

Why Projects Fail, from the Perspective of Service Science

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Abstract This article examines Project Failure in the IT Sector, specifically regarding projects being undertaken in organisations where project tasks clash for resources with concurrent regular ongoing “Business as Usual” IT operations. Projects also clash due to the project altering the organisational “status quo” in many other areas of the firm which are also causes of Project Failure which are examined. A background theoretical review of current Service Science thinking is undertaken, statement of current issues is made and then suggestions for areas of further research to attempt to address the issues from a Service Science perspective are discussed.

Keywords Service Science, Service Dominant Logic, Project Failure, SDL, S-D, Project Management

1 Introduction

It is no secret in the computer industry that information systems projects are more likely to fail than not. Information system breakdowns, financial market failures, accidents, natural disasters and planning failures, are common subjects. Bignall and Fortune (1984) called these failures 'systems failures. Systems failures are recognised as occurring from a complex interaction of technical and human factors set in a social situation rather than as the result of the failure of one particular component; human or technical (Stanforth 2010).

Although there is much work being done in describing the failures of many IT projects, there are few theoretical underpinnings given to the failures. Many have consequently chosen to avoid addressing the issue of failure directly and have couched their discussion in terms of what is needed to achieve success. It is the authors' belief that projects failed because there is a lack of understanding about value creation. This paper examines the failures of IT projects from the perspec-

tives of service science. It is our belief that by understanding the co-creation of value from service science, it is possible to resolve many of the known pitfalls in project management. This paper proposes a paradigm that can be used to help IT projects to avoid failures; it begins with a brief review of IT project failures, followed by description of the personal experiences of the author in project implementations. Afterwards reviews the emerging field of service science and service dominant logic, concluding with suggestions for further research.

2 Project Failures

IT projects have a bad reputation for going over budget and schedule, not realising expectations and for providing poor return on investment (Jaques, 2004; McManus and Wood-Harper, 2008). A study of 50 government projects over 20 years found that those involving technical innovation and systems development historically ran over budget by up to 200% and over the original contract duration by 54% (Bronte-Stewart 2009). The cost of project failure across the European Union was €142 billion in 2004 (McManus and Wood-Harper, 2008).

The Office of Government Commerce (OGC), part of the Efficiency and Reform Group within the Cabinet Office, in 2005 identified eight common mechanisms which lead to project failure:

- Lack of clear links between the project and the organization's key strategic priorities (including agreed measures of success)
- Lack of clear senior management and ministerial ownership and leadership
- Lack of effective engagement with stakeholders
- Lack of skills and a proven approach to project management and risk management
- Too little attention to breaking development and implementation into manageable steps
- Evaluation of proposals driven by initial price rather than long-term value for money (especially securing delivery of business benefits)
- Lack of understanding of, and contact with, the supply industry at senior levels in the organization
- Lack of effective project team integration between clients, the supplier team and the supply chain.

Many articles have been written about the extent and causes of IS/IT project failure and numerous studies have discussed a range of recognised risk factors including those concerning project leadership and management, organisational culture and structure, commitment and patterns of belief, user involvement and training, developer expertise, technology planning, scope and objectives setting, estimation and choice/use of methodology, (Block, 1983; Boehm, 1991; Willcocks and Margetts, 1994; Sumner, 2000; Cusing, 2002; Hashmi, 2009).

IS/IT projects are unique in that they are conceptual in nature and require the intense collaboration of several different groups of stakeholders including IS staff, users and management. IS projects are usually undertaken in teams and therefore subject to the vagaries of group dynamics, interactions, coordination and communication. The diverse backgrounds and training of the various team members and other people associated with the project make the ability to communicate and coordinate the activities of the group extremely important. (Ewusi-Mensah 1997).

Roger Elvin, (Senior 2003) argued that the management complexity arises from the necessity to deal simultaneously with several tensions:

- Innovation versus risk
- Learning versus control
- The need for organisational change to deliver business benefit versus stakeholder resistance to change
- Multiple stakeholder perceptions of the purpose of the project
- The need to deliver value to the organisation versus managing effectively to satisfy time, quality and cost objectives
- Managing detail and the “big picture”.

From the literature reviews above, it can be seen that there are many reasons given for project failures. The author has experienced many failures personally. Subsequent sections of the paper briefly review some of the causes of project personally encountered by one of the authors.

3 Personal Experiences in Multiple Organisations

How many Information Technology Project fail? The truth is that the failed percentage is quite high, but an even higher percentage are delivered with much less in terms of useful outputs and results than was originally envisaged, often in a much longer timeframe than originally expected and at the same time at much higher incurred costs, also with ongoing long term issues (“Technical Debt” to use an Agile Software Development term).

The first author of this paper has experienced of many project failures during his 15 years of working with different organizations. Before we proceed with analyzing the causes of failures through the lens of service science, it is suffice to introduce the important emerging subject of service science. This will enable us to propose a new framework for the co creation of value for project management.

Many failed IT projects have been ‘explained away’ in the past in many organisations on the basis of poor Project Management and over the past decade there has been a concerted push by the IT industry as a whole to address this issue, to the point where this is no longer a completely valid excuse. Most IT Project Managers have undertaken the now almost mandatory PMI courses to the point where having a PMI certification is no longer a differentiator in the market place in terms

of jobs skills, but the poor performance of IT projects continues unabated. Although the addressing of poor project management skills has managed to alleviate one pressing issue for the industry, the industry is yet to come to terms with issues surrounding the fundamental issue of poorly conceived projects in the first instance, which are then thrust onto project managers with the expectation that the Project Manager is some type of miracle worker who will either bring the project in successfully, in which case they will become a “Company Hero” or on the other side of the coin, they can be used as a scape goat to take the blame.

4 Service Science

The service sectors now represent 80% of the developed economies. Currently there is a lack of understanding of the science underlying the design and operation of service systems. In response to this, IBM has advocated a new discipline known as Service Science, or Service Science Management and Engineering (SSME). Research in service science seeks to find out how to design, build, operate, use, sustain and dispose of service systems for the benefit of multiple stakeholders such as customers, shareholders, employees, partners and society (IBM 2007). . The aim of service science includes addressing issues such as to what extent organizations can be restructured, how to manage service innovation, and others.

There are many different definitions given to services. Services are deeds, processes and performance (Zeithaml et al 2006). Vargo & Lusch (2006) define service as the application of specialised competences (knowledge and skills) through deeds, processes and performances for the benefit of another entity or the entity itself (p.4).

A “Service System” is defined as “a value co-production configuration of people, technology, other internal and external service systems, and shared information (such as language, processes, metrics, prices, policies and laws.)” (Spohrer et al 2007). Examples of service systems include people, organisations, corporations, cities, families etc. A key condition is that service systems interact to co-create value.

4.1 Service Dominant Logic

Central to service science is the concept of service dominant logic. In the last few decades there has been work going on by researchers trying to differentiate between goods and services. An emerging new concept has been gaining popularity among service management concerning the role of the firm. Vargo and Lusch (2004) argue for evolving a service dominant logic in marketing to replace the goods-dominant logic of the traditional view.

The new service dominant (S-D) logic is concerned with value-in-use. Value is always co-created between producers and consumers. Thus value is co-created through the combined efforts of firms, customers, employees, government agencies, stakeholders and other entities related to any given exchange, but is always determined by the beneficiary (e.g. customer).

In S-D logic, the notion of value co-creation suggests that there is no value until an offering is used. Experience and perception are essential to value determination (Vargo & Lusch 2006, p.44). Offerings must be integrated with other market facing (from other firms) and non-market facing (e.g. personal/private and public) resources for value to be created. Value creation typically requires resources beyond a two-party system, often involving a firm, its customers, suppliers, employees, stakeholders, and other network partners (Lusch & Vargo 2006).

According to these authors, services provided directly or through a good are the knowledge and skills (competencies) of the providers and beneficiaries that represent the essential source of value creation, not goods that are sometimes used to convey them. Because of this, Sporher and others (2008) argue that service involves at least two entities, one applying competence and another integrating the applied competence with other resources and determining benefits (value co-creation). These interacting entities are service systems. Therefore, a service system is defined as a dynamic value co-creation configuration of resources, including people, organisations, shared information (language, laws, measures, methods) and technology, all connected internally to other service systems by value propositions. These authors further explained that each service system engages in three main activities:

- Proposing a value co-creation interaction to another service system (proposal).
- Agreeing to a proposal (agreement) and
- Realising the proposal (realisation).

4.2 Co-Creation of Value

Understanding what customers value within a particular offering, creating value for them and then managing it over time have long been recognized as essential elements of firms' business strategy (Drucker, 1985). Porter (1985) argued that a firm's competitive advantage stems from its ability to create value for its customers that exceeds the firm's cost of creating it. The dominant logic of business is now being challenged. Today consumers want to interact with firms to co-create their own experiences. Interaction is the basis for value creation. Companies no longer act autonomously to design products and services. Customers want to interact with firms to co-create their own experiences. Today we have the new logic of business (Prahalad & Ramaswamy 2004).

Coates (2009) argues that the aim of co-creation is to enhance organisational knowledge processes by involving the customer in the creation of meaning and value. Co-creation also transforms the consumer into an active partner for the creation of future value.

From the general management perspective, Prahalad et al., (2004) have developed a holistic generative framework describing the fundamental building blocks of value co-creation practices, including Dialog, Access, Risk management and Transparency (thus, DART framework):

- The open Dialog between the multiple actors within the value network encourages knowledge sharing and mutual understanding. It provides an opportunity for customers to interject their view of value into the value creation process and helps companies understand the emotional, social, and cultural contexts of end user experiences.
- Access challenges the notions of openness and ownership. Providing customer access to resources, information, tools, assets and processes at multiple points across the value network provides companies with innovative ideas about new products and services, new business opportunities and new potential markets. As customers become co-creators of value, they become more vulnerable to risk
- Risk and demand more information about the potential risks associated with the design, manufacturing, delivery and consumption of particular products and services. Proactive risk communication and management offers companies with new opportunities for competitive differentiation.
- Transparency builds trust between both institutions and individuals. It enables a creative dialogue in which trust emerges (Tanev et al 2011).

The value co-creation process not only occurs within a provider and customer dyadic relationship but also involves several participants as dynamic operant resources in a many-to-many perspective (Gummesson, 2008; Mele, Colurcio and Russo Spena, 2009). We need to start to think about it from the customer's perspective and to work out how to co-create more value together with customers in project management. In order to do this, we need knowledge as knowledge is the Source of Business Value. "Knowledge includes all the valuable concepts and vital know-how that shape a business to be wanted and needed by customers". It is our belief that co-creation of value from SDL can be used to help overcome the problems associated with project management. A framework for co-creation of value is proposed.

5 Causes of Failures in Project Management Through the Lens of Service Science

Through the lens of service science, there are several reasons why project fail:

Firstly, the various stakeholder group representatives often act divisively in terms of attempting to satisfy self interest in as much as they are attempting to achieve goals that have been set for their own group and these goals are focused towards individual identifiable achievement for the group rather than for the organisation as a whole. Each stakeholder has his or her value ignoring the needs of others, that is; there is a lack of co creation of value.

Secondly, most of the stakeholders were only interested in how much money or cost they can save rather than providing service. That is using their knowledge and skills to benefit the other partners. The value perceived here is that of value in exchange rather than value in use. Thirdly, the relational link between each of the stakeholders is that of translational rather than relationship from the service perspective. Fourthly, a firm cannot create or deliver value alone. It always requires co-creation with customers and it cannot be embedded in the manufacturing process.

How do we start to address the above problems that besiege project managers? It is our belief that a new approach is needed. A possible solution could be from the perspective of service science.

6 Framework for Co-Creation of Value for Project Management

The proposed framework should be based on the co-creation of value of DART and other factors. To achieve competitive advantage it is not knowledge itself that is important, but rather the firms' capacity to apply this knowledge effectively in order to create new knowledge (Grant, 1996). Dynamic capabilities are important because knowledge flows from one capability to another, through the reconfiguration of organizational capabilities, leading to new knowledge that enables the firm to create superior customer value.

To co-create value for sustainability; firms need to take a more comprehensive view of the environment in which they must compete. This view not only includes buyers and suppliers but the local market for skilled workers, financial institutions, universities, legal system, and the domestic political situation. This requires the concept of dynamic capabilities. The dynamic capabilities emphasise the "soft assets" that management needs to orchestrate resources both inside and outside the firm. This includes the external linkages that have gained in importance, as the expansion of trade has led to greater specialization. It recognizes that to make the global system of vertical specialization and co-specialization work, there is an enhanced need for the business enterprise to develop and maintain asset alignment capabilities that enable collaborating firms to develop and deliver a joint "solution" to business problems that customers will value (Teece 2010).

We argue that in order to maintain competitiveness it is not enough for firms to be in possession of valuable resources and capabilities; they also require dynamic capabilities to develop and renovate their organizational resources and capabilities

(Teece et al., 1997). The authors have developed a conceptual framework for co-creation of value for project management. The dynamic capabilities value co-creation framework should consist of the following capabilities:

- Customer knowledge capabilities
- Collaborative networks capabilities
- Organizational capabilities
- Market orientation capabilities
- Management of technology capabilities.

Each of these require dynamic capabilities to enable the co-creation of value using DART and other features. The authors are currently working on this framework.

7 Conclusion

IT project failure is a common thing. There are many tales of IT projects that have failed. IT projects have difficulties with completion on time or on budget or on scope. In fact many are cancelled before completion or ultimately not implemented. There are many different reasons for the failure of IT projects, the most common reasons are rooted in the project management process itself. Projects fail because they do not meet one or more of the following criteria for success: delivered on time, or on budget, or satisfactory to user requirements.

Central to the problems in project failure is that there are many different stakeholders involved in the project and each often has conflicting interests. It is our belief that successful project management requires the co-creation of value between the different stakeholders of the project. The emerging field of service science can provide the answer and the development of the framework started with the recognition that of the centrality of co-creation of value is the process. Co-creation can be viewed as set of processes and resources with which the company seeks to create value propositions. Processes include the procedures, tasks, mechanisms, activities and interactions which support the co-creation of value. It is our belief that the co-creation framework proposed will provide project management with a means of addressing many of the failures. Currently we are working on the framework and empirical studies will be conducted using real cases to demonstrate its effectiveness.

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