects: concepts, strategies, and practices* for success, John Wiley and Sons, Hoboken, NJ.
- Morris, P.W.G. (2013), *Reconstructing project management*, Wiley-Blackwell, Oxford, England.

- Miles, M. and Huberman, M. (1994), *Qualitative data analysis: an expanded sourcebook*, 2nd ed., Sage, London, England.
- Nicholas, J.M. and Steyn, H. (2021), Project management for engineering, business and technology, 6th ed., Routledge, New York, NY.
- Office of Government Commerce (OGC) (2007), *Managing successful* programmes, 2nd ed., The Stationery Office, London, England.
- Pacelli, L. (2005), "Top ten attributes of a great project sponsor", paper presented at 2005 PMI Global Congress, Toronto, Canada, Project Management Institute, Newtown Square, PA.
- Pinto, J.K. (2004), "The elements of project success", Cleland, D.I. (Ed.), *Field guide to project management*, John Wiley and Sons, Hoboken, New Jersey, pp. 14-27.
- Project Management Institute (2014), Pulse of the profession in-depth report: executive sponsor engagement – top driver of project and program success, Project Management Institute, Inc., Newtown Square, PA.
- Project Management Institute (2017), A guide to the project management body of knowledge (PMBOK guide), 6th ed., Project Management Institute, Newtown Square, PA.

Remington, K. (2011), Leading complex projects, Gower, Farnham, England.

Robson, C. (2002), Real world research, 2nd ed., Blackwell, Oxford, England.

- Saldaña, J. (2010), *The coding manual for qualitative researchers*, Sage, London, England.
- Sewchurran, K. and Barron, M. (2008), "An investigation into successfully managing and sustaining the project sponsor-project manager relationship

using soft systems methodology", *Project Management Journal*, Vol. 39 No. Supplement, pp. S56-S68.

- Shenhar, A.J., Dvir, D., Levy, O. and Maltz, A.C. (2002), "Project success: a multidimensional strategic concept", *Long Range Planning*, Vol. 34 No. 6, pp. 699-725.
- Sutterfield, S., Friday-Stroud, S. and Shivers-Blackwell, S. (2006), "A case study of project and stakeholder management failures: lessons learned", *Project Management Journal*, Vol. 37, No. 5, pp. 26-35.
- Turner, J.R. and Zolin, R. (2012), "Forecasting success on large projects: developing reliable scales to predict multiple perspectives by multiple stakeholders over multiple time frames", *Project Management Journal*, Vol. 43 No. 5, pp. 87-99.
- Valencia, V.V. (2007), A project manager's personal attributes as predictors for success, Published MSc dissertation, Air Force Institute of Technology,
  Wright-Patterson Air Force Base, Ohio, available at: https://www.researchgate.net/publication/235161874\_A\_Project\_Manager%27s\_Pe rsonal Attributes as Predictors for Success (accessed 12 March 2018).
- Van Heerden, F., Steyn, J. and Van der Walt, D. (2015), Programme management for owner teams: a practical guide to what you need to know, Owner Team Consult, Sasolburg, South Africa.
- Walker, J.L. (2012), "The use of saturation in qualitative research", *Canadian Journal of Cardiovascular Nursing*, Vol. 22 No. 2, pp. 37-46.
- West, D. (2010), Project sponsorship: an essential guide for those sponsoring projects within their organizations, Gower, Farnham, England.

Zaccaro, S., Kemp, C. and Bader, P. (2004), "Leader traits and attributes",

Antonakis, J., Cianciolo, A. and Sternberg, R. (Ed.s), The nature of

leadership, Sage, Thousand Oaks, CA, pp.104-124.

## **APPENDIX: CASE STUDIES (PROJECTS)**

## Note:

No formal (documented) sponsor appointment process was followed on any of the projects. No psychometric or other assessments were performed to determine the suitability of any individual for the sponsor role.

## 1. Ingula pumped-storage scheme project

## **Project purpose**

The scheme, located in the KwaZulu-Natal Province, functions as a peaking plant, providing 1 332 MW of electricity during periods of peak demand on the national network. It was also intended to reduce the dependence of the national electricity utility (Eskom) on using costly diesel-powered open-cycle gas turbines.

## **Specifics of sponsor**

The executive responsible for the clean technology project portfolio in Eskom was appointed to the sponsor role in 2007 prior to the start of the construction phase of the project. He reported in both roles to the group general manager responsible for group capital, and was involved for the total duration of the construction, commissioning, and handover of the project.

- Budget: US\$0,89 billion. Actual: US\$3,6 billion
- Planned completion: End 2013. Actual completion: Beginning 2017.

## 2. Gautrain rapid-rail link project

### **Project purpose**

To establish a rapid-rail transit system linking the cities of Johannesburg and Pretoria and the OR Tambo International Airport in the Gauteng Province.

## **Specifics of sponsor**

The project leader (the *de facto* sponsor), as the Director-General of the Gauteng Department of Public Transport, Roads and Public Works, performed the sponsor role as project leader, as well as CEO of the management agency established for the project, from 2004 to 2012.

• Budget: US\$2,51 billion. Actual: US\$2,81 billion with US\$0,24 billion for operational and support costs.

• Planned completion: Mid-2011. Actual completion: Operational readiness achieved mid-2012.

# 3. New multi-product pipeline project

# **Project purpose**

During 2005, the national government commissioned a report on fuel shortages in the country. The report indicated the necessity of a new pipeline to transport three types of fuel – petrol, diesel, and jet fuel – from the City of Durban in the KwaZulu-Natal Province to Heidelberg in the Gauteng Province.

# **Specifics of sponsor**

The sponsor performed the sponsor role from 2000 to 2016 as managing director of the pipelines division in the national rail, port, and pipeline utility (Transnet), and later as group executive responsible for the capital project division in Transnet.

- Budget: US\$0,95 billion. Actual: US\$3,04 billion.
- Planned completion: 2010. Actual completion: 2017.

# 4. Fischer-Tropsch wax expansion project

# **Project purpose**

To double the production of hard wax in its RSA operations, the integrated energy and chemicals company (Sasol Ltd), via its wax business unit, undertook a synthetic (Fischer-Tropsch-technology-based) hard-wax expansion project.

# **Specifics of sponsor**

There were two sponsors on the project. The initial sponsor originated the concept to double the production of hard wax. He performed the sponsor role as managing director of the wax business unit from 2006 to 2012. The senior vice president responsible for the Sasol Ltd operations in the Free State Province performed the sponsor role from 2013 to 2017. Both individuals reported to the group executive responsible for chemicals within Sasol Ltd.

- Budget: US\$0,84 billion. Actual: US\$1,36 billion.
- Planned completion: Phase 1 in 2012. Phase 2 in 2014. Actual completion of plant in 2017.

# 5. Growth programme for Sasol Secunda Synfuels facility

# **Project purpose**

To use the full capacity of natural gas delivered after completion of a natural gas pipeline project from Mozambique to South Africa, Sasol Ltd launched the Natural Gas and Secunda Growth Programme (NG&SGP).

# **Specifics of sponsor**

Two sponsors performed the role on the programme, which spanned three business units. The initial sponsor performed the role from 2004 to 2009 while initially the managing director of the gas business unit of Sasol Ltd. He reported to the group executive responsible for the RSA energy businesses. The second sponsor performed the role from 2010 to 2014 as senior vice president responsible for the Sasol Secunda synthetic fuels operations in the Mpumalanga Province. He reported to the group executive responsible for RSA operations.

- Budget: US\$1,415 billion. Actual: US\$1,415 billion
- Planned completion: 2013. Actual completion: 2014.

# 6. Collieries replacement /expansion programme

# **Project purpose**

Replacement of four aging coalmines that were approaching their end of economically mineable life. The mining division of Sasol Ltd undertook the programme. The coalmines are in the coalfields of the Mpumalanga Province.

# **Specifics of sponsor**

There were two sponsors on the programme (from early 2007 to end 2018). The roles were not full-time, but were part of the sponsors' functions as members of the Mining Division executive team, reporting to the managing director.

- Budget: US\$1,58 billion. Actual: US\$1,53 billion.
- Planned completion: As the programme unfolded, more clarity was reached on the completion dates for each of the mines. Actual completion (all four mines): mid-2019.