MATURITY OF SUSTAINABLE DEVELOPMENT WITHIN INFORMATION SYSTEMS PROJECTS

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Abstract

Sustainability or sustainability development has been a major topic of discussion over the last couple of years. Project management is also a discipline that is starting to focus on sustainability, but the focus is more on the environmental aspect of the project itself. Information systems (IS) projects do not have such a major impact on the environment as construction and engineering projects do. Should project managers that are implementing these 'soft' projects be concerned about sustainability? There is currently little or no knowledge about sustainability within the IS domain and whether sustainability is incorporated at all within IS projects. A structured questionnaire was adapted based on previous studies. It was circulated to the project management community within South Africa and a total of 1 099 responses were received. The responses covered all industries and for the purpose of this article, 387 IS projects (35.2% of the total projects) were analysed to determine the level of project management sustainability maturity. The objective of the study was to determine the level of capability regarding sustainability. Capability levels were determined for each of the sustainability dimensions and a comparison was made between the three dimensions to determine whether the economic dimension takes preference. Determining sustainability project management capability provides insight into how project managers as well as organisations are incorporating sustainability. The analysis indicates that the focus is on the economic dimension of sustainability. The results also highlight the complete lack of integrating social and environmental sustainability into project management. Overall, organisations are not looking at the "bigger picture" as there is perpetual focus on the short- rather than long-term sustainability of IS project management. This research contributes to scholarship in two ways. There is currently limited or no research focusing on IS project management sustainability. The research fills this gap and highlights that sustainability in business or IS projects is not being considered. The results from this research can be applied internationally and the research therefore contributes to the limited body of knowledge on IS project sustainability. The second contribution is more of a philosophical

nature. Exploratory factor analysis indicates that there should be five dimensions when it comes to IS project management instead of the usual three.

Keywords: Sustainability; Information systems; Capability; South Africa; Exploratory factor analysis

1. Executive Summary

Sustainable development (SD) has become a hot topic for discussion. It emanates from global warming and the reasons what caused it and how we as humans can slow the process. It is therefore logical that this debate would spill over into the discipline of project management. Research on sustainability development within project started in the early 1990's with a handful of articles. The early 2010's saw around 40 annual research publications.

Research in SD and project management focuses more on the impact that construction and engineering projects have on the environment rather than how to incorporate SD principles into project management. Within the discipline of Information Systems (IS), the focus is on Green IT and not necessarily on SD per se. This creates an enormous gap in research as to how should IS projects incorporate SD.

Three hundred and eighty seven project managers participated in this research. The focus of this research is to determine the capability levels of SD. The results highlighted that the capability level of the economic dimension is at level 4. This implies that the aspects such as ROI, NPV and payback period are used to select projects. However, the results indicate that the social and environment dimensions are not considered during IS project implementations. The implication is that the capability levels are at a level 1 focusing on statements or ambitions regarding sustainability to be incorporated into IS projects. The results also highlighted that the three dimensions (Economic, Social and Environment) are not applicable to IS projects and that five dimensions (People, Environment, Society, Human Right and Economy) should be considered.

The value of this article is two-fold. First it highlights the fact that IS project managers are ignoring SD. This might be deliberate or it might be due to ignorance. Whatever the case, organisational leaders should ensure that IS project managers understand the importance of SD. Secondly, this article opens debate on the dimensions of SD. Are all the dimensions applicable to IS projects and to what extend are they applicable? This will be determined by future research where the focus will be on confirmatory factor analysis.

2. Introduction

Saint Francis of Assisi (1181 – 1226) was one of the very first people to advocate sustainability. During his lifetime, the creation and development of financial institutions with the increasing use of coins or money transformed the traditional environment of social exchange through barter and gifts. Very simply, Saint Francis thoroughly rejected this new economy and advocated the organisation of a different model based upon a sharing of goods and services while caring for each other's individual needs. The fulfilment of everybody's real need also meant real peace (Troncelliti, 2013). Thus started the conflict between the three dimensions of sustainability, i.e. economy (profit), environment (planet) and social (people).

Organisations cannot shy away from their responsibility towards sustainability and it is even compulsory within South Africa to report on sustainability. Project management, and for the purpose of this article, information systems (IS) project management, contributes to the sustainability of the organisation (Garies, Huemann, & Martinuzzi, 2013). IS projects themselves need to be executed in a sustainable manner and, more importantly, the deliverable must contribute to the sustainability of the organisation (Keeys, 2014; Marnewick, 2015).

Literature on project management and sustainability is emerging, but at a very slow pace. Current literature focuses on the incorporation of sustainability into project management and not necessarily on the contribution of project management to organisational sustainability. The focus is also on construction and civil engineering projects in developed countries and in China as an upcoming nation (Nannan, Ronggui, Radosavljevic, & Hua, 2011; Zheng, Shuibo, & Zhulin, 2011). Little or no attention is given to the role that IS projects play within the sustainability debate.

Africa, especially sub-Saharan Africa, is perceived as a potential point of growth and projects are executed all over the African continent (Marnewick, 2012). No knowledge is available on whether these projects are executed in a sustainable manner or whether they contribute to the sustainability of the organisation or the African continent at large. Insight into project management sustainability practices is needed to ensure that Africa is not depleted of her natural and human resources and that organisations

involved in Africa are focusing on a long-term commitment and not just on a "what is in it for me" kind of relationship (Zhang, Wu, Shen, & Skitmore, 2014).

South African companies such as MTN and Standard Bank are expanding into sub-Saharan Africa and various business-type projects are launched to aid this expansion into Africa. These projects might not have the same impact on Africa's natural resources as construction, mining and civil engineering projects, but they have a more direct impact on the sustainability of the organisations themselves. Organisations are employing thousands of local Africans as part of this expansion and the collapse of any organisation will have a devastating impact on the economic and social dimensions of the community in which the organisations operate (Ernst & Young, 2012). No research has been conducted into the sustainability of business and IS projects and whether these projects deliver benefits to the organisation and ultimately ensure the long-term existence of the company and the well-being of its employees. The problem is compounded as there is also no or little research on project sustainability within the African context.

This research focused on the capability of organisations to incorporate sustainability into IS projects. The specific aim of the research is to (i) measure the level of sustainability capability within IS projects and to (ii) determine whether the checklist for integrating sustainability in projects is also applicable to IS projects. Organisations within the South African environment were investigated to determine the level of project management sustainability capability. The research focused on all three dimensions of sustainability, i.e. the economic, environment and social dimensions. It also focused on the intra-relationship between these three dimensions. This intra-relationship is addressed during the final exploratory factor analysis. A third aspect is whether IS projects should have different ways to measure sustainability than construction and engineering projects. Insight into IS project management sustainability capability contributes to the current body of knowledge. This knowledge can be utilised to raise awareness amongst IS project managers regarding sustainability. The ultimate goal is to ensure that IS projects meet current needs and do not compromise the needs of future generations.

A quantitative research approach was followed as the research was exploratory (Field, 2013). Structured questionnaires were distributed and the three dimensions were used as the constructs. Statistical analysis

was done on these three constructs to determine the relationship between them and whether a causal relationship exists between the constructs.

The article is divided into four sections. The first section is on sustainability literature as well as how sustainability is incorporated into project management. The second section deals with the research methodology and how the results were collected from the various respondents. The third section is an analysis of the results of the 650 respondents. The focus of the analysis is on the three dimensions of sustainability and how they are incorporated into IS project management. The fourth and last section specifies the impact of ignoring sustainability and the effect of sustainability on the overall sustainability of the organisation.

3. Literature Review

According to Toman (2006), the term 'sustainability' is inherently ambiguous. Sustainability can be understood as either preserving and maintaining ecological systems or maintaining or improving the living standards from the perspective of economists. These different perspectives allow for different interpretations which can make understanding sustainability more difficult. According to Keeys (2014) as well as Silvius and Schipper (2014), the definition that is most commonly accepted is that of the Brundtland Report: "*sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (World Commission on Environment and Development, 1987). Sustainability, according to this report, is concerned with three dimensions, namely economy (profit), environment (planet) and social (people).

Economic dimension: Maximising profit, reducing costs and growing revenue are considered to be some of the traditional business imperatives (Thomas & Lamm, 2012). The primary goal of an organisation is to generate wealth for the shareholders. Martens and De Carvalho (2014) recognise the importance of the economic dimension as it protects the capital of the shareholders. Since moving away from a goods bartering system to a money-based economy, organisations and individuals require money to obtain the resources they need and want from others (Handy, 2002). Profits are also reinvested into the organisation to ensure that the organisation achieves growth.

Social dimension: The social dimension refers to the communities in which organisations operate as well as the employees of an organisation (Dempsey, Bramley, Power, & Brown, 2011; Dillard, Dujon,

& King, 2009). Employees are the ones who generate the results of the organisation and should be cherished by the organisation. The results of the organisation are also dependent on how the community supports the organisation. Utilising communities and employees for organisational success while not exploiting them is the balance espoused by the concept of the social dimension. Organisations should look after the communities in which they operate. Those that impact negatively on the community in which they operate can hurt their reputation (for example the BP Deepwater Horizon oil spill (Morgan, Whitehead, Huth, Martin, & Sjolander, 2016) or the Markina incident (Hill & Maroun, 2015)) and they can lose customers to more reputable organisations. Organisations which recognise the importance of people often engage in corporate social responsibility/investment (CSR/I) initiatives. These initiatives are organisational actions taken to improve the quality of life of employees as well as society at large while still ensuring economic development (Holme & Watts, 1999; Nejati, Shafaei, Salamzadeh, & Daraei, 2011).

Environment dimension: This dimension is concerned with the environment which people inhabit. Sustainability has largely become linked to the preservation of the environment and the failure of humanity to date to preserve the environment (Gore, 2006; Higgins, 2010). It is evident from literature that the planet has been negatively impacted by the activities of the human race (Gore, 2006; Higgins, 2010; Ludwig, Hilborn, & Walters, 1993). It was already suggested in 1993 that the pursuit of economic goals had led to and would continue to lead to the degradation of the environment that sustains humankind (Douthwaite, 1993). The environment is an important source of resources which need to be preserved to ensure continuity of operations (Turner, Pearce, & Bateman, 1994). The support provided by the natural environment is necessary to the operation of most organisations. Organisations rely on the natural resources found throughout the world. As these resources dwindle, organisations find it more and more difficult to continue their operations (Waughray, 2015). Not considering the sustainability of the environment has a negative impact on organisations and affects the profits realised, since operating costs increase as the sourcing of materials becomes more costly.

A balance between the dimensions of sustainability is therefore necessary (Elkington, 1997). It has become widely accepted that the wise use of natural resources, social wellbeing and economic growth cannot be achieved without considering all of the dimensions and their effect on each other. The

dimensions and their relationship can be seen in figure 1, which highlights that only when there is a balance between all three dimensions, sustainability is achieved.

[INSERT FIGURE 1 HERE]

2.1 Problems incorporating sustainability

In spite of the apparent importance of sustainability, there are issues regarding how sustainability is incorporated, if at all. Organisations value profit above the other two dimensions, resulting in the social and environment dimensions being neglected, particularly the social dimension (Edum-Fotwe & Price, 2009; Labuschagne & Brent, 2005; Martens & De Carvalho, 2014; Smith & Sharicz, 2011; Ullah, Lai, & Marjoribanks, 2013).

According to Kendall and Willard (2015), the biggest contributor to the failure of organisations' sustainable performance is the gap between awareness and action. The majority of business leaders recognise the need for sustainability but underestimate what needs to be done. This in turn leads to a gap between current performance and needed performance with regard to sustainability.

Alänge and Steiber (2009) attribute the difficulties of implementing sustainability to the governance structure of an organisation. How sustainability is implemented within an organisation depends on the understanding and orientation of the board. The board is directly responsible for the achievement of sustainable economic, social and environmental performance (Institute of Directors Southern Africa, 2009). Top management needs to have the correct understanding of sustainability which ties into the 'awareness and action' that was mentioned by Kendall and Willard (2015). Alänge and Steiber (2009) also note that even if top management understand and support sustainability, eventually this sentiment changes. There is a risk that with the inevitable change of management, this understanding and support of sustainability may not be reflected in the direction given by new management.

Including sustainability in organisations can also be considered at project level, but inherent problems are still present. According to Garies et al. (2013, p. 11), projects that include sustainability principles are not necessarily integrated into the business processes. To receive benefits from sustainability, it needs to be integrated into the core functions and processes of the organisation. Sustainability is even being linked to company performance by some researchers (Orlitzky, Schmidt, & Rynes, 2003; Ullah et al., 2013).

2.2 Relating sustainability to projects

"*The need to integrate sustainability in project management has emerged*" (Martens & De Carvalho, 2014, p. 2), as the field of sustainability integrated with project management is considered to still be an emerging field. According to Garies et al. (2013), sustainability principles are considered in specific project types. These types include public, engineering and construction projects. As societies move towards a more sustainable orientation, it requires the implementation of effective projects to realise this change (Silvius et al., 2012).

Garies et al. (2013) note that sustainability has been considered at strategic level, but the operational levels including projects and programmes have yet to be considered. There are many organisations which have embraced sustainability as a fundamental aspect of doing business (Silvius et al., 2012). This orientates the business context of projects to address sustainability. This includes the way that projects are managed and executed with regard to sustainability.

Silvius et al. (2012) describe six principles of sustainability that have an implication specifically for projects and project management. The principles as well as their accompanying descriptions can be seen in table 1.

[INSERT TABLE 1 HERE]

In light of these principles, Silvius et al. (2012) provide their own definition for sustainability in projects and project management: "*Sustainability in projects and project management is the management, development and delivery of project-organised change in, processes, resources, policies, assets or organisations, with consideration of the six principles of sustainability, in the project, its results and its effects.*"

Research currently done on sustainability in project management is considered to be interpretive (Silvius & Nedeski, 2011; Silvius et al., 2012) as well as conceptual (Martens & De Carvalho, 2014). These studies give meaning as to how the concepts of sustainability could be interpreted within the context of projects. Seeing as the studies are interpretive, they provide the ingredients but not a clear recipe on how sustainability should be integrated into projects. In light of this, a goal at the 2010 International Project Management Association (IPMA) Expert Seminar was to translate the concepts of sustainability into practically applicable tools that can be used by project management professionals.

One such tool that was developed, is a sustainability checklist shown in table 2. The checklist provides specific areas in projects for which sustainability can be considered.

[INSERT TABLE 2 HERE]

A project sustainability capability model was developed based on this checklist. The capability model is based on two concepts:

1. Project sustainability capability is expressed in terms of depth of vision (Silvius & Nedeski, 2011; Silvius & Schipper, 2014). This approach is based on the assumption that sustainability can be considered at different levels. The capability model consists of four levels which exclude the state at which sustainability does not feature within a project. The first level is resources used in the project. The second level is the business process of delivering or managing the project. The third level of consideration is the business model within which the project is executed. The fourth level of consideration is the deliverable or result of the project. This level connects the consideration of sustainability in the management of the project with the sustainability of the project itself.
2. The second concept that the capability model builds upon entails the principles of sustainability, operationalised in the sustainability integration checklist. Each of the four levels of the model is assessed according to the different aspects which are grouped into one of the dimensions of sustainability (Silvius & Nedeski, 2011). The capability model assesses a project at each of the levels.

The project sustainability capability model is similar to the business capability model in that they both imply an origin or base where no sustainable activity is contemplated (Crawford, 2006; Donnellan, Sheridan, & Curry, 2011; Silvius & Schipper, 2014). The business capability model stages as well as the project capability levels both indicate a ranking which implies that the last stage and level is the optimal position for businesses and projects, respectively, with regard to sustainability. According to the business stages of capability, it is only at the third stage that organisations take a proactive approach to incorporate sustainability. It is foreseeable that only organisations at the third stage and higher would actively include sustainability within their projects.

2.3 Sustainability and IS projects

There is an apparent void in literature regarding sustainability and its consideration in IS projects. Research on sustainability in project management focuses on construction and engineering projects and not necessarily on business or IS projects. Research on sustainability within the engineering and construction disciplines emphasises that it is the project manager's responsibility to integrate and realise sustainability in the construction project process (Wang, Wei, & Sun, 2014). A shortcoming of the research is that it focuses mostly on the environmental dimension where project managers must assess the environmental aspects of a project and the deliverable itself (Maltzman & Shirley, 2014). Sustainability in project management research is neglecting the social and economic dimensions.

The question arises whether business and/or IS projects are different from construction and engineering projects since these types of projects do not necessarily have an impact on the environmental dimension of sustainability. Wang et al. (2014) have identified strategies that can be incorporated into construction and engineering projects but these are not applicable to business/IS projects and different strategies should be designed for these types of projects.

Sustainability within IS focuses on the concept of Green IT (Costello, 2011; Hedman & Henningsson, 2011). The emphasis is on the infrastructure side of IT where Green IT "benefits the environment by improving energy efficiency, lowering greenhouse gas emissions, using less harmful materials, and encouraging reuse and recycling" (Murugesan, 2008, p. 24). Little or no research has been done on the implementation and management of IS. IS do run on Green IT infrastructure but, according to Silvius and Nedeski (2011), they can contribute to sustainability if the focus is on the product that is created through the implementation of IS. This is especially the case where the end product is a service or process. The multilevel IS project sustainability model focuses on two aspects of IS sustainability (Marnewick, 2015). The first is whether the sustainability principles as per table **2** are incorporated into the daily management of an IS project. This speaks directly to the first two levels of the project sustainability capability model. The second aspect addresses whether the deliverable of an IS project is beneficial to the organisation. The ultimate benefit is whether the deliverable itself is sustainable and contributes to the sustainability of the organisation. This aspect deals with levels 3 and 4 of the project sustainability capability model.

IS projects differ in several ways from projects in other fields, warranting further investigation. The result or deliverable of IS projects is not entirely concrete. As such, judging the result of an IS project can be difficult, especially from the perspective of the customers who may not have an IT background. The goal of this research was to measure the capability of IS projects with regard to sustainability. The assumption was that organisations realise that sustainability should be incorporated into the management of IS projects. In order to achieve this goal, two research objectives were identified:

1. To measure the level of sustainability capability within IS projects.
2. To determine whether the checklist for integrating sustainability in projects is also applicable to IS projects.

The next section covers the research methodology that was used to achieve the goal and research objectives. A quantitative research approach was used, as explained.

3. Research Methodology

The questionnaire used in this research was based on that of Silvius et al. (2012), which was adapted to measure capability. The original questionnaire of Silvius et al. (2012) measured two values for each aspect of a sustainability dimension. For example, the direct financial benefit aspect consists of four questions and each question measures the actual and desired state. In the adapted questionnaire, the four questions were adapted to reflect the capability from levels 1 to 4 and each aspect within a dimension was thus measured on a scale of 1 to 4, where 1 indicated low capability and 4 high capability.

The adapted questionnaire consisted of four sections. Section one focused on the biographical information of the respondent whereas section two focuses on information related to the project itself. Section three focused on the context within which projects were implemented and measured organisations' commitment towards sustainability. Compliance to the five aspects of the definition of sustainability was determined in this section. Section four was divided into the three sustainability perspectives. Four questions formed part of the financial perspective focusing on direct (financial) benefits, managerial flexibility and optionality, investment evaluation as well as reporting. The planet perspective had seven questions focusing on procurement, materials, energy, water, waste, travel as well as reporting. The social perspective consisted of eight questions which covered the following aspects: (i) labour practices and decent work, (ii) health and safety, (iii) training and education, (iv)

diversity and equal opportunity, (v) human rights, (vi) society and customers, (vii) bribery and anti-competitive behaviour and (viii) reporting. Each of the questions provided respondents the opportunity to reflect upon the capability for each aspect within the three dimensions.

Purposive non-probability sampling was used. The researcher chose this method as the sample consisted of project managers and their responses were appropriate for the research. A total of 1 099 valid questionnaires were received. These responses reflect the view of project managers managing various types of projects across various industries. The rationale of gaining feedback from project managers managing various types of projects, is to compare the maturity of sustainability across the various types of projects. Of the 1099 responses, 387 responses were focusing on IS projects, which is the focus of this article.

The results in table 3 indicate that the majority of IS projects (61.8%) were executed within the financial services and ICT services industries.

[INSERT TABLE 3 HERE]

The questionnaire was tested for reliability and a Cronbach's alpha of 0.748 was obtained. This implies that the scales used in the questionnaire had high reliabilities (Field, 2013:716). Since the questionnaire was based on the questionnaire of Silvius et al. (2012), construct validity was used. The questionnaire was designed to measure the capability levels of each aspect of the three sustainability dimensions. The results and appropriate analysis are presented in the next section.

4. Results and Analysis

The results of the survey are presented in two sections. The first section is on the capability of IS project managers to incorporate sustainability into projects. The focus is very much on descriptive analysis in this section. In the second section, the factor analysis is presented to determine whether some components of sustainability have a greater impact on IS projects than others.

4.1 Descriptive analysis

The first part of section three of the questionnaire dealt with the organisational context of sustainability. The results, expressed as a percentage in figure 2, present the most important aspect (blue) versus the least important (red).

[INSERT FIGURE 2 HERE]

It is evident that *meeting current needs* and the *economic dimension* are the most important aspects of sustainability. This emphasises that finance and the short-term gain are what is considered the most important aspects. This view is also reflected in the least important aspects of sustainability. The *social* and *environment* dimensions are the least important, with the aspect of *allowing future generations to meet their needs* wedged between these four aspects. The focus is thus still very much on the financial gains of IS projects, with some consideration of the environmental and social aspects.

The second part of section three of the questionnaire, focused on incorporating sustainability into the strategies of the organisation as well as how the organisation reports on sustainability. With regard to the incorporation of sustainability into the organisational strategy, figure 3 highlights that 33.5% of the respondents indicated that "*The strategy of the organisation includes statements or ambitions that making a contribution to sustainability is one of the drivers behind the project and is included in the justification of the project*". Although more than a third of the respondents felt that sustainability was an important aspect of their strategy, only 15.1% indicated that the reporting of sustainability adhered to the reporting guidelines of the Global Reporting Initiative (GRI). A quarter (26.2%) said that their organisation reported what was required by law and 38.4% reported on sustainability as part of their regular company reports. From a South African company perspective, corporate governance is driven by the King III Report (Institute of Directors Southern Africa, 2009). Although this report does not explicitly mention how to report on sustainability, it does follow integrated reporting as prescribed by the GRI. Companies listed on the Johannesburg Stock Exchange (JSE) are required to report on sustainability. It seems as if South African companies are fairly capable regarding reporting on matters of sustainability.

[INSERT FIGURE 3 HERE]

The position of sustainability with regard to strategy is spread across the four capability levels. As mentioned earlier, 33.5% of the organisations operated at level 4. What is of concern is that 42.1% of the organisations operated at levels 1 and 2. Level 1 indicates that the strategy of the organisation only includes statements or ambitions regarding sustainability to comply with laws and regulations, whereas level 2 includes statements or ambitions regarding sustainability, but only to the extent that the interests of different stakeholders of the project are not compromised. It is evident that sustainability is not rated

as that important by South African companies and this attitude is supported by the results depicted in figure 2, where the focus is on the financial and short-term aspects of sustainability.

In the following sections the three dimensions of sustainability are analysed in detail and the aim of the analysis is to determine IS project managers' capability to incorporate sustainability into projects.

Economic dimension

The first dimension is the economic dimension, which consists of three aspects as per table 4.

[INSERT TABLE 4 HERE]

The *direct financial benefits* aspect focuses on the types of benefits that are recognised in the project's business case. Most of the IS project managers (36%) concentrated on capability level 3. Capability level 3 deals with benefits that are recognised in terms of extra revenues from improved business processes and/or new business models for existing products and services. Capability levels 1, 2 and 4 are almost equally distributed, implying that IS projects are still evaluated across various success criteria and that the benefits of IS projects range from direct financial benefits to the benefit of improved products or services.

The second aspect of the economic dimension focuses on the extent to which IS projects allow for future decision making. Capability levels 2 to 4 mention that this aspect is considered explicitly, which is heartening. The results indicate that levels 2 to 4 are almost equally represented. The implication is that IS projects are perceived as playing a part in the strategy of the organisation and that the end product or service contributes to future decision making within the organisation.

The evaluation and selection of IS projects is always a contentious issue and there are various ways of evaluating and selecting these projects. The most common way is to use a business case which reflects the financial viability and benefits of the project. The results as per table 4 indicate that capability level 3, where projects are evaluated and selected predominantly based on their long-term strategic value in combination with their short-/medium-term returns, are the most appropriate level on which to base investment evaluations.

The results in figure 4 display the overall capability levels of the economic dimension. This was calculated using the highest capability level of each of the three aspects within the economic dimension.

[INSERT FIGURE 4 HERE]

All three aspects are measured at capability level 3, emphasising the importance of the financial side of any IS project that is managed by the organisation.

Proposition 1: The economic dimension is high on the agenda of IS project managers. The reason for this is quite obvious, as organisations aim at maximising profit, reducing costs and growing revenue. IS itself is capable of reducing costs through process automation. IS project managers can still do better and focus on the economic dimension not just from a project viewpoint, but from the organisation's viewpoint. That might enable organisations to reach a sustainability capability level of 4.

Environment dimension

The next dimension is the environment dimension. This dimension consists of six aspects that IS project managers need to consider when they manage projects. Looking at table 5, it is obvious that IS projects are operating at the low capability level of 1.

[INSERT TABLE 5 HERE]

Procurement is the only aspect where the majority of the responses are at level 4. The respondents indicated that suppliers were selected based on their know-how and that the partnership helped to deliver the project in a more sustainable way, as well as complemented the project's products and services to aid sustainability. The choice of suppliers in South Africa is regulated through broad-based black economic empowerment (BBBEE) (Sibeko, 2010). Although the South African supplier is a BBBEE partner, the equipment and software supplied are sourced from companies such as Apple, Dell, IBM, Microsoft and SAP. These companies' products adhere to sustainable practices and it is almost logical that the suppliers therefore deliver sustainable products.

Most IS projects do not use any materials unless it is an infrastructure project. It therefore makes logical sense that the capability level is at 1 (59.4%) where materials are selected based on technical and functional requirements and the associated costs.

The energy aspect focuses on project-specific policies regarding energy consumption. This includes the energy consumption of individual team members as well as the equipment used during the project. Although most IS projects are at capability level 1 (44.3%) where the project does not have any specific policies, there is a move towards level 2 (24.8%) where the efficient use of energy is promoted and, where possible, energy-saving equipment is used.

Water is a scarce resource in South Africa and most of the country is classified as semi-arid. Although water is not used during the implementation of an IS project, IS project managers need to take note of two issues. The first is how water is managed during the manufacturing of equipment and, secondly, how water is managed and used by the team members themselves. Unfortunately, this aspect is measured at capability level 1 with 20.1% of IS projects promoting the efficient use of water and, where possible, using water-saving equipment.

The fifth aspect within the environment dimension deals with waste and how it is managed within IS projects. As with the other aspects, this aspect operates at capability level 1 (46.2%) and a lesser percentage (20.7%) at capability level 2. This means that waste management and the way that waste is dealt with are addressed implicitly. The onus is on team members to deal with waste generated during the course of the project.

The last aspect deals with travel. Travel forms a major part of IS projects, as team members need to travel to various customers, especially in a geographically dispersed roll-out. In this survey, half (50.9%) of the IS project travel was selected based on cost and time. No consideration was given to environmental aspects or to minimising the travelling of team members through video conferencing. This results in capability level 1.

Figure 5 summarises the capability level of the environment dimension. This was calculated using the highest capability level of each of the six aspects within the environment dimension. Apart from the procurement aspect (capability level 4), all the other aspects are measured at capability level 1. This is in stark contrast to the financial dimension where the average capability level is at 3. IS project managers have a lot of work to do in this regard and they will have to think of ways of addressing the aspects within the environment dimension.

[INSERT FIGURE 5 HERE]

Proposition 2: The only aspect that is seriously considered is the procurement aspect. The reason for this might be that it focuses on reducing costs whilst delivering quality. The other aspects within this dimension are not considered by IS project managers. They might feel that IS do not have anything to do with the environment, but they should focus on how these aspects should be addressed within a project, e.g. holding virtual meetings instead of attending physical meetings.

Social dimension

The third section focuses on the aspects that contribute to the social dimension of sustainability. As with the environment dimension, all the aspects are at a capability level of 1. This implies that IS project managers are applying the bare minimum with regard to the social dimension.

[INSERT TABLE 6 HERE]

In 38.9% of the IS projects, the projects complied with applicable standards and regulations for labour practices or decent work. A further 31.1% of IS projects required their suppliers and partners to practise good labour practices and decent work. Only 30% of the IS projects' deliverables were designed to improve labour practices and decent work in the community. The question that should be asked is whether IS projects are the same as construction and engineering projects. The notion is that IS projects do not necessarily play a role in local communities and therefore operating at a capability level of 2 at the most is more than sufficient.

The same thinking applies when it comes to health and safety. Health and safety is more of a concern in construction and engineering projects than in IS projects. Almost three-quarters of IS projects are at capability levels 1 and 2. The majority of IS projects are at capability level 1 where these projects comply with applicable standards and regulations regarding health and safety. To a lesser extent (27.1%), suppliers and partners were also required to enforce good health and safety practices.

Concerning training, education and organisational learning, the results show an almost equal split between the four capability levels. However, capability level 1 (the project includes activities for appropriate training and education of end-users as part of the project's deliverables) is still the dominant capability level (32.4%). The results indicate that learning opportunities are also taken into consideration, such as team members' training and education (level 2) and the development of relevant competencies of all the stakeholders involved.

South Africa, in the apartheid years, did not allow for diversity and equal opportunity within the working environment. This changed with the dawn of democracy and it is heartening to see that 40.1% of IS projects operate at capability level 1 where the project complies with applicable standards and regulations on equal opportunity in terms of gender, race and religion. A further 28.6% of these projects operate at capability level 2 where suppliers and partners are also expected to follow diversity practices

and provide equal opportunities. The same logic applies to this aspect as to the aspects of labour practices and health and safety. The product or service of an IS project cannot necessarily improve diversity and equal opportunity in the communities in which the product or service is used.

Almost half of the IS projects (47.5%) did not apply specific policies with regard to human rights such as non-discrimination, freedom of association and no child labour. A further 22.4% of IS projects focused on human rights reactively with the intention of not compromising the interests of different stakeholders. Only a small portion (13.2%) of these projects included human rights as a justification for the project.

The second-last aspect deals with society and customers where the focus is on social responsibility. This aspect operates at capability level 1 with 38% of IS projects recognising their social responsibility towards the external stakeholders in the society in which they operated. 24.3% of IS projects claimed that suppliers and partners were also required to take on social responsibility towards the external stakeholders in the society in which they operated. Just over a fifth of IS projects' deliverables and results were designed in such a way that translated their social responsibility towards the external stakeholders in the society in which they operated.

Bribery and anti-competitive behaviour are serious issues within the South African context, with 75% of South Africans admitting to paying bribes (Dobie, 2015). It is then no surprise that this aspect operates at a capability level of 1 where bribery and anti-competitive behaviour are rejected and responsible team members are held accountable. Suppliers and partners are also expected to reject bribery and anti-competitive behaviour. Some 35% of IS projects expected project deliverables to be actively designed in such a way that bribery and anti-competitive behaviour was prevented in the organisation or the community at large.

Figure 6 summarises the low capability levels of each of the aspects that contribute to the social dimension. This was calculated using the highest capability level of each of the seven aspects within the social dimension.

[INSERT FIGURE 6 HERE]

Proposition 3: IS projects operate at a capability level of 1. The implication is that IS project managers are not in the least concerned with the social dimension of sustainability. IS project managers must apply their minds to how these aspects can be incorporated in the daily management of an IS project.

Figure 7 summarises each of the aspects that contribute to the economic, environment and social dimensions of sustainability. This capability model clearly highlights that the focus is entirely on the economic dimension of an IS project and that little or no consideration is given to the environment and social dimensions.

[INSERT FIGURE 7 HERE]

Given the low capability levels of IS project management sustainability, the question is whether IS projects should be treated the same as construction and engineering projects. In the following section the factors that contribute to IS project management sustainability are analysed.

Proposition 4: The sustainability capability levels of IS projects are biased towards aspects that have a direct bearing on the financial side of a project. The emphasis is on the direct financial benefits, investment evaluation and the procurement of goods and services. This correlates with the results of (Edum-Fotwe & Price, 2009); Labuschagne and Brent (2005); (Martens & De Carvalho, 2014; Smith & Sharicz, 2011; Ullah et al., 2013).

4.2 Exploratory factor analysis (EFA)

The capability levels indicate that IS project managers are not particularly concerned about the social and environment dimensions. This raises the question whether these aspects are merely there for the sake of conscience or whether they should really be considered during the implementation of an IS project. In the next section these aspects are analysed and the aim is to determine which aspects influence one another and which should not be part of the sustainability equation. The purpose of EFA is to assess the dimensionality of the observed variables attained from the original questionnaire and condense them into fewer latent variables that are simpler to comprehend (Joseph, 2013).

Osborne and Costello (2005) is of the opinion that optimum results are achieve when a true factor analysis extraction method, oblique rotation and the use of scree plots are used. For the purpose of this article, maximum likelihood as an extraction method, Promax as an oblique rotation and the

interpretation of scree plots and factor plots in rotated factor space were used to achieve the optimum results.

Economic dimension

A maximum likelihood extraction factor analysis was conducted on the three aspects with Promax rotation. The Kaiser-Meyer-Olkin (KMO) measure did not verify the sampling adequacy for the analysis as the KMO = 0.583 (Miserable). Only one factor had an eigenvalue over Kaiser's criterion of 1 and explained 45.68% of the variance. Table 7 shows the factor loading after rotation. The items that cluster on the same factor suggest that factor 1 represents the economic aspects.

[INSERT TABLE 7 HERE]

Further iterations did not reveal any changes to the EFA and this was confirmed by the scree plot where only one data point appears above the break. The results in table 7 confirm that the three aspects as per the questionnaire do contribute to the economic dimension of sustainability. The low KMO value makes the results questionable. This is in line with the results presented in table 4 and figure 4.

Environment dimension

A maximum likelihood extraction factor analysis was conducted on the six environmental aspects with Promax rotation. The KMO measure verified the sampling adequacy for the analysis as the KMO = 0.73 (Middling). An initial analysis was run to obtain eigenvalues for each factor in the data. Two factors had eigenvalues over Kaiser's criterion of 1 and, in combination, explained 44.65% of the variance. The scree plot showed inflexions of two factors. Table 8 shows the factor loading after rotation. The items that cluster on the same factor suggest that factor 1 represents the environment and factor 2 represents travel.

[INSERT TABLE 8 HERE]

Further iterations did not reveal any changes to the EFA. The results in table 4 do not correlate with the results presented in table 7 and figure 8, which indicated that procurement is more important to IS project managers.

Social dimension

A maximum likelihood extraction factor analysis was conducted on the seven social aspects with Promax rotation. The KMO measure verified the sampling adequacy for the analysis as the KMO =

0.77 (Middling). An initial analysis was run to obtain eigenvalues for each factor in the data. Two factors had eigenvalues over Kaiser's criterion of 1 and, in combination, explained 40% of the variance. The scree plot showed inflexions of two factors. Table 9 shows the factor loading after rotation. The items that cluster on the same factor suggest that factor 1 represents the environment and factor 2 represents bribery and training.

[INSERT TABLE 9 HERE]

Further iterations did not reveal any changes to the EFA.

Sustainability dimensions

The exploratory factor analysis of the three individual dimensions is actually inconclusive. A maximum likelihood extraction factor analysis was therefore conducted on all 16 sustainability aspects with Promax rotation. The KMO measure verified the sampling adequacy for the analysis as the KMO = 0.756 (Middling). An initial analysis was run to obtain eigenvalues for each factor in the data. Five factors had eigenvalues over Kaiser's criterion of 1 and, in combination, explained 36.57% of the variance. The scree plot showed inflexions of five factors. Table 10 shows the factor loading after rotation. The items that cluster on the same factor suggest that factor 1 represents people at large, factor 2 represents the environment, factor 3 society, factor 4 diverse aspects and factor 5 the economy.

[INSERT TABLE 10 HERE]

The EFA was further investigated and subjected to further iterations. During the iterations the following two items were removed: Materials and Bribery and ant-competitive behaviour. The final EFA is presented in table 11.

[INSERT TABLE 11 HERE]

The final EFA is a better fit and the validity was confirmed based on the following: KMO=0.739, Goodness of fit was assessed and the significance level was 0.002 which is lower than 0.05 implying that the results are valid and adequate. The third test of adequacy focuses on assessing the total variance explained. The EFA identified five factors which accounts for 40.56% of the total variance in the dataset.

The results in table 10 actually make more sense when procurement is grouped with the three aspects of the economic dimension.

Proposition 5: The various EFAs contradict the checklist for integrating sustainability in projects (table 2). This is the case specifically for IS projects but might not be the case for other types of projects, such as construction and engineering projects. The results in table 10 portray five different groupings, with the social and environment dimensions each split into two sub-dimensions. The reason might be the inherent nature of IS projects which do not necessarily focus on the social and environment dimensions of the sustainability model as illustrated by Neudorff (n.d.). Although the purpose of this article is to determine the overall sustainability capability for IS projects, it is suggested that the same analysis should be done on construction and engineering projects to determine whether there is a substantial difference between IS projects and construction and engineering projects.

5. Discussion

The analysis of the data highlights two issues that are important to organisations that initiate IS projects. The first is the project management sustainability capability levels of IS projects and those of the organisation at large. The results show that most IS projects (71.3%) are done within industries other than construction and engineering. The implication is that the mindset is of such a nature that the social and environment dimensions do not form part of an IS project manager's frame of reference. The capability levels are focused almost exclusively on the economic dimension and the aspects that contribute to it. This is in line with the literature stating that organisations value profit above the other two dimensions, resulting in the social and environment dimensions being neglected (Edum-Fotwe & Price, 2009; Labuschagne & Brent, 2005; Martens & De Carvalho, 2014; Smith & Sharicz, 2011; Ullah et al., 2013). The capability levels vary between 3 and 4. Level 3 implies the business model within which the project is executed. Changing the frame of reference of a project from merely the implementation phase to the full extended life cycle can have favourable effects on the project deliverables. This is due to the emphasis in moving from delivering a project to delivering a product that is beneficial to the organisation and contributes to sustainability. The fourth capacity level is the deliverable or result of the project. Considering sustainability in the deliverable or result connects the consideration of sustainability in the management of the project with the sustainability of the project itself.

Little or no consideration is given to the aspects that contribute to the social or environment dimensions. All aspects have a capability level of 1. The focus is on the resources that are used in the project. The choice of a resource might reduce the negative impact of the project, but does not change the output of the project to be sustainability focused. Since the majority of IS projects are executed within the financial and ICT industries, the assumption is that the social and environment dimensions are not considered by IS project managers. IS project managers must start thinking about how the various aspects can be incorporated into the management of IS projects. This is also an opportunity for training providers to incorporate sustainability into their programmes.

Elkington (1997) advocated for a balance between the dimensions of sustainability, but it is evident from the results that this is not taking place within IS projects.

The second issue is that the traditional three dimensions are not applicable to IS projects. The EFA of all the aspects across all three dimensions indicates that sustainability should focus on five dimensions, as illustrated in figure 8.

[INSERT FIGURE 8 HERE]

This thinking is in line with Seghezzo (2009), who also claims that the original three dimensions of sustainability need to be re-evaluated. This has played a vital role in awareness and original debates around various industries and disciplines. Just as the three dimensions were incorporated into project management, it is time to re-evaluate how sustainability should be addressed in future project management, and especially within IS project management.

Sustainability is addressed as a governance component within the South African context (Institute of Directors Southern Africa, 2009). South African organisations report on sustainability in general and not specifically on the way that sustainability is addressed in projects. There is currently no research within the South African project environment on how sustainability is incorporated into project management. This is applicable to all environments i.e. construction and engineering as well as information technology. The results portrayed in this article is influenced by this and it is evident that sustainability does not form part of South African project managers' mind set. Similar future research might indicate an increase in capability as project managers are exposed to the notion of sustainability.

6. Conclusion

A synthesis of the literature reveals that research into project management sustainability is on the rise. The literature review also highlights that the research is done more in the construction and engineering industries as these industries have a bigger impact on the social and environment dimensions of sustainability. Research within the domain of IS project management is not receiving the attention that it should, given the important role that IT plays within an organisation. The importance of IS projects goes beyond the normal delivery of a product or service, as the focus is on the benefits that these project deliverables provide to the organisation. One of these benefits is the contribution to the sustainability of the organisation. IS projects should be delivered in a sustainable way but the product or service should also contribute to the sustainability of the organisation (Marnewick, 2015).

Sustainability is not something that IS project managers think of by default or as part of their planning. This is evident from the capability levels. The only reason why the financial dimension is at a capability level of 3 is that all projects are authorised based on financial implications. The results also highlight low capability levels for the social and environment dimensions. The argument is that IS projects are not directly involved in the environment like construction and engineering projects are. Overall, the project management sustainability capability levels of IS projects are extremely low as per the results in figure 7. Sustainability is traditionally divided into three dimensions. The EFA contradicts this intuitive division and suggests five dimensions for IS project management sustainability. These five levels are the economic side of an IS project, the people and society dimensions as well as the environment and diverse dimensions. The EFA therefore divided the social and environment dimensions into four dimensions with a much more focused view of each of the four new dimensions.

To incorporate sustainability into IS projects and raise the level of capability, organisations and IS project managers must reconsider the way that sustainability is incorporated. Is sustainability addressed as an after-thought or does it form part and parcel of the project life cycle beyond benefits delivery? IT project managers should ask themselves how each of the aspects on the checklist can be incorporated or addressed. Universities and other institutions of higher education should also play a role. These institutions can incorporate sustainability into their curricula and make current and prospective project managers aware of how sustainability can be incorporated into projects.

The significance of these results is in the potential debate that will ensue. The debate should be on whether IT projects should include sustainability and which aspects of sustainability should be incorporated. The applicability of these results to other countries should be tested in separate research. The dimensions of sustainability should also still be debated. Are the three original dimensions still valid? If so, are they applicable to all industries? These are the questions that are raised from the results of this research.

Future research will focus on confirmatory factor analysis. Structural equation modelling will be used to determine which aspects contribute to each dimension and ultimately to project management sustainability. The model will also focus on potential aspects that might be removed. It is also envisaged that this research will be repeated as part of a longitudinal study. This will indicate whether the project management sustainability capability levels have improved.

It seems as if Saint Francis of Assisi's concerns are still valid eight centuries later. The creation and development of financial institutions made humankind focus on the economic dimension and forget the social and environment dimensions, which are an integral part of humankind's future existence.

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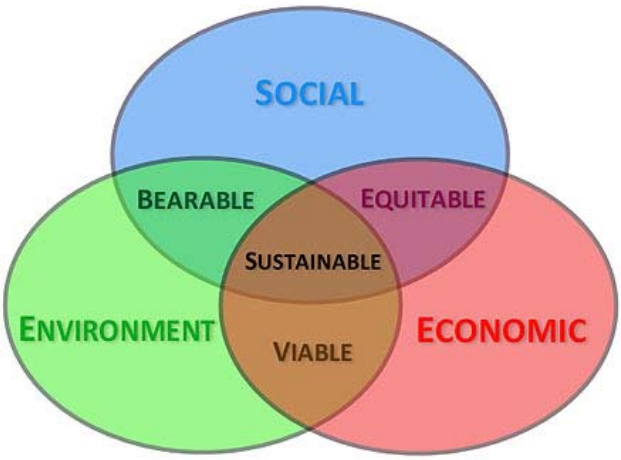

Figure 1. Three dimensions of sustainability (Neudorff, n.d.; Silvius, Schipper, Planko, Van den Brink, & Köhler, 2012)

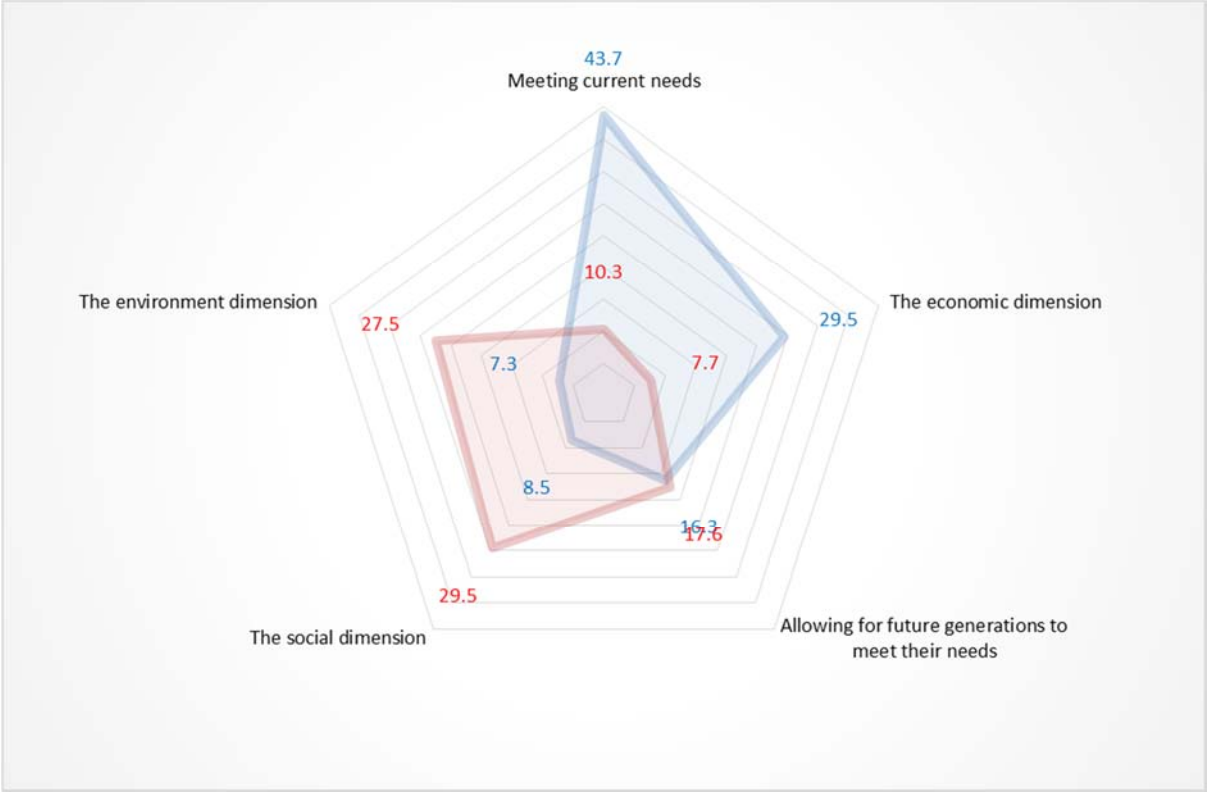

Figure 2. Aspects of sustainability

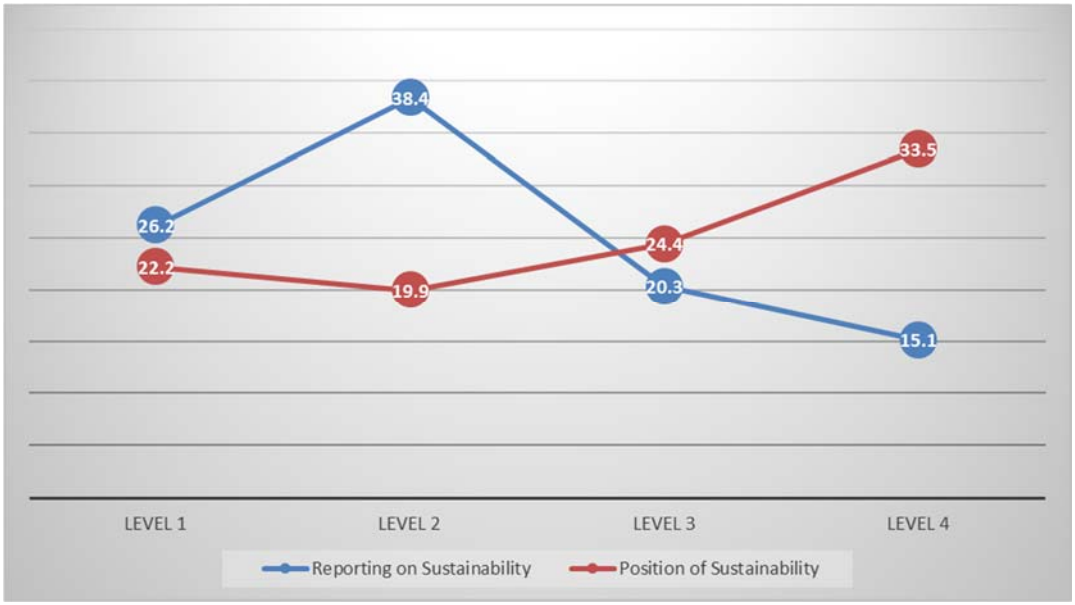

Figure 3. Reporting capability versus position on sustainability

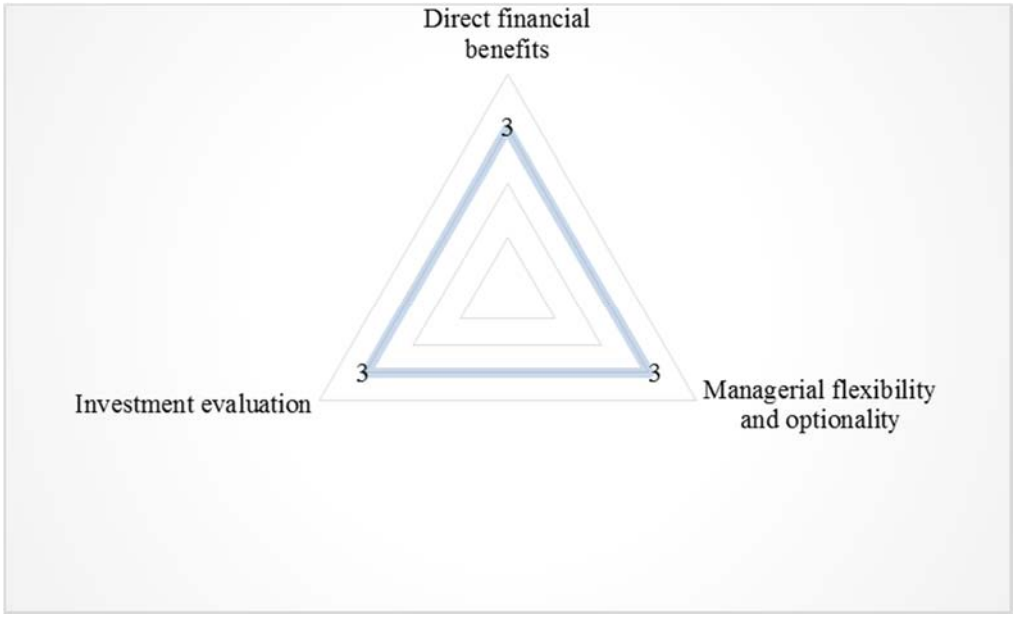

Figure 4. Capability levels of the economic perspective

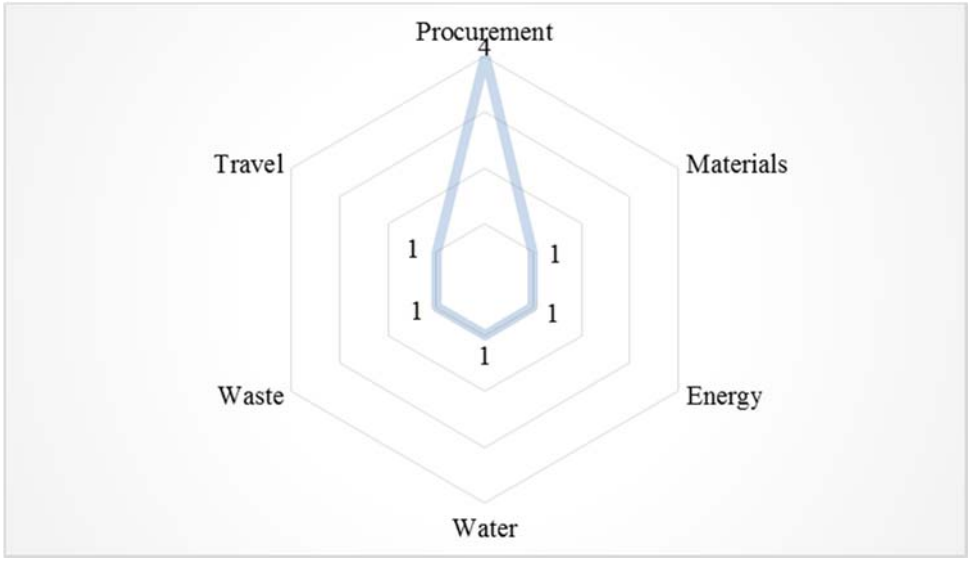

Figure 5. Capability levels of the environment dimension

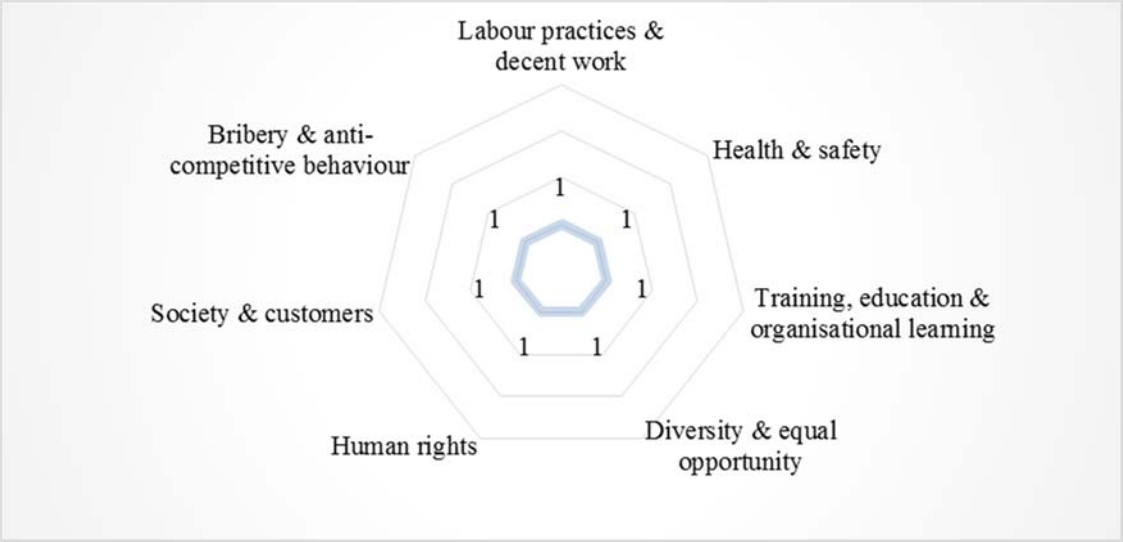

Figure 6. Capability levels of the social dimension

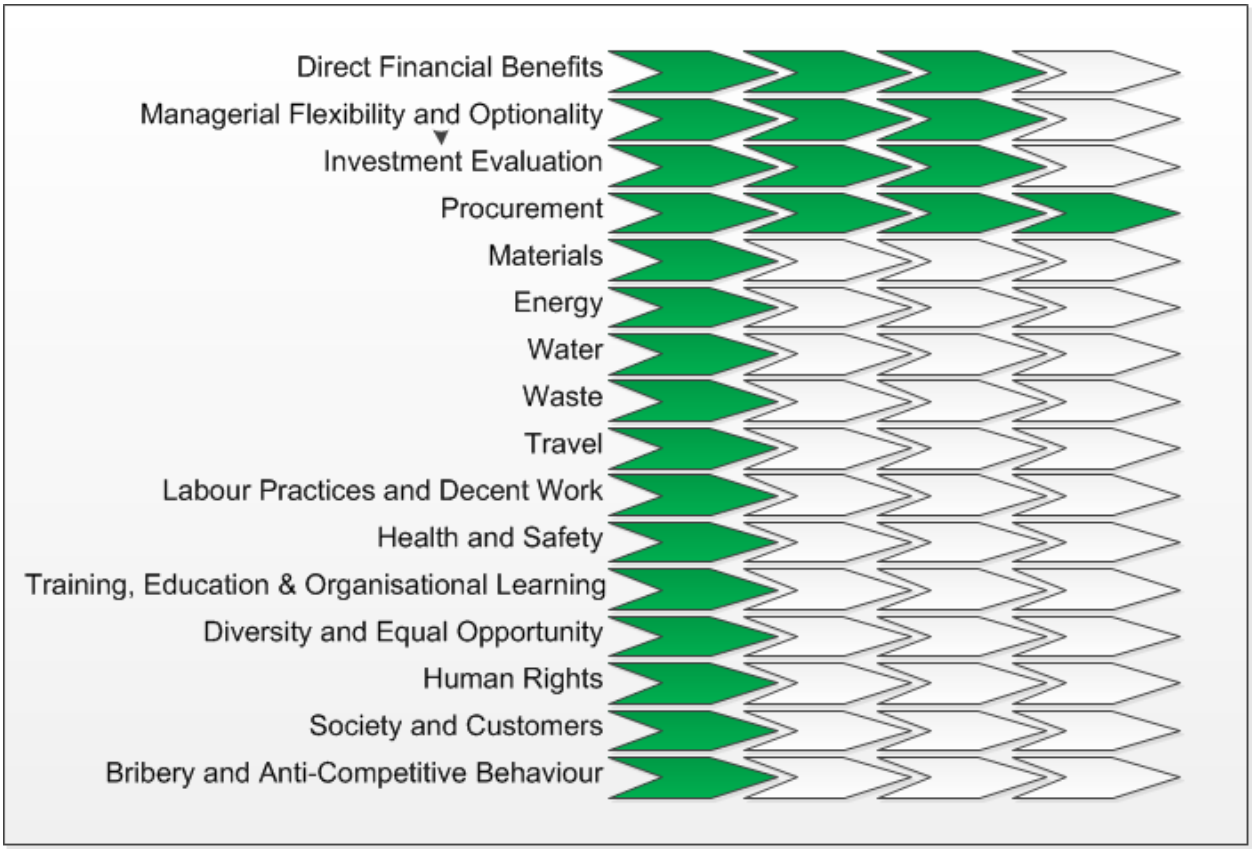

Figure 7. Capability levels of IS project management sustainability

Figure 8. Five dimensions of IT project management sustainability

Table 1. Sustainability principles

Number	Sustainability Principle	Description
1	Sustainability is about balancing or harmonising environmental, social and economic interests.	The integration of sustainability in projects and project management requires that all three dimensions of sustainability be considered.
2	Sustainability is about both short-term and long-term orientation.	The definition of sustainability identifies both the short- and long-term orientation of sustainability. Garies et al. (2013, p. 74) state that the boundaries of project management may end up being expanded, which may allow for the inclusion of a long-term orientation.
3	Sustainability is about local and global orientation.	The business world is increasingly becoming more global. The impact that projects may have on communities and environments are no longer confined to those found locally. Project teams, suppliers and beneficiaries of projects may exist across several countries for the same project.
4	Sustainability is about consuming income, not capital.	To meet the needs of the present without compromising the future generation's ability to meet their needs, resources cannot be exhausted. There are several resources utilised in projects, such as people and raw materials. While a project is temporary, there will be future projects that may rely on the same resources.
5	Sustainability is about transparency and accountability.	The accountability for the economic aspect of a project is clearly presented in project management. Sustainability requires that the environment and social aspects also be equally accounted for.
6	Sustainability is about personal values and ethics.	Sustainability is regarded by some as an ethical decision which ultimately comes down to the values and beliefs of those involved in a project. Project managers can refer to codes of ethics and professional conduct to determine the professional ethics and values they should subscribe to.

Table 2. Checklist for integrating sustainability in projects

Economic sustainability	Return on investment	- Direct financial benefits - Net present value
	Business agility	- Flexibility/optionality in the project - Increased business flexibility
Environmental sustainability	Transport	- Local procurement - Digital communication - Travelling - Transport
	Energy	- Energy used - Emission/CO_2 from energy used
	Waste	- Recycling - Disposal
	Material and resources	- Reusability - Incorporated energy - Waste
Social sustainability	Labour practices and decent work	- Employment - Labour/management relations - Health and safety - Training and education - Organisational learning - Diversity and equal opportunity
	Human rights	- Non-discrimination - Freedom of association - Child labour - Forced and compulsory labour
	Society and customers	- Community support - Public policy/compliance

		- Customer health and safety - Products and services labelling - Market communication and advertising - Customer privacy
	Ethical behaviour	- Investment and procurement practices - Bribery and corruption - Anti-competition behaviour

Table 3. Percentage of IS projects per industry

Industry	Percentage
Financial Services	37.6
ICT and Communication Services	24.2
Public Administration	9.5
Other	6.8
Energy	4.7
Logistic Services	3.2
Education and Training	3.2
Agriculture	2.4
Healthcare	2.1
Wholesale and Retail	1.8
Consulting	1.6
HR Services	1.3
Building and Construction	0.8
Facility and Real Estate Services	0.8
TOTAL	**100.0**

Table 4. Economic dimension

	Direct financial benefits	Managerial flexibility and optionality	Investment evaluation
Level 1	19.2	18.6	11.4
Level 2	23.8	26.4	23.6
Level 3	36.0	27.6	42.2
Level 4	21.0	27.4	22.9

Table 5. Environment dimension

	Procurement	Materials	Energy	Water	Waste	Travel
Level 1	26.5	59.4	44.3	51.7	46.2	50.9
Level 2	26.1	12.8	24.8	20.1	20.7	12.3
Level 3	12.3	13.8	17.8	13.9	17.3	21.3
Level 4	35.1	14.0	13.1	14.3	15.9	15.5

Table 6. Social dimension

	Labour practices & decent work	Health & safety	Training, education & organisational learning	Diversity & equal opportunity	Human rights	Society & customers	Bribery & anti-competitive behaviour
Level 1	38.9	48.2	32.4	40.1	47.5	38.0	42.7
Level 2	31.1	27.1	23.5	28.6	22.4	24.3	22.0
Level 3	17.2	14.5	22.9	17.1	16.9	21.5	18.3
Level 4	12.8	10.2	21.2	14.2	13.2	16.1	17.0

Table 7. Summary of maximum likelihood extraction factor analysis (economic dimension)

	Factor 1: Economy
Direct financial benefits	.473
Investment evaluation	.419
Managerial flexibility and optionality	.401

Table 8. Summary of maximum likelihood extraction factor analysis (environment dimension)

	Factor 1: Environment	Factor 2: Travel
Water	.792	-.034
Energy	.767	-.013
Waste	.521	.109
Materials	.283	.093
Procurement	.264	-.101
Travel	-.015	1.004

Table 9. Summary of maximum likelihood extraction factor analysis (social dimension)

	Factor 1: People	Factor 2: Bribery & training
Diversity and equal opportunity	.720	-.059
Human rights	.644	.034
Labour practices and decent work	.556	.022
Health and safety	.452	.068
Society and customers	.381	.228
Bribery and anti-competitive behaviour	-.040	.970

Training, education and organisational learning	.142	.294

Table 10. Summary of maximum likelihood extraction factor analysis (1st iteration)

	Factor 1: People	Factor 2: Environment	Factor 3: Society	Factor 4: Diverse	Factor 5: Economic
Human rights	.614	.081	.251	-.271	.032
Diversity and equal opportunity	.610	.024	.072	-.025	.083
Labour practices and decent work	.570	.029	-.033	.181	-.117
Health and safety	.479	-.008	-.074	.194	.010
Water	-.053	.780	.086	.063	-.043
Energy	.105	.738	-.108	.005	.033
Waste	.103	.395	-.004	.239	.032
Society and customers	.066	.003	.756	.061	-.085
Bribery and anti-competitive behaviour	.116	-.140	.375	.357	.082
Travel	-.027	.127	.027	.420	-.124
Training, education and organisational learning	.000	-.037	.209	.400	.113
Materials	.023	.185	-.098	.290	.051
Procurement	-.187	.144	.170	-.045	.541
Direct financial benefits	.141	-.067	-.274	.017	.533
Managerial flexibility and optionality	-.065	.050	-.004	.035	.378
Investment evaluation	.157	-.113	-.019	-.057	.301

Table 11. Summary of maximum likelihood extraction factor analysis (sustainability)

	Factor 1: Environment	Factor 2: People	Factor 3: Human Rights	Factor 4: Society	Factor 5: Economic
Water	.802	.357	.281	.233	.216
Energy	.750	.376	.329	.087	.271
Waste	.548	.465	.239	.174	.271
Labour Practices and Decent Work	.298	.649	.453	.199	.080
Health and Safety	.258	.589	.337	.147	.179
Training, Education and Organisational Learning	.216	.307	.172	.209	.229
Travel	.250	.297	.046	.093	.062
Human Rights	.297	.399	.824	.362	.126
Diversity and Equal Opportunity	.305	.543	.595	.286	.236
Society and Customers	.214	.304	.444	.997	.067
Procurement	.254	.027	.107	.130	.535
Direct (Financial) Benefits	.108	.134	.063	-.147	.486
Managerial Flexibility and Optionality	.152	.098	.023	.049	.421
Investment Evaluation	.027	.130	.112	.051	.298