

# ANALYSING BENEFITS REALISATION FROM A THEORETICAL PERSPECTIVE AND ITS CONTRIBUTION TO VALUE GENERATION

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## ABSTRACT

The benefits realisation approach emerged in the beginning of the 1990's, in the information systems and technology sector, focusing the management of projects on the delivery of business benefits. The approach intends to bring a greater awareness of project benefits to stakeholder, as well as the means to achieve and maximise benefits. Such approach is currently being explored in the construction sector, especially for managing healthcare projects. However, the literature on benefits realisation is mainly dedicated to the practical aspects of its implementation and little has been discussed about the theoretical foundations of this approach. Thus, the purpose of this article is to explore benefits realisation from a theoretical perspective and highlight its potential contribution for project management, specifically for further developing value generation concept in construction projects. This was pursued through a literature review on benefits realisation, to understand its principles and the search for theories that could further explain them. The paper describes concepts originated from three different scientific fields, namely production science, social science and systems thinking, which were found to be aligned with the core guidelines of benefits realisation. As a result, a theoretical discussion of the benefit realisation approach is presented, as well as its potential contribution to further developments of value generation concept. How the theory will be tested with experimental data is also indicated at the end of the paper.

## KEY WORDS

Benefits realisation, Project management, Value generation

## INTRODUCTION

Traditionally, the concept of value in project management thinking (including the value management body of ideas) is essentially related to product creation: the development or improvement of a physical product, system or facility to specification, cost and time (Winter et al., 2006). The same authors argue that the understanding of value should exceed the boundaries of product creation and be aligned with the business strategy, focusing on the generation of benefits in relation to different stakeholder groups.

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In the beginning of the 1990's, an approach named benefits realisation has emerged in the information systems and technology (IS/IT) sector, focusing the management of IS/IT implementation on the delivery of expected business benefits, instead of the traditional focus on project's time, costs and quality. The approach intends to bring greater awareness of project benefits to stakeholders, as well as the means to achieve and maximise benefits.

Since the 1990's, several models have been developed to support the implementation of this approach in diverse sectors, including construction (e.g. Sapountzis et al., 2010). However, little has been discussed about the theoretical contributions of this approach to project management. Thus, the aim of this paper was to analyse benefits realisation from a theoretical viewpoint as an attempt to better understand the contributions to project management. As a consequence, it is expected to better support the adoption of such approach in the construction sector.

A fundamental assumption underlying this research is that project management practices in construction are primarily based on the conversion model, while value generation concept is still underdeveloped. In this sense, benefits realisation has potential contributions to the further development of value generation, as the approach focuses on delivering benefits from projects. Thus, the hypothesis being tested in this research is related to the following research question: "how a better understanding of benefits realisation can contribute to further develop the value generation concept in construction projects?"

The paper is structured as follows. Firstly, the benefits realisation approach and its managerial process are presented. Then, the approach is discussed from different theoretical perspectives. Finally, the contributions of a greater understanding of benefits realisation for further developing the value generation concept are highlighted. How the theory will be tested with experimental data is indicated in the conclusions and future work section, presented at the end of the paper.

## **BENEFITS REALISATION AND VALUE GENERATION**

Bradley (2006) and Ward & Daniel (2006) define benefits as an outcome of a change that is perceived as an advantage by a particular stakeholder or a group of stakeholders. According to Payne (2007) and the OGC (2007), benefit is a measurable improvement resulting from outcomes, which is perceived as an advantage by a stakeholder, and should contribute towards one or more of the strategic objectives (OGC, 2007). Benefits are anticipated when a change is conceived (OGC, 2007) and are owned by individuals or groups who expect to obtain value from an investment (Glynne, 2007).

According to Reiss et al. (2006) benefits are achieved during the life of a programme, as completing projects are decommissioned and new ones commissioned. The same author explains that only when this capability is used by the organisation is a benefit actually realised: transport for London, for instance, has a portfolio of programmes, each of which creates a component of the London transport infrastructure, combining construction, ticketing, marketing and the integration projects to deliver improvements to Londoners. Thus, Reiss et al. (2006) explains that there is a value path from projects to benefits: projects create deliverables and the combination of these deliverables generates the capabilities that enable the desired benefits to be achieved.

Thus, a benefit management process ensures that the capabilities created are used to deliver the anticipated benefits (e.g. improved quality, enhanced cost effectiveness, etc.). In the benefits realisation approach, emphasis is given to the need of looking at

the project from a systemic view, being aware of every change that is necessary to achieve the expected benefits (Ward, Taylor & Bond, 1996).

Thus, the success of a project or programme often depends on synergy among different activities, as one project or set of activities might only be successful if others complete in a certain way (Bartlett, 2006). In this sense, the benefits realisation approach has been suggested as a way to expand the traditional way of managing projects based on the control of costs, quality and time, to providing accountability for the realisation of expected business benefits, and the achievement of success (Farbey et al., 1999). The same authors also emphasise that this approach enable the maximisation of benefits through learning and coping with contingencies.

OGC (2007) presents a diagram that shows the path from project outcomes to strategic objectives (Figure 1), highlighting not only the realisation of benefits, but also the emergency of unexpected benefits or dis-benefits that are side effects of achieving the desired outcomes, which also need to be managed.

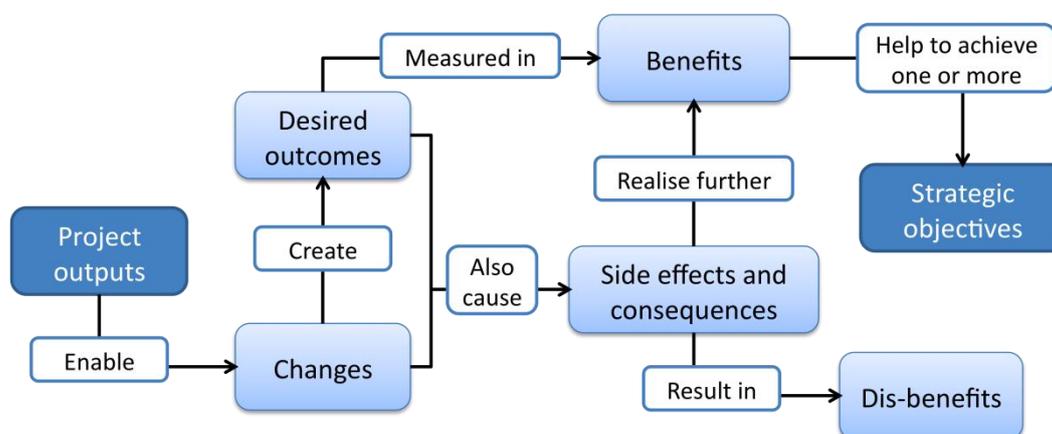


Figure 1: Path from project outputs to strategic objectives (Adapted from OGC, 2007)

### THE BENEFITS REALISATION MANAGEMENT PROCESS

According to Thorp (1998), a benefits realisation process should be able to deal with four dimensions of complexity: (a) Linkage – the link between expected results and the organisation’s strategy should be clear; (b) Reach – there is a need to understand the scope of the change which is necessary to achieve the expected results, including the areas that will be impacted and to what extend stakeholders will be affected; (c) People - people must be motivated and prepared to change; and (d) Time – the time for the transformation process should also be considered.

Since the 1990’s different benefits realisation models have been developed and applied in many sectors, e.g. Ward, Taylor and Bond (1996), Thorp (1998), OGC (2007), Sapountzis et al. (2010). Generally speaking, the models present a similar process, following a Plan-Do-Check-Act cycle (Nogeste & Walker, 2005). However, while some authors emphasise the contributions of benefits realisation for summative evaluations (evaluations for accountability), others highlight the contributions of such approach to formative evaluations (evaluations for learning) (e.g. Farbey et al., 1999).

Based on a literature review presented in Sapountzis et al. (2008), considerations for a benefits realisation process could be compiled. Thus, core guidelines for such process are presented and explained as follows:

- Identify and engage stakeholders;
- Identify and agree on benefits and possible dis-benefits;

- Set the plan for benefits realisation and define targets;
- Realise the benefits and track (measure) achievements;
- Adapt the process based on monitoring data and on emergent changes in expected benefits; and
- Review achieved benefits, identifying opportunities to improve.

Ward & Daniel (2006) argue that the non-consideration of some stakeholders and how they can influence projects' results is a major reason for project failure. Reiss et al. (2006) suggests that the expected benefits of a project are usually vaguely defined, leading to difficulties in maintaining focus when subsequent problems occur. The vagueness of expected benefits can also lead to an increased uncertainty in allocating responsibility for managing and delivering benefits (Lin & Pervan, 2001).

When planning for benefits realisation, Thorp (1998) emphasises the need to consider the interconnected issues that might influence the project's results, in order to achieve success. Moreover, Ward, Taylor & Bond (1996) argue that the purpose of benefits realisation, when this process was introduced in IT was "*not to make good forecasts but to make them come true.*" In this sense, planning for benefits realisation, including key assumptions and sensitivity and risk analysis of those expected benefits should be seen as a major component of this decision-making process, being a roadmap for the programme and providing focus for delivering change (OGC, 2009).

OGC (2007) argues that the ultimate success of a programme should be judged by its ability to realise benefits and the continuing relevance of these benefits to the strategic context. In this sense, the benefits realisation is an approach has also been suggested as a way to better consider the dynamic nature of projects, recognising the emergency of unexpected benefits and dis-benefits, while supporting learning and adaptation (OGC, 2007; Ashurst & Doherty, 2003). Sapountzis et al. (2010) also emphasise the need for understanding that changes in expected benefits will emerge during the process, and these should be recognised and appropriately managed. According to the same authors, in a construction project, requirements change and evolve throughout the process. These changes need to be managed (e.g. active management of the design brief) to assure that the overarching expected outputs (or benefits) are achieved and consequently reducing value loss.

## BENEFITS REALISATION FROM A THEORETICAL PERSPECTIVE

The guidelines drawn from the literature were the starting point for analysing the benefits realisation approach from a theoretical viewpoint. Considering the core of a benefits realisation process the plan-do-check-act cycle, three different perspectives were found to be important for further understanding this managerial process: the social science perspective, the production science perspective, and the systems thinking perspective (see figure 2).

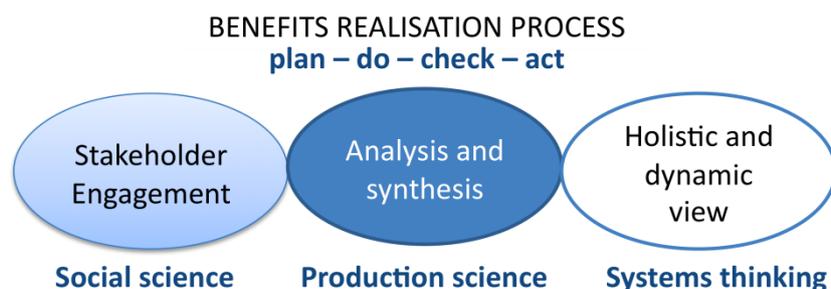


Figure 2: Benefits realisation from a theoretical perspective

### **THE SOCIAL SCIENCE PERSPECTIVE TO BENEFITS REALISATION**

In the benefits realisation literature, great emphasis is given to the role of stakeholders in realising benefits. Stakeholder engagement is an important issue when considering a benefits realisation approach. Stakeholders are individuals and groups that have an interest and can influence the actions of an organisation (Savage, Nix, Whitehead, & Blair, 1991). Neglecting stakeholder expectations and how they can influence project results, can lead the project to failure. Stakeholders must be identified, agreement should be reached regarding the strategic objectives, and their expectations should be managed.

Another related concept to stakeholder engagement is governance. Governance can be defined as the process of decision-making and the process by which decisions are implemented (UNESCAP, 2010). According to the same authors, an analysis of governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decision. “Good governance” has 8 major characteristics (UNESCAP, 2010): it is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law.

In the context of change management within organisations, governance must be effective to ensure that the organisation does not waste its fund and resources on investments that do not adequately contribute business (Ward & Daniel, 1996). In this sense, within a benefits realisation approach, governance should be applied to the whole of an organisation’s investment in change to focus on realising the benefits (Bradley, 2006). According to the same author, governance is usually undertaken by:

- a) The group of people who own or are custodians of the investment funding;
- b) The group of people that are likely to be affected by the required changes; and
- c) The group of people that will experience, or at least appreciate, the value of the majority of expected benefits.

Thus, stakeholder engagement and governance are aligned with the following aspects of benefits realisation:

- Identify and engage stakeholders throughout the process (Thorp, 1998; Remenyi & Sherwood-Smith, 1998);
- Reach stakeholder agreement on benefits and awareness of possible dis-benefits from investments (Ward & Daniel, 1996; Thorp, 1998); and
- Assign responsibilities for realising benefits and ensure stakeholders are committed to realise them (including the search for opportunities to maximise benefits) (Ward & Daniel, 1996; OGC 2007; Glynne, 2007).

### **THE PRODUCTION SCIENCE PERSPECTIVE TO BENEFITS REALISATION**

Production science or design science, as described by Aristotle, is oriented towards the making (designing, planning and producing) of useful and beautiful objects (Koskela, 2008). In the context of this article, making useful and beautiful objects is interpreted as generating value.

In the core of Aristotelian science of production lays the method of analysis and synthesis, as used by ancient Greek geometers (Koskela & Kagioglou, 2005). Koskela (2010), referring to Aristotle’s work, points out that when discussing about production and design, Aristotle suggests a method of analysis in which first the end is assumed and then it is considered how and by what means it is to be attained. This is a continuous process of envisioning the results or desired effects and searching for the means to achieve the desired effects. In this sense, what is last in the order of analysis

seems to be first in the order of becoming (Koskela, 2010 - referring to Aristotle remarks on deliberation as analysis). Synthesis, in turn, provides the proof that the desired solution is possible. Differently, in this case, it is supposed that which was reached last in analysis to be already done, and arranging in their natural order as consequences, until the construction of the thing sought is achieved (Koskela, 2010 - referring to Pappus remarks on analysis and synthesis). Thus, in analysis and synthesis, there are two directions of reasoning: backwards for solution (analysis, resolution) and forwards for proof (synthesis, composition).

The method of analysis and synthesis is embedded in the process of benefits realisation, as this process suggests the definition of expected benefits and analysis into what is needed to achieve them; as well as the definition of ways to measure, track and report their achievement. That can be evidenced in the following considerations of the approach:

- Clearly define benefits at the outset, creating a shared vision of the results (Thorp, 1998; OGC, 2007);
- Effectively plan the path from investments to benefits, understanding what needs to be done in order to achieve them (Thorp, 1998; OGC, 2007; Bradley, 2006);
- Identify and classify the nature of expected benefits (Bradley, 2006);
- Define relevant measurement to drive the process (Ashurst & Doherty, 2003; OGC, 2007); and
- Track and report the realisation of benefits and other achievements (Reiss et al. 2006; OGC, 2007)

#### **THE SYSTEMS THINKING PERSPECTIVE TO BENEFITS REALISATION**

Plsek (2000) describes a system as a coming together of parts, their interaction and sense of purpose. A system can exist in one of four different states: stasis, order, complexity and chaos. Stasis is the absence of dynamic behaviour; order is used to describe predictable, linear and stereotypical behaviour. Chaos refers to a system that appears random but contains hidden order. Complexity is the state between order and chaos (Sweeney, 2006). Complexity thinking views the world as a network of interacting systems where change in one element can alter the context for all other elements (Kernick, 2004).

Holt (2002) emphasises four main characteristics that need to be understood in complex systems: (a) the multiple dimensions – multiple variables can be related to the cause of one effect; (b) dynamicity – change in course caused by a determined factor; (c) non-linearity – two variables can result in a non-linear effect; and (d) emergency – complex interactions can generate new properties. Moreover, Burton (2002) describes complex systems as consisting of multiple components that should be understood by observing their interactions. Such interactions are non-linear, this means that the result of any action depends on the state of the elements at the time as well as the size of the input. Moreover, those interactions can generate new properties, called emergent behaviors of the system, which cannot be predicted or explained through studying the elements of the system (Burton, 2002).

Systems' thinking in the context of benefits realisation breaks the assumption of a stable and static process. Such perspective seems to be considered in a latter stage in the benefits realisation literature, as suggested in Truax (1997). Truax (1997) explains that there was a paradigm shift in benefits realisation, from a passive management of benefits into a proactive management of them (see figure 3).

<b>Traditional Benefits Realisation Principles</b>	<b>New Benefits Realisation Principles</b>
Benefits are stable over time	The potential benefits from an investment change over time
The investment determines the nature and scope of benefits	The organisation and its business context determine the benefits
Financial returns represents the most valid justification for an investment	All the outcomes of an investment represent potential sources of value
It is sufficient to manage the investment to generate benefits	The organisation must be proactive in realising benefits

Figure 3: Paradigm shift for benefits realisation (Truax, 1997)

In this sense, Farbey et al. (1999) also highlights the contributions of benefits realisation for a formative evaluation (evaluation for learning): throughout the process, the maximisation of benefits should be enabled through learning and adaptation.

Thus, the main aspects of benefits realisation which are aligned with a systemic view are highlighted below:

- Ensure stakeholders will search opportunities to maximise the benefits (OGC, 2007; Reiss et al., 2006)
- Track and proactively manage the emergence of unplanned benefits/dis-benefits (Ashurst & Doherty, 2003; Farbey et al., 1999)
- Continuously review expected benefits to check strategic fit, recognising changes and appropriately managing them (Sapountzis et al., 2010; Bartlett, 2006; OGC, 2007)
- Identify internal and external changes that may affect the benefits realisation process (Ward, Taylor & Bond, 1996)
- Consider interconnected issues that might influence the project's results (Thorp, 1998)
- Maximise benefits through learning and adaptation (Farbey et al., 1999)

Through this literature review, it was possible to further understand the benefits realisation approach and identify potential contributions for the value generation concept. Such contributions are highlighted as follows:

As suggested by Winter et al. (2006) value has been essentially related to product creation. The primarily contribution of benefits realisation is the consideration of value beyond the boundaries of product creation, as such approach suggests a straight alignment with the organisation's strategic objectives and focuses on the generation of benefits to different stakeholder groups.

In the core of the benefits realisation process is a plan-do-act-check cycle, as suggested by (Nogeste & Walker, 2005). However, the analysis of this approach from different theoretical perspectives enabled a further understanding of this process. While the method of analysis and synthesis from production science seems to underlie the benefits realisation process, a different perspective is obtained when social aspects and a systemic view are considered.

In sum, the importance of understanding project's value for different stakeholder groups, and how this value will be achieved, are important issues to be considered in a value generation process. Another contribution is the consideration of value generation as a social process, as value can be affected by the engagement, agreement and commitment of project stakeholders (Thorp, 1998; Remenyi & Sherwood-Smith, 1998). Finally, a holistic and dynamic view is required. Holistic view in the sense of

understanding the interconnected issues required to achieve an expected result, and a dynamic view meaning the consideration of changes that might influence the achievement of expected value, or the need to review the initial understanding of the project's value. In this sense, opportunities to maximise value in projects may rise.

## CONCLUSIONS AND FUTURE WORK

In this literature review, the benefits realisation approach was analysed and confronted with established theories. The findings suggest that benefits realisation brings a combination of concepts from different fields, namely social science, production science and systems thinking. There are other approaches, which have been based on similar concepts, e.g. Ballard's Last Planner™ System and Toyota's Hoshin Kanri (for more information see Ballard, 2000 and King, 1989). However, these approaches are not specifically focused in value generation.

Benefits realisation is directly related to value generation; however it moves the focus of value from product creation to the organisation's strategic objectives and the generation of benefits to different stakeholder's groups. By exploring the approach from a theoretical perspective, it was possible to identify potential contributions of benefits realisation to the further development of value generation concept, namely: the consideration of a social dimension, a systemic understanding of value and its generation, and an underlying process based on the method of analysis and synthesis.

Based on the analysis of benefits realisation from different perspectives, it seems to be true that benefits realisation can contribute for the further development of value generation concept in construction management. However, there is a need to further support this argument with experimental data. Three empirical studies are being conducted, to implement and test a benefits realisation process model in the construction sector (for more information see Sapountzis et al., 2010). In this sense, the further steps of this research will be to test the findings discussed in this paper by assessing the results of that implementation.

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