

Value co-creation in the management of projects delivering integrated solutions: the case of BT Global Services in the UK

Article (Accepted Version)

Sato, Carlos Eduardo Yamasaki (2018) Value co-creation in the management of projects delivering integrated solutions: the case of BT Global Services in the UK. *International Journal of Project Organisation and Management*, 10 (1). pp. 54-81. ISSN 1740-2891

This version is available from Sussex Research Online: <http://sro.sussex.ac.uk/id/eprint/69930/>

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher's version. Please see the URL above for details on accessing the published version.

Copyright and reuse:

Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Value Co-Creation in the Management of Projects Delivering Integrated
Solutions: The Case of BT Global Services in the UK

Carlos Eduardo Yamasaki Sato*

August 2017

Paper accepted by the **International Journal of Project Organisation and Management**

* University of Sussex, School of Business, Management and Economics, Science Policy
Research Unit (SPRU), Jubilee Building, The Freeman Centre, Falmer, Brighton, East Sussex
BN1 9SL, United Kingdom
Tel.: +44 (0)1273 873564; e-mail: c.e.y.sato@sussex.ac.uk

Value Co-Creation in the Management of Projects Delivering Integrated Solutions: The Case of BT Global Services in the UK

Abstract

This paper investigates the role of value co-creation in the management of projects delivering integrated solutions, implementing a new business model for incumbent telecommunications operators. The case study of BT Global Services (BTGS) shows that BT's business unit responsible for the business of projects delivering integrated solutions requires collaboration at a strategic level between BTGS and customers. An empirical framework is proposed for value co-creation in projects delivering integrated solutions. It highlights the strategic alignment between the integrated solution's provider (BTGS) and the customer as the main feature that differentiates this framework from those in the existing literature. It also highlights the importance of considering post-project (i.e. longer-term benefits after the handover) factors when evaluating project success.

Keywords: Integrated Solutions Projects; Value Co-Creation; Service Innovation; Next Generation Networks.

1. Introduction

This paper highlights the role of value co-creation in the management of projects delivering integrated solutions by incumbent telecommunications operators, supporting them in achieving sustainable growth. It contributes to the issue of how such organisations co-create value with their customers. It uses the case study of BT Global Services (BTGS) to show how organisations and customers use projects in order to collaborate and co-produce innovative integrated solutions that satisfy customer's needs. The aim is to provide an empirical framework that can support firms looking to transform their business by offering high-value integrated solutions. Also the contribution of this paper is to refine 'customer satisfaction' as one of the criteria for project success by highlighting the long term effects (i.e. benefits) of value co-creation: the strategic alignment with customers allows the organisation to create more sustainable business models by creating new opportunities for delivering further projects for the particular customer organisation when previous projects are delivered successfully.

The increasing role of services in the economy and the higher levels of interactions and collaboration between providers and customers have been leading to a different logic of commercialisation of goods and services: Service Dominant Logic (S.L. Vargo & Lusch, 2004, 2008; S. L. Vargo, Lusch, & Morgan, 2006). In this logic, the primary aim is to deliver a service having goods as support for the service, and having the collaboration of other stakeholders, mainly customers, to co-produce the solution as a service, hence co-creating value (S.L. Vargo, Maglio, & Akaka, 2008). In contexts such as in B2B (Business-to-Business), interactions between provider and customer tend to be more intense, as the products and services involved are usually customised and of high value (Lehrer, Ordanini, DeFillippi, & Miozzo, 2012; Ordanini & Pasini, 2008). In particular, in the telecommunications industry, incumbent telecommunications operators, besides their B2C (Business-to-Consumer)/retail business, are developing their business around projects delivering high value integrated solutions to large business customers, which offer more flexibility to their business and a significant source of revenues different from their traditional voice business.

Right after the internet bubble burst and the telecommunications downturn in the beginning of the 2000s, the incumbent telecommunications operators needed to rethink their business. Their level of debt and the declining revenues obtained from their traditional business in fixed voice services made the incumbent telecom operators to figure out different ways of

providing services profitably. BT decided to sell its mobile business operations in 2001 in order to pay its debt (BT, 2002), while DT (Deutsche Telekom) and FT (France Telecom) retained their mobile business. In the subsequent years, the mobile business proved to be successful, and DT and FT could offset their loss in revenues with fixed telephony, but this was not the case for BT. In hindsight, BT's decision to sell its mobile business may not have been a good one, but BT needed to take action in order to keep the business healthy and growing. They needed to innovate their service business. At this time, the concept of Next Generation Network (NGN) started to be articulated in the telecommunications industry.¹

As part of their growth strategy, BT announced two major initiatives in 2004. One was the BT 21st Century Network (BT21CN), a major project to renew its network, adopting the Internet Protocol/Multiprotocol Label Switching (IP/MPLS) in the core of the network. The other initiative, the unit of analysis of this paper, was the official creation of a new business unit, BT Global Services (BTGS), to deliver networked IT services as integrated solutions to large customers. These two project-based initiatives represented a significant shift in the way BT provides services to customers, and in the way BT relates to their large customers.

The concept of integrated solutions is understood as the overall provision of products and services through projects by a single provider 'to address each customer's business and operational needs (Davies & Hobday, 2005, p. 215). Such products and services can come from both the provider and third parties (with the provider taking responsibility for third party products and services). Integrated solutions are usually addressed from the supplier perspective, i.e. from the provider of the goods and services, although customer needs are central to its delivery. On the other hand, the concept of service-dominant logic comes from marketing and focus on the customer perspective. Bringing those two concepts together, the aim is to bridge the gap between customer and supplier and better understand how value is co-created in an empirical setting and what its implications are. Besides that the concept of value co-creation is much debated (see, for example, (S.L. Vargo et al., 2008)), although an understanding of what it means in actual applications is in constant development in the literature. Additionally there is a growing literature on the role of the customer in integrated solutions and on the conceptualisation of 'solutions' (e.g Tuli et al. (2007), Nordin and Kowalkowski (2010), Storbacka (2011)).

¹ For this research, NGN is defined as 'a multi-service network based on IP technology' (OECD, 2005, p. 7). Voice, video and data services are digitalized and transported using packet-switching technology based on the Internet Protocol (IP).

In this scenario where incumbent telecommunications operators such as BT needed to transform their business in order to survive and grow, the research question asks about the process of co-creating value with their suppliers and customers:

How do incumbent telecommunications operators co-create value with their suppliers and customers through projects delivering integrated solutions?

BTGS is the business unit within BT responsible for providing projects delivering integrated solutions for large firms. This is a relevant case to examine, from the perspective of customer and provider, the ways in which BTGS co-creates value with its customers and suppliers.

This paper is structured as follows. Section 2 presents the literature review of both projects delivering integrated solutions and service-dominant logic (SDL). The literature on integrated solutions is predominantly based on the provider's perspective while SDL helps to capture the customer's role in co-creating value for the business. This literature review identifies the main concepts and frameworks of SDL and the delivery of integrated solutions through projects with the aim to integrate and refine them through the empirical analysis of BTGS. Section 3 makes considerations about the case study methodology used in this research. Section 4 explores the business unit BTGS as a major provider of projects delivering integrated solutions, and it also looks more deeply into a vanguard project (Unilever), providing data and insights for the discussion of value co-creation in this project. In Section 5, a refined framework is proposed for value co-creation in projects delivering integrated solutions. Section 6 summarizes the main points of the proposed framework explaining how incumbent telecommunications operators can co-create value. Also its applicability in other contexts and by other types of firms is discussed. Besides the framework, the contribution of this paper is to highlight the long-term effects (or benefits) of projects after its handover: the way the successful delivery of integrated solutions projects provides more sustainable relationship with customers creating the opportunity for the identification and delivery of further project business to the same customer. This happens to a great extent due to BTGS continuing to provide maintenance and/or operational services after the project handover.

2. Projects Delivering Integrated Solutions and Service-Dominant Logic (SDL)

This paper integrates two concepts: projects delivering integrated solutions and Service-Dominant Logic (SDL) of marketing. The concept of integrated solutions delivered by projects comes from the technology and innovation management literature and has a predominant inside-out (from firm to customer/market) approach. On the other hand, the

concept of SDL comes from marketing management literature, having a predominant outside-in (from customer/market to firm) approach. The aim is to provide an integrative approach of both concepts in order to investigate the co-creation of value in an empirical project environment.

2.1 Projects Delivering Integrated Solutions

Integrated solutions can be seen from many perspectives, such as the move from manufacturing to services (Wise & Baumgartner, 1999), or the solutions-based projects (e.g. turnkey solutions, global outsourcing solutions, Public-Private Partnership (PPP) and Public Finance Initiative (PFI)) (Davies & Hobday, 2005). The solutions-based projects fall into the category of large and complex projects, involving the transaction between firms (business-to-business market) and often involving the delivery of Complex Products and Systems (CoPS) which is defined by Hobday (1998, p. 690) as ‘high cost, engineering-intensive products, systems, networks and constructs’. According to Brady et al. (2005), projects delivering integrated solutions have their origins in the Build-Operate-Transfer (BOT) projects of the 1980’s, further elaborated by, for example, Kumaraswamy and Zhang (2001). According to Davies (2003), the move to integrated solutions can occur from a base in manufacturing or from a base in services. The move from a base in manufacturing is sometimes called ‘servitisation’ (see Slack, 2005; Vandermerwe & Rada, 1988).

Cova and Salle (2007) point out that the integrated solutions approach originated in the domain of project business. In this context, a project involves a transaction between a buyer and a seller, thus the role of customer is important. As stated in the definition of integrated solutions formulated by Brady et al. (2005), they are ‘unique combinations of products and services that address a customer’s specific business problems’ (p. 360). The customer’s specific business problems are usually associated with customers’ needs and wants. Therefore, the business of projects delivering integrated solutions usually starts by identifying such customers’ needs and wants. Although the customer seems to be within the scope of integrated solutions, the literature on integrated solutions tend to neglect the role of the customer in the analysis (see, for example, Davies (2003), Davies and Hobday (2005), Brady et al. (2005), Windahl and Lakemond (2006), Oliva and Kallenberg (2003), Ceci and Prencipe (2008)). This happened because these studies concentrated on the supply side and on the move to the business of integrated solutions of those suppliers, considering issues such as organisational capabilities and strategies from the perspective of the supplier (but not the interaction with the customer). However, there are some exceptions. For example, Cova and

Salle (2008) investigate the interaction of customer and supplier to co-create value, considering the customer as a resource for the integrated solution. The integrated solution then becomes a customer solution (tailored for the customer's specific needs and wants) with Tuli et al. (2007) arguing that 'customer solutions embody the new service-dominant logic' (p. 1). The new service-dominant logic is discussed in Section 2.2, based on Vargo and Lusch (2004). Day (2006) argues that 'the crux of Vargo and Lusch's argument is that a service perspective is superior to a goods-centred view because it emphasises solutions [...]' (p.88). This also reflects why Brown (2007) suggests that most marketing practitioners may prefer to use the expression 'solutions-dominant logic' instead of 'service-dominant logic'. Thus, the interconnection of service-dominant logic and integrated solutions is made evident. Nordin and Kowalkoski (2010) elaborates on a critique about the meaning of the term 'solutions'. And a more extensive framework emphasizing the capabilities and management practices for the solution business is developed by Storbacka (2011). This stream of research builds the relationship between solutions, services and project capabilities.

In order to differentiate integrated solutions from systems selling (Davies, Brady, & Hobday, 2007), integrated solutions should be seen as involving projects instantiated with a customer involved or at least interacting, based on a jointly articulated need (with the supplier) and involving the integration of components from third parties. So, there is a need to identify a customer (specifically, a business customer) in order to be considered as an integrated solution. This instantiation with an involved or interacting customer implies that the business of integrated solutions is managed on a customer-by-customer basis, by firms that are usually called customer-centric organisations (see, for example, Galbraith (2005)), not by measuring the performance of isolated products or services. In this type of firm, performance is measured for each customer (customer satisfaction), and not through the amount of discrete products and commercialised services. Such a business requires close relationship with the customer. That is the reason why the role of the customer is significant in the co-creation of value between the supplier and customer. This is the view of the service-dominant logic which serves as a support for the business of integrated solutions.

While integrated solutions address the customers' needs and wants, Jaworski and Kohli (2006) suggest that both customer needs/wants and firm needs/wants should be addressed. These approaches are not in conflict, as integrated solutions are usually studied from the firm/supplier perspective, considering the customer needs and wants. Thus, projects delivering integrated solutions have the firm needs/wants implicit in the service being

provided. This is a business model that can be very difficult for the provider to establish as a profitable and sustainable business.

The literature on projects delivering integrated solutions, although dealing directly with customer needs, pays more attention to the perspective of the suppliers of integrated solutions rather than the customer's perspective. In order to balance the perspective, next section presents the concept of Service-Dominant Logic (SDL) with the aim to apply it to the business of projects delivering integrated solutions, where goods are building blocks supporting the delivery of solutions as services.

2.2 Service-Dominant Logic (SDL)

Projects can be seen from the perspective of value creation (Winter, Andersen, Elvin, & Levene, 2006), and from this perspective, the relationship between the firm/supplier and customer becomes relevant. Shared understanding would be important for successful project delivery, but it is not always achieved (Fortune, Peters, & Short, 2015). In the process of value creation, customers are more interested in solutions rather than isolated products which they need to integrate into their business by themselves (Brady et al., 2005). In order to facilitate this, suppliers offer services in the form of integrated solutions, combining their own products/goods and services with others from third party suppliers (A. Davies, 2003; Davies, 2004; Davies et al., 2001). In order to manage such integrated solutions effectively, the firm/supplier focuses on services as the mainstream activity which is supported by goods/products, rather than the opposite. That is the essential nature of the Service-Dominant Logic (SDL) when compared to the Goods-Dominant Logic (GDL) (cf. S.L. Vargo & Lusch, 2004). This section examines the Service-Dominant Logic as an important element of the organisational culture as a means to deliver integrated solutions through projects and to promote innovation in services through the co-creation of value between firms/suppliers and customers, and their networks.

Vargo and Lusch (2004) set the foundations for a wider discussion about the merits of a 'service-dominant logic'. The service logic has its foundations in Shostack (1977), who claims that the jargon used in marketing at that time was predominantly based on manufactured physical goods. This 'goods-dominant logic' has been prevailing for many years due to the nature of the manufacturing economy. Central to the differences between SDL and GDL is the concept of resources, broken into operand and operant resources. Operand resources are resources which are acted upon to produce effects, and operant

resources are those which act on operand resources (and other operand resources) producing effects. Operand resources are usually natural resources (e.g. land, animal life, plant life and minerals) whereas operand resources are factors of production and technology (e.g. knowledge and skills) which convert operand resources into outputs (Constantin & Lusch, 2004). Operand resources can be understood as the equivalent to what Grant (1998) and others called 'capability'.

In SDL, physical goods are a means by which people acquire competences and services. Thus, services are the primary concern and goods (if necessary) support services. Customers take a more active role, having a relationship with the supplier, co-creating value, which is perceived by the customer not only as value-in-exchange (in a transactional mode of goods), but also as value-in-use (S.L. Vargo & Lusch, 2004, 2008; S.L. Vargo et al., 2008).

The central difference between GDL and SDL resides in the fact that value in GDL is seen as embedded in goods and services, and produced as the output of a production line, whereas in SDL value is determined by the use and context being co-created between customer and supplier (S.L. Vargo et al., 2008). Prahalad and Ramaswamy (2004) reinforces this difference suggesting that the locus of value creation is the interaction between firm (supplier) and customer, i.e. value is shifting to experiences. In the context of services, GDL implies that services are standardised and specified, and the relationship between the supplier and customer is relatively distant (which leads to the objectification of services). On the other hand, SDL requires more relational proximity and interaction between buyers and sellers (favouring the 'servitisation' of products) (Lindberg & Nordin, 2008).

Vargo and Lusch (2004) defined eight foundational premises (FPs) of SDL, which were later updated and expanded to ten FPs in Vargo and Lusch (2008). FP 6 – The customer is always a co-creator of value – is especially important as it highlights that value is co-created between the customer and supplier(s). This fact has been gaining importance as customers (or simply users) are increasingly participating actively in shaping the service and the experience provided by the supplier. This is particularly important in projects where the origin is jointly constructed (e.g. through a bid process) as the supplier tries to offer the best solution to satisfy customer needs.

The Service-Dominant Logic (SDL) and the Goods-Dominant Logic (GDL) can be seen as two faces of the same coin, where the tension between different interests of the supplier and customer takes place. The supplier wants to provide the solution and maximise revenues and

profits while the customer wants benefit from the solution and minimum cost. SDL is more customer-led while GDL is more supplier-led. This tension can also be seen as an extension of the old ‘technology-push versus market pull’, but in the context of business-to-business relationships, where large customers and suppliers interact with each other intensely through projects. As the supply side has been traditionally more powerful, the GDL has been prevailing in many sectors of the industry. However, as the service economy has been increasing (Spohrer, Maglio, Bailey, & Gruhl, 2007), the pendulum seems to be moving towards the customer and services. The resolution to this conflict seems to be an approach based on the co-creation of value where *both* suppliers and customers’ goals are balanced (Oliver, 2006). Section 2.2.1 extends the concept of value from the customer perspective, exploring value co-creation and its impact on service innovation.

2.2.1 Value Co-Creation

Services can be seen as a process of mutual exchange where knowledge and skills are applied for the benefit of another entity and/or of the entity itself (S.L. Vargo & Lusch, 2004; S. L. Vargo et al., 2006; S.L. Vargo et al., 2008). Services can be deployed through processes, projects, and interconnecting service systems, which are value-creation interactive configurations of resources connected with each other by value propositions (S.L. Vargo & Lusch, 2004; S. L. Vargo et al., 2006; S.L. Vargo et al., 2008) to encourage service innovation (Maglio, Srinivasan, Kreulen, & Spohrer, 2006). This section discusses the relevant aspects of value co-creation with the aim of elaborating a framework for investigating the mutual exchange and relationship between supplier/firm and customer.

New service development and new product development are supposed to have distinct characteristics as the nature of services and products are different (Fitzsimmons & Fitzsimmons, 2006). Services, compared to products (or goods), are intangible and are consumed when produced, i.e., they cannot be stored for later use (Fitzsimmons & Fitzsimmons, 2006; Johnston & Clark, 2005). There is limited knowledge on the extent to which the processes applied to new product development in manufacturing sectors can be applied to the service sector (Tidd, Bessant, & Pavitt, 2005). While Miles (2000) argues for the integration of service innovation and the traditional innovation studies, Spohrer et al. (2007) advocates the establishment of a distinctive ‘science’ of service systems. Despite these different views, research on innovation in services has been increasing since the 1990s (Vermeulen & van der Aa, 2003), focusing on organisational and management issues from the service provider perspective (see, for example, Tidd and Hull (2003)). Limited research

has been undertaken on integrating the organisational and managerial aspects of the service provider and its interactions with the customer.² However, more recently, Chang et al. (2013) highlighted the importance of value co-creation in the context of megaprojects in the defence industry. And Mele (2011) provides a new understanding of conflicts and value co-creation in project networks. Dick et al. (2015) examines value co-creation with stakeholders in an applied research study for a not-for-profit organisation. Mohan et al. (2016) argues that realisation of project value lies more on the ability to review continuously the status of project benefits than on the alignment of individual goals of project stakeholders to the common and anticipated project benefits. All these studies approach different aspects of value co-creation, however they tend to, as a common issue, emphasize long-term factors for project success (including long-term benefits and value created and captured post-project (after the handover)).

Arnould et al. (2006) suggest a value creation process based on interaction between the firm and customer resources. Firm and customer have their operand and operant resources which are articulated, and the firm offers its value proposition. This is according to foundational premise 7 (FP7), 'the enterprise cannot deliver value, but only offer value propositions' (S.L. Vargo & Lusch, 2008, p. 7). Customers 'derive value-in-use from the firm's package of services in ways that vary from firm intent' (Arnould et al., 2006, p. 95-96). Figure 1 shows the various elements under discussion in the firm and customer resource interaction. The locus of co-production (or co-creation) is the locus of control (firm, customer or joint control), temporality (as value and brands change over time), multiple firms and multiple customers (market offerings can be made by multiple firms to multiple customers, targeting customer loyalty) (Arnould et al., 2006). Another interpretation of temporality is that such a relationship is mediated through temporary projects (with start and finish dates).

² Although some authors discuss the role of customer in service innovation (e.g. Gronroos (2007)), real interactions with customers are rarely analysed in-depth, and the discussion tends to be centred around the organisational and management issues from the service provider perspective. One exception is Tuli et al. (2007).

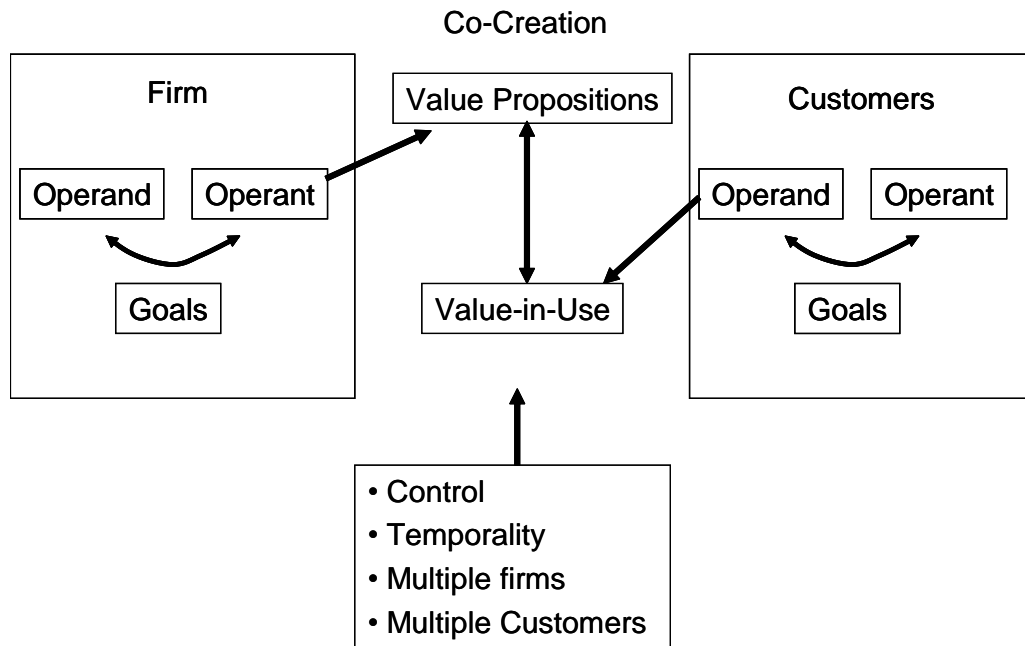


Figure 1 – Firm and Customer Resource Interaction
 Adapted from: (Arnould et al., 2006, p. 96)

Cova and Salle (2008) suggest that co-creation of value is not limited to the customer and supplier, but it also spreads to their networks. Figure 2 represents this argument and reinforces the role of the customer in the co-creation of value, i.e., value is not something delivered *from* the supplier *to* the customer in a simple transactional mode (e.g. with value embedded in a tangible good), but is something that also relies on customer resources and on the relationship that the supplier keeps with the customer (understanding and acting on the customer's perception of the service). Early contractor/supplier involvement (e.g. Meng & Humphreys, 2015) and barriers to client-contractor communication (e.g. Engström & Stehn, 2016) may also affect project performance and value.

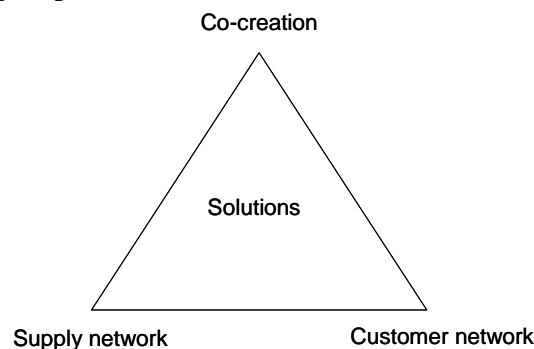


Figure 2 – The Three Pillars of Offering Strategies According to the S-D Logic
 Source: Cova and Salle (2008, p. 271)

Figure 3 uses the concept of 'service system' as an arrangement of resources (including people, technology, information, etc.) connected to other systems by the application of value

propositions (Spohrer et al., 2007). Service systems are interdependent in the sense that they are connected to resources of other systems in order to accomplish their processes (S.L. Vargo et al., 2008). The concepts of value-in-use, value-in-exchange and value-in-context are also represented. Value-in-use (dependent on the context of the product, service or solution) rather than value-in-exchange (dependent on point transaction between provider and customer), is argued to be turning out to be the dominant meaning for value (S.L. Vargo et al., 2008). Value-in-use implies ‘the integration and application of resources in a specific context’ while value-in-exchange refers to value ‘embedded in firm output and captured by price’ (S.L. Vargo et al., 2008, p.145). Relationships with customers and customer experience become more important than (or as important as) the quality of products and services considered as transactional outputs (Prahalad & Ramaswamy, 2004). Trust may also be regarded as a relevant factor to produce project value (see, for example, Tam & Hadikusumo (2016)), but this is not going to be explored in this paper.

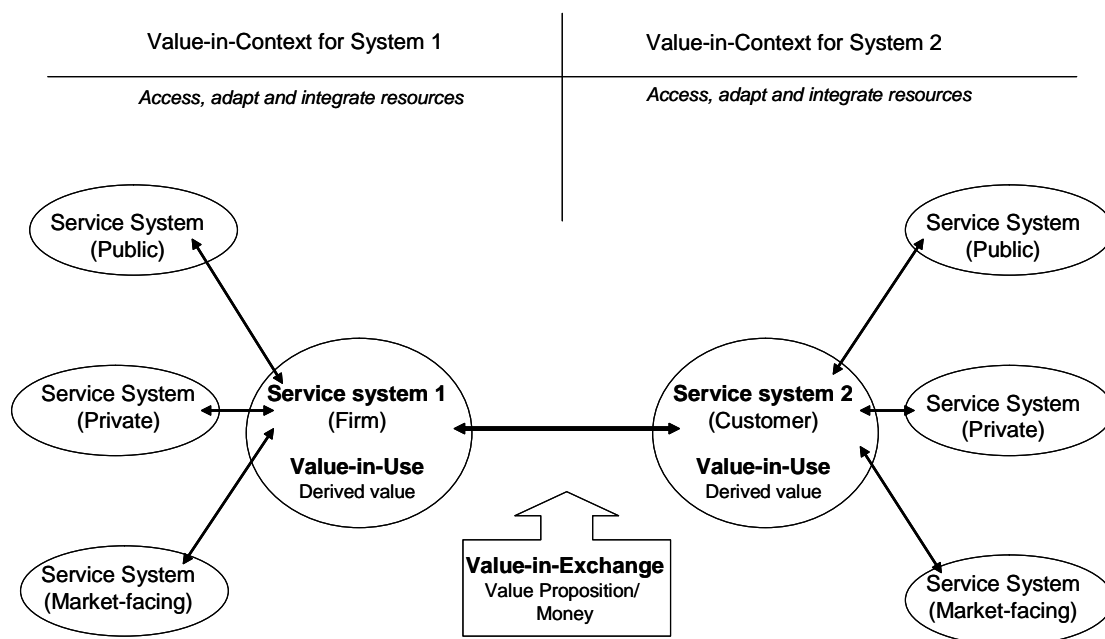


Figure 3 – Value Co-Creation among Service Systems

Source: Vargo et al. (2008, p.149)

The concept of integrated solutions can be considered an instance of the Service-Dominant Logic (SDL). Integrated solutions put the emphasis on the solution-as-a-service to address customer’s business and operational needs. In this context, products/goods are considered only as the means to provide such solutions. Practitioners may even prefer solutions-dominant logic to service-dominant logic in order to avoid the service/goods dichotomy (Brown, 2007).

The service-dominant logic may serve as a better explanation for Davies' (2004) value stream approach to integrated solution. He claims that service firms like C&W and WS Atkins, moving from a service base, are 'moving into integrated solutions from both upstream and downstream positions to occupy the high value space situated between manufacturing and services' (Davies & Hobday, 2005, p. 216). Another explanation would be that service providers like C&W are changing their logic into what is being called service-dominant logic (S.L. Vargo & Lusch, 2004). Although such companies have a base in services, their dominant logic was to sell services as products, i.e. as isolated goods (within the goods-dominant logic). The shift to service-dominant logic is followed by a closer interaction with the customer, trying to understand its business, and being involved in what the customer needs and what the customer wants to do with the service at a business and strategic level. The big difference turns out to be the relationship with the customer and the systems integration that occurs in the customer's premises and which is managed by the service supplier, not by the customer (as it usually was). In this explanation, the firm does not change its position in the value stream, moving upstream or downstream (as suggested in Davies (2004, p.738). Firms with a base in services remain in services, but change their mind-set or logic about services, adopting the Service-Dominant Logic.

2.3 Theoretical Framework

Integrated solutions and Service-Dominant Logic (SDL) are the lenses through which the case of BTGS is analysed. On the one hand, integrated solutions take predominantly the perspective of the supplier and SDL includes the customer's perspective emphasizing the co-creation of value in the solutions business.

Figures 1, 2 and 3 represent different aspects of the relationship between firm/supplier and customer. All three figures emphasise the aspect of value co-creation at the level of system, resource and network. They are going to be considered in order to propose an integrated framework for the understanding of value co-creation grounded on the empirical evidence shown in Section 5 (BTGS).

3. Research Methodology

The research was based upon a variant of participant observation in which the author's previous background as a telecommunication engineer and manager allowed him to be recognised by people in the industry as a fellow engineer rather than a social science

researcher.³ In seeking an understanding of telecommunication industry developments by attending trade conferences and interviewing specialists, it became apparent that the major issue for companies was defining the fundamental change needed within the industry and the organisations, namely the traditional telecommunication operators, in order to cope with the shifting competitive environment. More particularly, the fundamental change was concerned with the development of a more flexible infrastructure, and with the rethinking of the innovation processes to create and deliver new services. This change can be translated into a new dominant logic based on platform and integrated solutions, where the customer and the service delivered to the customer are the centre of business practices. The question was not whether incumbent telecom operators needed to change their infrastructure and their innovation processes in services, but how to make these changes in an uncertain and competitive environment carrying a huge legacy system (Deutsche Telekom Technical Manager, Interview, March 2005; Lucent Technical Manager, Interview, March 2005; Nortel Senior Technical Manager, Interview, March 2005). BT officially launched BT Global Services (BTGS) as a new business unit in 2004. In that same year, BT launched a major project called BT 21st Century Network (BT21CN) to transform their infrastructure into an all-IP (Internet Protocol) network. The original research covers both BTGS and BT21CN, but this paper focuses on BTGS.

3.1 Operationalizing the Research Strategy

An inductive approach was adopted in three stages. This is in line with what Eisenhardt (1989) calls grounded case study, where theory is built from case study research. Although the author identified some prospective literature in the beginning of the research, it was during and after the data collection that emerging literature could be identified to better explain the data and compare the findings. The research was conducted through interviews and analysis of documents such as reports, newspaper articles and official Internet websites. The reports included annual reports of suppliers and incumbent service providers, and documents of regulators. The interviews were conducted with senior managers, managers and other practitioners of incumbent telecommunications service providers and suppliers,

³ The participant observation was variant in the sense that, although I was attending conferences as I normally did in my previous job, I was not employed by any of those firms, which helped me 'to retain some critical subjectivity about the situation' (Maylor & Blackmon, 2005, p. 236). Thus, the research objectives and the participants' objectives were not co-determined, and had a high level of independence. On the other hand, the participants may be less willing to cooperate or may give less information than expected. I address these issues and how I tried to avoid or overcome them in this Section 3.

regulators, consultants and market research analysts. An overview of the documentary and interview data used is shown in Table 1.

Stage 1 was the exploration phase where the context of the research problem and incumbent operators were investigated. One of the outcomes of this phase was to narrow the options down to BT as the main case study to be developed. Stage 2 was the phase of exploitation where more information about BT and the industry was gathered addressing the research question on three aspects: platform, service innovation and NGN (Next Generation Network). Stage 3 served to further exploit the insights and propositions reached in phase 2 and attempted to confirm (or not) those propositions.

The interviews were conducted during the trade conferences attended by the author. A questionnaire was elaborated including several questions related to this research. During the trade conferences it was adopted the approach to make few questions very focused on the expertise of the interviewee, and wherever possible, pose the same question to many interviewees. All questions were supposed to be covered in one trade conference. Then, whenever possible, received answers were compared with documentary data, trying to confirm (or not) the information thus obtained in the following trade conference. Dubious or ambiguous information was either discarded or considered for a discussion topic. When necessary and possible, previous interviewees were contacted again (by telephone and/or e-mail) for clarification or to obtain more information.

Table 1 – Overview of the research stages for data collection and empirical sources used.

	Stage 1: March 2005 – July 2005 (Exploration)	Stage 2: August 2005 – July 2006 (Exploitation)	Stage 3: August 2006 – May 2008 (Exploitation and Confirmation)
Objectives	<ul style="list-style-type: none"> • Understanding industry structure, processes and resources to deliver and build NGN; • Identifying main suppliers of NGN; • Identifying main fixed-line incumbent telecom operators building NGN; • Exploring the dynamics of capabilities development, disruption and inter-firm collaboration. 	<ul style="list-style-type: none"> • Exploring in detail the specifics of industry change in terms of innovation and capabilities development in order to deliver and build the NGN; • Exploring in detail the dynamics of innovation and capabilities development in the transition to NGN of BT21CN, and in BTGS. 	<ul style="list-style-type: none"> • Finalising data collection about the innovation dynamics of the transition to NGN at industry level; • Finalising the data collection about the capabilities development in BT: BT21CN and BTGS; • Resolving remaining discrepancies.

Interviews	Interviews with suppliers, service providers, industry analysts, consultants and regulators: <ul style="list-style-type: none"> • 7 interviews in CEBIT 2005; • 3 interviews in VON Europe 2005; • 3 interviews in Light Reading Carrier Class Ethernet; • 1 interviews in IEE Course. 	Interviews with suppliers, service providers, industry analysts, consultants and regulators: <ul style="list-style-type: none"> • 2 interviews in Light Reading – The Future of Telecom; • 6 interviews in Carriers World 2005; • 8 interviews in Broadband World Forum Europe 2005; • 9 interviews in ITU-T NGN Focus Group and Industry Event; • 14 interviews in CEBIT 2006; • 16 interviews in 21st Century Communications World Forum 2006. 	Interviews with suppliers, service providers, industry analysts and consultants: <ul style="list-style-type: none"> • 3 interviews in The New Telco: Europe 2006; • 9 interviews in Broadband World Forum Europe 2006; • 5 interviews in IP Leaders 2007; • 14 interviews in C5 World Forum 2007; • 1 interview in Carrier Ethernet Expo 2007; • 3 interviews in ITU –T Kaleidoscope Academic Conference 2008.
Secondary Sources	<ul style="list-style-type: none"> • Annual reports; • Press releases; • Newspapers and magazine articles; • Official websites; • Trade Conference presentations. 	<ul style="list-style-type: none"> • Annual reports; • Press releases; • Newspapers and magazine articles; • Official websites; • BT Technology Journal; • Trade Conference presentations. 	<ul style="list-style-type: none"> • Annual reports; • Press releases; • Newspapers and magazine articles; • Official websites; • BT Technology Journal; • Trade Conference presentations.
Events involved in	<ul style="list-style-type: none"> • CEBIT 2005; • VON Europe 2005; • Light Reading - The Future of Carrier Class Ethernet 2005; • The IEE Annual Course on Telecoms NGN. 	<ul style="list-style-type: none"> • Light Reading - The Future of Telecom – Europe 2005 (07-08 Sept 2005); • Carriers World 2005; • Broadband World Forum Europe 2005; • ITU-T Focus Group on NGN 2005; • CEBIT 2006; • 21st Century Communications World Forum 2006. 	<ul style="list-style-type: none"> • The New Telco: Europe 2006; • Broadband World Forum Europe 2006; • IP Leaders 2007; • C5 World Forum 2007; • Carrier Ethernet Expo 2007; • ITU-T Kaleidoscope Academic Conference 2008.

Source: Author's elaboration

The methodology was primarily a qualitative case study, and the data collection involved conducting interviews and collecting documentation during the period between 2005 and 2009 with further follow-ups and updates done by 2015. An important element of the data collection was the attendance at trade conferences in order to interview executives, attend their presentations and gain insights which would not have been possible (or would have taken much more time) by only analysing documents. The interaction between the information obtained through interviews (as primary sources) and through documentation and presentations (as secondary sources) helped to speed up the process and deepen the understanding of the phenomenon. Data was collected and analysed considering the

frameworks of figures 1, 2 and 3 (Section 2 above), considering the elements of interaction between firm (supplier) and customer.

Section 4 below explains some of the main projects delivering integrated solutions by BTGS, including the vanguard project (Unilever) while Section 5 provides a deeper discussion of such projects taking into account the concept of value co-creation and contrasting them with the frameworks depicted in figures 1, 2 and 3.

4. The Business of Projects Delivering Integrated Solutions: BT Global Services (BTGS)

The differentiator of the business of projects delivering integrated solutions is based firmly on the quality of relationship with the evolving needs of customers with the aim of persuading these companies to renew contracts after some years. In fact, much of the value and profit of this type of business is dependent on long-term relationships with the customer. BT's position in the UK and especially in London, where many multinational firms have placed their headquarters, creates good conditions for the business of integrated solutions to thrive (BT Senior General Manager, Interview, October 2006). For other operators in Europe, where the volume of this business is lower, the business of integrated solutions may be more difficult to succeed. Also, the change of the internal culture of the incumbent telecom companies into a more professional services environment may prove too difficult for some operators.

For this type of business to thrive in the long term it is necessary to gain some efficiency in terms of repeatability and knowledge transfer, where the solution provided for the next customer can be re-used to at least some extent from the solution developed for the previous customer (BT Senior Manager, Interview, March 2005). This reinforces the platform approach being implemented by BT at strategic level, and instantiated in other parts of the business within BT. The repeatability usually refers to repeatable solutions (Davies & Brady, 2000), and also the importance of acquiring good references in order to market services to new customers. Although projects are supposed to be unique, customers usually ask for details of other customers where the proposed solution was implemented. This is supposed to reduce the execution risk for the new customers. The requirements of having good financing capabilities and good references in the market may make the business of integrated solutions accessible for many companies, but it is a major opportunity for large firms who need to grow, and grow fast, and cannot rely on breakthroughs alone for their growth.

The activities of BT Global Services include: Global IP Infrastructure Services, Applications and Application Management Services; Outsourcing and Managed Services; and Business Transformation Services (BT Senior Technical Manager, Interview, March 2007). These activities are substantially carried out with partners: Cisco, Intel, Alcatel, Nortel, Vodafone, and Marconi for Global IP Infrastructure Services; Computacenter and Microsoft for Applications & Application Management Services; Siemens, CSC and HP for Outsourcing and Managed Services; and Accenture for Business Transformation Services. BT Global Services has restructured its division from a fragmented service to another that is more simplified from the customer perspective (BT Senior Manager, Interview, March 2007). This restructuring prevented a common problem of one customer being visited by several teams from BT, with one team unaware of the customer approaches of the other, creating confusion and a bad image of BT for the customer (BT Manager, Interview, March 2007).

The types of projects/contracts that BTGS is now dealing with are of higher value and longer term (for some 3 to 10 years usually), and one important part for the profitability of this business is the renewal of major projects/contracts. BT claims that around 90% are renewed and, as noted earlier, long-term contracts are essential for the profitability of the business model (BT Senior General Manager, Interview, March 2007). Each contract represents a different customer with different needs. In this sense, skills in large scale project management are important. In some instances, the learning in one project can be transferred to another, but the real gain (and profit) occurs when the contract is re-signed (BT Senior Manager, Interview, March 2007). In large business-to-business contracts, factors like trust, reliability and security are highly valued.

The business of projects delivering integrated solutions as practiced by BT Global Services follows the life cycle proposed by Davies and Hobday (2005) which comprised of: strategic engagement; the value proposition phase; the systems integration phase; and the operational services phase, which feeds back into the strategic engagement based on customer needs. In the case of BTGS, re-signing is an important feature of this type of integrated solutions project in order to be profitable in the long term (Green, A., Presentation, 2006). Thus the transition from the operational services phase to the strategic management phase is important for the profitability of the business model when a contract is renewed due to the identification of another project or due to the extension of the operational services phase. In this transition, the cycle could take the form of a spiral to emphasise the identification of a new project and the re-signing of contracts. Besides that, the strategic engagement seems to be important over

all the phases of the life cycle, as BTGS is trying to build trust and long-term relationships with their customers. One special measure of success in these integrated solutions projects is when the same customer extends the contract and relationship for additional years. The ultimate aim of BTGS would be to achieve customer 'lock on', which happens 'when customers want the enterprise as their sole or dominant choice' (Vandermerwe, 2003, p. 56)⁴.

The case of Barclays Africa illustrates this life cycle. BT and Barclays Africa had already been in a business relationship for ten years when their service contract was coming to an end in March 2004. This was the point of transition from the operational services to the strategic engagement phase, where BT was providing installation and support for Barclays Africa's satellite network to provide real time services to customers in Africa. The end of the contract represented an opportunity to 'take a fresh look at Barclay Africa's strategic telecommunications requirements' (BT, 2007a, p. 2). Although other options were considered, BT was selected due to its existing relationship, good service availability in Africa and technological and operational expertise. These factors composed a good value proposition for the integration and building of a broadband infrastructure including a satellite-based solution. The project lasted less than 12 months from contract sign off to full implementation. After the project finished, operational services continued with the technical support for the broadband infrastructure on an ongoing basis until a new major customer need is identified.

Another life cycle example is VISA CEMEA (Central and Eastern Europe, the Middle East and Africa). BT had a relationship with VISA as a network provider since the early 1990s. In 2002, VISA CEMEA recognised that their legacy networks were inadequate to keep pace with business growth and response times required for the card business (BT, 2007b). Besides that, VISA wanted to consolidate its network and reduce the number of supplier contracts. About 250 firms took part in the initial negotiations and eventually BT was selected as the provider of the new network (BT, 2007b). The new network was built and BT continued to be a prime partner of a managed service solution. The result is better availability of the network and an improvement in the response time for card processing. An interesting concept that was used in this project was the 'in-sourcing', i.e. BT people working inside the VISA

⁴ According to Vandermerwe (2003), customer lock-on differs from customer lock-in and customer loyalty. When customers are locked in, even when they are dissatisfied, they have no choice of changing suppliers as the alternatives do not present a real gain for the customer. Customer loyalty assumes that customers repeat the purchase of the same product or service. Further discussion can be found in Vandermerve (2001) and Vandermerve (2003).

organisation. This helped to identify and solve problems quickly, and better positioned BT for another round of strategic engagement for further integrated solution projects.

The year of 2005 was a remarkable year for BT Global Services as it reported operating profit, proving the business of integrated solutions. ‘The 2005 financial year saw Global Services deliver its first ever full year operating profit before goodwill amortisation and exceptional items, at £7 million’ (BT, 2005, p. 33). However, recent developments in November 2008 indicate major setbacks in BTGS (Barker, 2008), although it is too early to assess its long-term effects on the whole business. This resonates with similar financial problems from firms like IBM, WS Atkins and Serco (A. Davies, 2003) and the significant number of bankruptcy cases of firms in the servitisation context (Neely, 2009).

In order to build the business of projects delivering integrated solutions, BTGS needs to be in close contact with its customers in order to create value and profit in the long term. More than close contact, BTGS needs to align its strategy to the customer strategy in order to grow together. Thus BTGS, and consequently BT, will be part of an ecosystem of organisations that can support each other in their strategies for survival and growth. Fundamental to this long-term profitability is the re-signing of contracts, which occurs when BTGS identifies a new project within the same customer or when the customer wants to extend their operational services phase due to a satisfactory experience with BTGS. The ultimate aim is to achieve customer lock-on where the relationship is satisfactory and the customer is willing to continue it, even with the presence of other potential competitors. Working closely with the customer leads to the issue of co-creation of value with customers.

Unilever was BTGS’s first major customer in the business of projects delivering integrated solutions: a ‘vanguard’ project (see, for example, Brady and Davies (2004) for an elaboration on vanguard projects). Some considerations are made below in order to emphasise the strategic alignment between BTGS and Unilever in order to co-create value for the business solution.

4.1 Strategic Alignment with Major Customer: Unilever

In order to understand customer needs, the analysis starts with one of BT’s major customers, Unilever, which was important in setting up the business of integrated solutions and consequently BT Global Services. Unilever has a special meaning to BT as it was the contract that provided a step change in BT Global Services’ business (BT Senior Manager, Interview, March 2006).

In this type of business, it is usual to have a tender process, and the Unilever contract was no exception. The short list of bidders included AT&T, BT, Deutsche Telekom, France Telecom and Sprint. This contract can be seen as a strategic partnership, as the relationship between BT and Unilever went beyond the functionalities of the solution to the establishment of a shared vision of the future. The specific project was fortuitous as 'BT's ambition to move into a global space matched Unilever's needs' (Cameron, N., Presentation, 14 September 2006). In other words, BT and Unilever shared common goals at the strategic level. International presence is part of BT's overall strategy and one of the main targets to be achieved by the networked IT services through BT Global Services. In the same way, as globalisation is a driving force for large multinational firms, so it is for Unilever (BT Senior Manager, Interview, October 2006).

In 2006, Unilever had a presence in 150 countries, with physical business interests in 100 countries and 365 manufacturing sites spread throughout the world (Cameron, N., Presentation, 14 September 2006). In order to meet the communication demands of firms such as Unilever, BT had to expand into other countries where the customer had presence and where interconnection was demanded. One of the reasons why BT won the contract was that it owned network coverage and presence through partnerships in locations that BT did not reach into through its own network (BT Senior Manager, Interview, October 2006). This 'geographic capability' is of major importance in this type of business and for this type of customer and market.

In addition to geographic coverage, another aspect of Unilever's problem was that it had different contracts for various parts of its network, individual voice and mobile service contracts, and data networks for each country. Unilever wished to simplify this operation in order to have as few contracts as possible (thereby benefiting from lower costs in comparison to the management of diverse contracts and providers, and possibly by reducing the cost of the services themselves). Also, Unilever concluded that an external partner could deal with such cost and quality issues better than Unilever: '[Unilever] makes soup and soap, and as a company, it particularly does not want to do IT, but it has to do IT' (Cameron, N., Presentation, 14 September 2006). This is a typical example where the customer core competence is outside the IT arena, but it needs to use IT in order to have flexible, agile and efficient operations. As Unilever's own IT activities became very large and complex, it became worthwhile to have a strategic partner to take care of it and its evolution. An understanding of the business needs of the customer at the strategic level and a vision that

matches the provider's own strategy and values became important for a long term and effective partnership. Another distinctive point of the large projects in integrated solutions is the shared success between customer (in this case Unilever) and provider (BT): 'BT's success is [Unilever's] success and vice versa (Cameron, N., Presentation, 14 September 2006). In large projects, this generates a shared commitment, as the consequences of failure are a bad reputation in the market and possible negative effects in present and future projects.

Interestingly, Unilever, with its 350 operating companies around the world, aims to move to One Unilever (Cameron, N., Presentation, 14 September 2006). This is an attempt to consolidate the company into a more coherent company. The initiative involves moving from 1600 to 400 brands globally. This represents a huge change culturally, politically and financially. Each of those 350 companies has its own chairman (Cameron, N., Presentation, 14 September 2006). BT also had the strategy to move to One BT (BT Senior Manager, Interview, March 2007). The main problem of having this large conglomerate of companies is that each company tends to work for its own targets, and tends not to have the culture of leveraging their scale, technology, knowledge and resources, or presenting the firm to the customer as a unified company (BT Senior Manager, Interview, March 2007). Both BT and Unilever are examples of companies that are trying to achieve 'higher levels of strategic integration between their business and subunits', where 'each unit head feels responsible for the performance of other units as well as for their own, and actively looks for ways to help them deliver' (Doz & Kosonen, 2008, p.80). Although the idea of a unified company may seem to mean the centralisation of decisions, this is not the case. It is about the collective commitment of the top management (Doz & Kosonen, 2008) to support each other's business, sharing a common vision, and leveraging resources.

Unilever signed a multi-year contract with BT, that was said to be a 'leap of faith' (Cameron, N., Presentation, 14 September 2006). Unilever had a contract with WorldCom at that time and in the first half of July 2002 WorldCom failed,⁵ and the telecom industry as a whole was in a bad shape. Unilever decided to sign with BT in December 2002. This reveals a major contextual influence on winning a contract: the failure (bankruptcy) of the previous provider at the time of negotiating the contract. The leap of faith was due to the fact that this type of multi-year contract has many challenges and it usually does not work as it was supposed to do in the early stages (usually in the first three years) (Cameron, N., Presentation, 14 September 2006). To resolve this problem, it is necessary to invest in the relationship and in

⁵ An account of WorldCom's demise can be found in Jetter (2003).

the values of the provider (BTGS): it is necessary to believe that the firm (BTGS) will be able to execute (Cameron, N., Presentation, 14 September 2006). Although evidences and prior experience are required, they do not guarantee success. At the end of the day, it is necessary to believe that BT (the provider) will do what they are saying they will do; that is the ‘leap of faith’. In other cases, previous successful relationship helps to lower the barriers for this ‘leap of faith’. This case shows that there are many aspects of the relationship that needs to be worked on throughout the project.

5. Value Co-Creation and Strategic Alignment with Customers

From the perspective of BTGS as a provider of integrated solutions, Section 4 shows the challenges and processes of value co-creation highlighting the resources and capabilities issues as well as the strategic alignment that are necessary to build between BTGS and its customers. This section examines BTGS from the integrated solutions project perspective and elaborates on the processes of value co-creation.

Figure 4 below shows BTGS as provider of integrated solutions (cf. A. Davies, 2003), which are represented by various major projects for each major customer. These projects can be also seen as temporary organisations (Lundin, 1995; Lundin & Soderholm, 1995; Packendorff, 1995; Turner & Mueller, 2003) that sustain the permanent one (in this case BT Global Services).

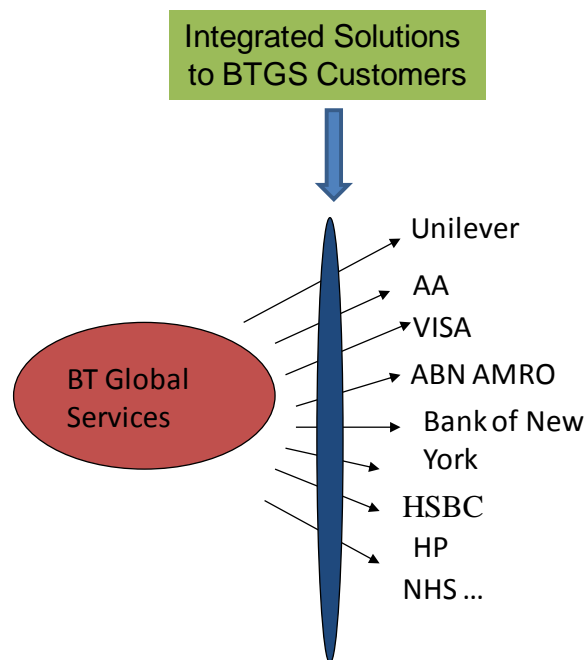


Figure 4 – BTGS delivering Integrated Solutions Projects
Source: Author's elaboration

Systems integration, operational services, business consulting, and financing capabilities were identified by Davies et al. (2001) in their research about integrated solutions, but they need some reinterpretation in order to fit into the telecom/BT environment, and also some more specific capabilities need to be addressed.

Professional services are usually the capability that joins IT and network products together. Within professional services are systems integration, business consulting and outsourcing capabilities that allow BT to cope with more complex solutions, dealing with its own and third party products and systems. Professional services are a capability that BTGS is building up. BTGS has also built a team of thousands of 'billable professional services people' (BT Senior Technical Manager, Interview, March 2007). The idea is that these people are not only considered support for the business, but they take active participation in the value creation of the business. BTGS has hired people from Deloitte, PWC, Accenture and IBM, and this shows one aspect of convergence where people from one domain (consulting companies) move to another domain (telecom operators) (BT Senior General Manager, Interview, March 2007). This is a major transformation in the nature of business for BT, where the profile of the people required to work in this environment is very different from that where the aim was to sell a lot within a limited variety of products and services.

Financing capabilities are not frequently mentioned, but they continue to be important, and there are some similarities and differences to the context of CoPS (Complex Products and Systems) as indicated by Davies et al. (2001). The similarities involve the financial stability of the supplier. Customers want a financially strong supplier because they want the supplier to support them in the years to come, providing technical and business support to the solution they purchased (BT Senior Account Manager, Interview, October 2006). Some level of financing for products and services may be necessary depending on customers' requirements. Another aspect is that the business model used in this context by BT usually starts to contribute with profit only in the third year of the contract (on average), and the cumulative cash flow starts to become positive usually only in year 4 (BT Senior General Manager, Interview, March 2007). This is a financial burden and business model that only large firms with appropriate financial capabilities can afford.

Capabilities of the business of projects delivering integrated solutions generally pointed out by BT interviewees are those such as business transformation, change management, large-

scale project management, process transformation, solutions design and innovation (BT Senior Manager, Interview, March 2006). These capabilities can be categorised into three levels: the first level corresponds to fundamental changes (business transformation and change management), that largely affect the resources and infrastructure of customers' firms. The second level corresponds to intermediary capabilities (large scale project management and process transformation) which act on the resources and infrastructure to leverage the third level of services (through solutions design and innovation). These capabilities are intertwined, but it is important to note that the engagement with the customer tends to be at the business level, i.e. what the customer intends to do with the solution being provided. This usually requires the engagement of BTGS with the customer at a more strategic level. An understanding of the customer strategy is needed and sometimes the customer can consider matching the supplier's (BTGS's) values in order to decide whether or not to take the contract. This engagement and match of supplier's (BTGS's) and customer's strategies are unusual in the way BTGS (and other incumbent operators) traditionally do business.

Another identified capability that seems to be particular to this context is the geographic capability. This is required due to the global nature of BTGS customers, and also drives the decisions on BTGS partnerships and acquisitions. BTGS global customers have operations around the world and BTGS needs to provide a solution in different parts of the world including those countries where BTGS may not have a network or an operation. The internationalisation strategy of BTGS is based predominantly on the demands of the existing customers to expand to other countries. When a customer requires BTGS to have presence in a country where there is no BTGS operation, if the business is strategic and worthy, BTGS decides what the best strategy is to undertake: partnership; acquisition/merger; or the establishment of a new operation. This reinforces the customer-orientation strategy. The geographic capability is driven initially by firms in Europe that want to move to other regions, for example, Latin America. If an operation is established in Latin America, then BTGS tries to leverage it by offering communication services to firms in Latin America who want to expand into Europe (BT Manager, Interview, October 2006). This contrasts significantly from the internationalisation strategy of the 1990s, where the aim was to expand into foreign markets, frequently without proper consideration of customer demand in those markets.

The investigation revealed that, more than network transformation, there was a significant impact on transforming the way BTGS created and developed new business: it was also a

business transformation. It affected the network, the service and application layers and forces the operators to deliver new types of services and new business models. The business of projects delivering integrated solutions is ‘[...] a service business with a network inside, not a network that does some services’ (Craig, T., Presentation, 14 September 2006).

This shift in the approach is subtle, but important to emphasise. Vargo and Lusch (2004) argue that the economy is becoming primarily based on services and that ‘goods are distribution means for service provision’ (p. 8). They propose that there is a significant change in the logic of conducting business from goods-centred to service-centred dominant logic. This seems to be the change that is being stimulated by BTGS in the logic to create and develop business focused on integrated solutions.

Other parts of BT business continue to be related to the consumer market (retail) and are still based on selling goods and services (goods-dominant logic). This logic is changing, where BTGS and other incumbents aspire to improve the customer experience (moving to a service-dominant logic). Thus, although BTGS is a services company, the service-dominant logic moves at different speeds (e.g. for integrated solutions and retail businesses) according to both customers’ needs and to what BTGS can supply profitably as long as its resources and capabilities are evolving. The service-dominant logic may evolve at differing paces within BTGS, depending on the various types of business models for different customer segments. In this sense, BT Global Services (BTGS), which is BT’s integrated solutions business unit, is clearly based upon service-dominant logic, while BT retail still relies mostly on selling point products and services, but it seems to be evolving to service-dominant logic (SDL).

Figure 3 in the literature review can be further elaborated in order to incorporate some of the features of the empirical analysis above in integrated solutions. Firm and customer are seen as service systems in the sense that they comprise not only their own resources and capabilities⁶, but also those from third parties that collaborate in order to make the system work. For example, BTGS uses systems and services from external equipment suppliers such as Cisco and Avaya. In this way, as illustrated in Figure 2, the firm’s network works with the customer network in order to co-create the service.

According to Figure 1, resources (operand resources) and capabilities (operant resources) are configured and shaped in order to achieve certain goals at the organisational level. From the case of BTGS-Unilever it is possible to note that, prior to signing the contract for the project

⁶ In order to make the nomenclature homogeneous, operand and operant resources are being called resources and capabilities respectively.

to deliver the integrated solution, a strategic alignment of the goals of both firm (provider) and customer is done in order to proceed with the project. As these relationships are supposed to be long-term ones, both firms and customers align their strategies in order to have symbiotic relationships.⁷

Also in Figure 1, some characteristics of the co-creation environment are pointed out such as control, temporality, multiple firms and multiple customers. As it was highlighted in the case of BTGS, these characteristics are typical of the integrated solutions associated to the projects conducted by the multiple firms involved. Temporality, in its original interpretation, is related to changes in the meaning and value of brands over time (Arnould et al., 2006). In this context, temporality is reinterpreted as the fact that integrated solutions are delivered through projects that are temporary in nature, i.e. usually these projects are bounded in time, having an expected timeframe to be finished.

In Figure 3, value-in-context reflects the fact that some environmental factors can influence decision making. For example, Unilever was more inclined to negotiate and sign the integrated solutions contract because at the time of negotiation WorldCom, which was providing the communications network to Unilever, was going into bankruptcy. Thus, a contextual factor provided more value to the integrated solutions provided by BTGS.

Figure 5 below is an adaptation and reinterpretation of Figure 3 based on the empirical evidence provided by the integrated solutions environment found in BTGS.

⁷ Symbiotic relationship is a term that comes from the study of ecosystems, and it means that over time these relationships remain collaborative. Both firm and customer have a strategic commitment to their evolution in terms of direction and performance in a way that lock-in is avoided. Further information about symbiotic relationships in the ICT sector can be found in Fransman (2007).

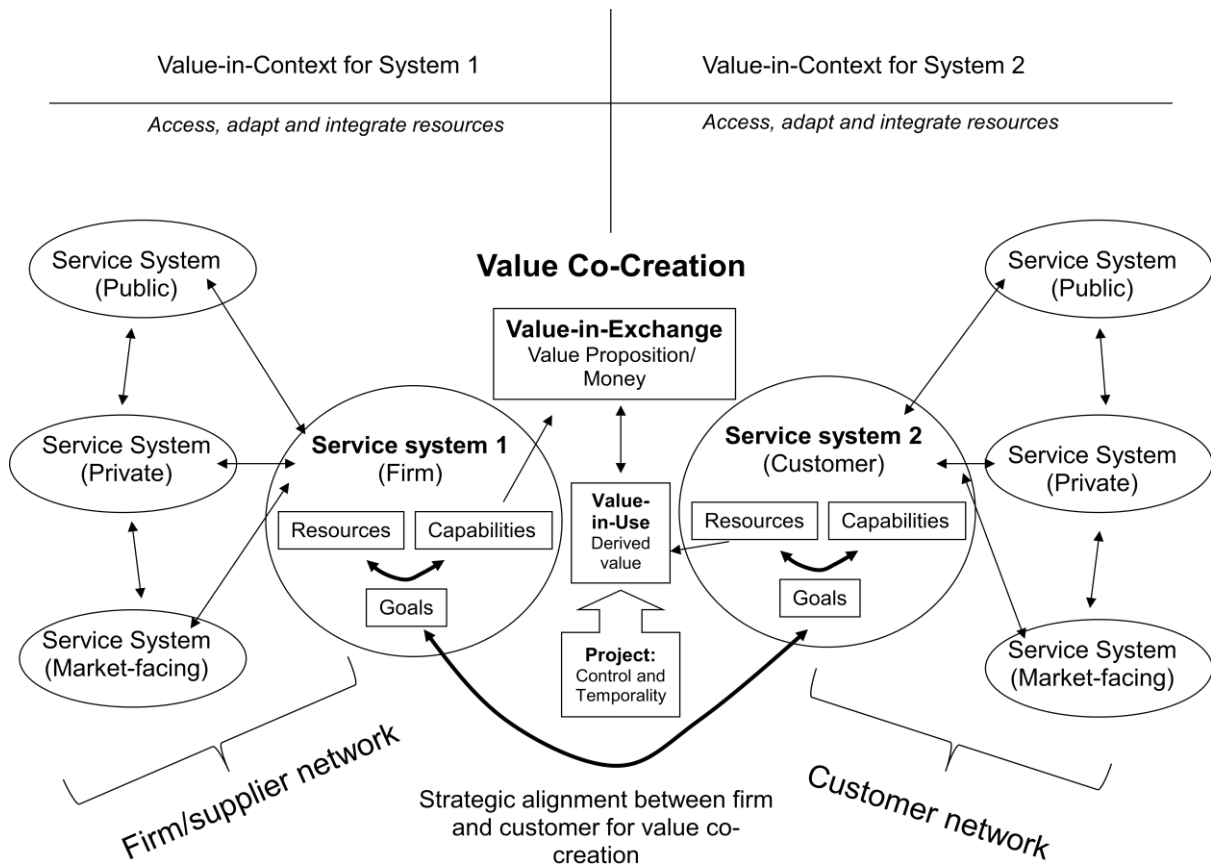


Figure 5 – Framework for the Analysis of Value Co-Creation between Supplier and Customer
Source: Author's elaboration based on Figure 1, Figure 2, Figure 3 and empirical analysis.

The framework above recognises the importance of not only the firm/supplier and customer in the co-creation of value, but also other actors who are part of the firm/supplier and customer network, that may affect value creation. Instead of using operand and operant resources, resources are used for operand, and capabilities for operant resources in order to align with nomenclature of innovation studies (e.g. Tidd et al. (2005)). The interaction between resources and capabilities towards a goal/strategy connects with Section 2's discussion of resources and capabilities. From Figure 5, capabilities from the firm/supplier are offered to the customer (or potential customer) in the form of a value proposition (i.e. value-in-exchange, involving a price), establishing the connection between the service systems. Once the customer's resources are affected by the deployment of the value proposition through projects both customer and firm/supplier create value-in-use or value-in-context⁸. An important point is the inclusion of the concept of project for the control and temporality features of co-creation of value. This relates to project capabilities and its

⁸ Vargo et al. (2008) do not differentiate explicitly value-in-use and value-in-context and they sometimes use them interchangeably. However, Figure 3 suggests that value-in-use would be the perception of value from inside the service system, and value-in-context from the outside.

intrinsic issue of temporality is dominant. Finally, this framework is based on a service-dominant logic environment. Particular emphasis is given to the strategic alignment between firm and customer as a condition found in the integrated solutions delivered by BTGS to create symbiotic and sustainable relationships for the long term.

6. Conclusion

This paper aimed to provide an empirical framework (Figure 5) that can help the implementation of value co-creation in high-value projects delivering integrated solutions. The main element that differentiates this framework from the others is the strategic alignment that is necessary to be done between the provider and customer. This strategic alignment supports the collaboration in a deeper level of co-creating value, building of a long-term relationship where provider and customer co-evolve and hopefully grow together. This framework resulted from the refinement of existing frameworks, and from empirical analysis of projects undertaken by BTGS, contributing to a better understanding of the concept of value co-creation in the management of projects and its application. This framework may hopefully help researchers and practitioners to apply the concept of value co-creation in other contexts and industries, and contributes to the debate on the empirical meaning of value co-creation in a project environment.

The crisis in the early 2000s made BT to adopt a more humble and focused strategy. From a vision of being ‘the most successful worldwide communications group’ (BT, 2000, p.1), BT moved to a more customer-centric strategy, focusing on European customers with global presence. Large firms such as BT struggle with the imperative of growth. Just a few percentage points of growth may represent millions or billions of pounds of additional revenues. Even large firms may not have enough resources to obtain those additional revenues from their own new products and services. They need to rely on new uses and applications of their existing technologies, products and services.

Although BT (during its crisis in the early 2000s) and IBM (in the mid-1990s) experienced the same dilemma of whether they should be split and sold, or remain as one firm, both BT and IBM were able to remain as one firm. This echoed the underlying idea that innovation is an end-to-end process. In the business of integrated solutions, splitting the firm may weaken the innovation process. When large firms intend to deliver innovation to large customers, size matters, particularly if rapid and large scale developments must be undertaken (Neely, 2009). That is the essence of the business of projects delivering integrated solutions to large

customers by BTGS: to understand customer needs and offer the best solution possible using their own and/or third party partial solutions, and in the process, achieve customer lock-on by strategically aligning with the customer. However, in order to not get lost in offering solutions, as firms may end up offering anything to anybody, two important lessons from BTGS are important for the business of projects delivering integrated solutions:

- Firstly, to have customer focus, selecting which type of customer the firm intends to target. BT decided to focus on multi-site organisations with operations in Europe;
- Secondly, to identify its strengths or its core capabilities, which must be within the integrated solutions projects being offered. Otherwise the whole solution may fall apart, if trying to offer anything to anybody. BT identified its strength as ‘networked IT services’, providing services within their integrated solutions that leverage their network (infrastructure) capabilities.

In this paper, in order to approach the research question ‘how do incumbent telecommunications operators co-create value with their suppliers and customers through projects delivering integrated solutions?’, the case of BTGS is used to illustrate how BT is taking advantage of integrated solutions projects to emerge from crisis and achieve targets of future growth. The profitability of the business of projects delivering integrated solutions relies on a challenging and risky business model. Projects start to deliver profits only after a few years from the start of the project (usually three years), and its profitability is also highly dependent on the renewal of contracts, i.e., on long term relationships. Thus, the business of projects delivering integrated solutions goes beyond selling integrated products and services. It is about building relationships and trust, in a culture where the service-dominant logic (SDL) prevails. The development of capabilities in professional services (i.e. consultancy, systems integration, project management and outsourcing), underpinned by network and IT products, requires major investment by BTGS. For this reason, the strategic alignment between BT and the customer is deemed as fundamental for them to co-evolve as the market evolves. One major problem may occur when either the provider or the customer goes into bankruptcy, inflicting heavy financial losses and damaging long term relationships.

Projects delivering integrated solutions seem to be a way of implementing the service-dominant logic, where products and services in isolation are not the main focus. Instead, the onus is on how they are put together in a coordinated way to satisfy customer’s needs and wants, which may change over time. The customer experience is of the utmost importance,

having network/IT products and services as a support. This type of business provides great flexibility for the customer, which needs to be supported by the flexibility embedded within the provider (i.e. BTGS).

Finally, through the case of BTGS, it was shown the high degree of commitment between provider(s) and customer(s) where both sides were actively engaged in the co-creation of value within the service-dominant logic of the business of projects delivering integrated solutions. This case illustrates the resources commitment of each side and the strategic alignment that is necessary for value co-creation in this context. Figure 5 represents the empirical framework showing the main factors involved and their relationship for value co-creation in projects delivering integrated solutions. Although this framework was designed for the particular case of projects delivering integrated solutions within BTGS, it can be used, tested, modified and refined by other firms in other contexts. Other incumbent telecommunications operators in developing countries could be investigated in order to verify their state of evolution in terms of the business of projects delivering integrated solutions and value co-creation, and if (and to what extent) this type of business model makes sense for them.

References

- Arnould, E. J., Price, L. L., & Malshe, A. (2006). Toward a Cultural Resource-Based Theory of the Customer. In R. F. Lusch & S. L. Vargo (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (pp. 91-104). Armonk, New York: M.E. Sharpe, Inc.
- Barker, C. (2008). BT Global Services head resigns. *Silicon.com*.
- Brady, T., & Davies, A. (2004). Building Project Capabilities: From Exploratory to Exploitative Learning. *Organization Studies*, 25(9), 1601-1621.
- Brady, T., Davies, A., & Gann, D. M. (2005). Creating value by delivering integrated solutions. *International Journal of Project Management*, 23, 360-365.
- Brown, S. (2007). Are we nearly there yet? On the retro-dominant logic of marketing. *Marketing Theory*, 7(3), 291-300.
- BT. (2000). *BT Annual Report 2000*. London: <http://www.btplc.com/report/1999-2000/> accessed on 27 Feb 2009.
- BT. (2002). *BT Annual Report 2002*: <http://www.btplc.com/report/index.shtml> accessed on 27 February 2009.
- BT. (2005). *BT Annual Report 2005*: <http://www.btplc.com/Sharesandperformance/Howwehavedone/Financialreports/Annualreports/AnnualReports.htm> Accessed on 31 May 2005.
- BT. (2007a). *Case Study Barclays Africa: IP in the heart of Africa*. London: BT Global Services Case Study.
- BT. (2007b). *Shaping new markets in the digital networked economy: Visa CEMEA case study*. London: BT Global Services Case Study.
- Ceci, F., & Prencipe, A. (2008). Configuring capabilities for integrated solutions: evidence from the IT sector. *Industry and Innovation*, 15(3), 277-296.
- Chang, A., Chih, Y., Chew, E., & Pisarski, A. (2013). Reconceptualising mega project success in Australian Defence: Recognising the importance of value co-creation. *International Journal of Project Management*, 31(8), 1139-1153.
- Constantin, J. A., & Lusch, R. F. (2004). *Understanding Resource Management*. Oxford, OH: The Planning Forum.
- Cova, B., & Salle, R. (2007). Introduction to the IMM special issue on 'Project marketing and the marketing of solutions' A comprehensive approach to project marketing and the marketing of solutions. *Industrial Marketing Management*, 36, 138-146.
- Cova, B., & Salle, R. (2008). Marketing solutions in accordance with the S-D logic: Co-creating value with customer network actors. *Industrial Marketing Management*, 37, 270-277.
- Davies, A. (2003). Are Firms Moving "Downstream" into High-Value Services? In J. Tidd & F. M. Hull (Eds.), *Service Innovation: Organizational Responses to Technological Opportunities & Market Imperatives*. London: Imperial College Press.
- Davies, A. (2003). Integrated solutions: the changing business of systems integration. In A. Prencipe, A. Davies & M. Hobday (Eds.), *The Business of Systems Integration* (pp. 333-368). Oxford: Oxford University Press.
- Davies, A. (2004). Moving base into high-value integrated solutions: a value stream approach. *Industrial and Corporate Change*, 13(5), 727-756.
- Davies, A., & Brady, T. (2000). Organisational capabilities and learning in complex products and systems: towards repeatable solutions. *Research Policy*, 29, 931-953.
- Davies, A., Brady, T., & Hobday, M. (2007). Organizing for solutions: Systems seller vs. systems integrator. *Industrial Marketing Management*, 36, 183-193.

- Davies, A., & Hobday, M. (2005). *The Business of Projects: Managing Innovation in Complex Products and Systems*. Cambridge: Cambridge University Press.
- Davies, A., Tang, P., Brady, T., Hobday, M., Rush, H., & Gann, D. (2001). *Integrated Solutions: the new economy between manufacturing and services*. Brighton: University of Sussex - SPRU.
- Day, G. (2006). Achieving Advantage with a Service-Dominant Logic. In R. F. Lusch & S. L. Vargo (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (pp. 85-90). Armonk, New York: M.E. Sharpe, Inc.
- Dick, B., Sankaran, S., Shaw, K., Keely, J., Soar, J., Davies, A., et al. (2015). Value Co-creation with Stakeholders Using Action Research as a Meta-methodology in a Funded Research Project. *Project Management Journal*, 46(2), 36-46.
- Doz, Y., & Kosonen, M. (2008). *Fast Strategy: How strategic agility will help you stay ahead of the game*. Harlow: Pearson Education Limited.
- Eisendhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Engström, S., & Stehn, L. (2016). Barriers to client-contractor communication: implementing process innovation in a building project in Sweden. *International Journal of Project Organisation and Management*, 8(2), 151-171.
- Fitzsimmons, J. A., & Fitzsimmons, M. J. (2006). *Service Management: Operations, Strategy, Information Technology* (5th ed.). Singapore: McGraw Hill.
- Fortune, J., Peters, G., & Short, L. (2015). Shared understanding during design and delivery: the case of a large-scale information systems program. *International Journal of Project Organisation and Management*, 7(4), 327-338.
- Fransman, M. (2007). *The New ICT Ecosystem: Implications for Europe*. Edinburgh: Kokoro.
- Galbraith, J. R. (2005). *Designing the customer-centric organization: a guide to strategy, structure and process*. San Francisco: Jossey-Bass Business & Management Series.
- Grant, R. M. (1998). *Contemporary Strategy Analysis*. Malden, Massachusetts: Blackwell.
- Gronroos, C. (2007). *Service Management and Marketing* (3rd ed.). Chichester: John Wiley & Sons Ltd.
- Hobday, M. (1998). Product complexity, innovation and industrial organisation. *Research Policy*, 26(6), 689-710.
- Jaworski, B., & Kohli, A. (2006). Co-creating the Voice of the Customer. In R. F. Lusch & S. L. Vargo (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (pp. 109-117). Armonk, New York: M.E. Sharpe.
- Jetter, L. (2003). *Disconnected: deceit and betrayal at WorldCom*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Johnston, R., & Clark, G. (2005). *Service Operations and Management: Improving Service Delivery* (2nd ed.). Harlow: Pearson Education Limited.
- Kumaraswamy, M. M., & Zhang, X. Q. (2001). Governmental role in BOT-led infrastructure development. *International Journal of Project Management*, 19, 195-205.
- Lehrer, M., Ordanini, A., DeFillippi, R., & Miozzo, M. (2012). Challenging the orthodoxy of value co-creation theory: A contingent view of co-production in design-intensive business services. *European Management Journal*, 30(6), 499-509.
- Lindberg, N., & Nordin, F. (2008). From products to services and back again: Towards a new service procurement logic. *Industrial Marketing Management*, 37(3), 292-300.
- Lundin, R. A. (1995). Editorial: temporary organizations and project management. *Scandinavian Journal of Management*, 11(4), 315-318.

- Lundin, R. A., & Soderholm, A. (1995). A theory of the temporary organization. *Scandinavian Journal of Management*, 11(4), 437-455.
- Maglio, P. P., Srinivasan, S., Kreulen, J. T., & Spohrer, J. (2006). Service Systems, Service Scientists, SSME, and Innovation. *Communications of the ACM*, 49(7), 81-85.
- Maylor, H., & Blackmon, K. (2005). *Researching Business and Management*. New York: Palgrave Macmillan.
- Mele, C. (2011). Conflicts and value co-creation in project networks. *Industrial Marketing Management*, 40(8), 1377-1385.
- Meng, X., & Humphreys, P. (2015). The application of early contractor involvement and its impact on project performance. *International Journal of Project Organisation and Management*, 7(4), 339-351.
- Miles, I. (2000). Services Innovation: Coming of Age in the Knowledge-Based Economy. *International Journal of Innovation Management*, 4(4), 371-389.
- Mohan, K., Ahlemann, F., & Braun, J. (2016). Realising value from projects: a performance-based analysis of determinants of successful realisation of project benefits. *International Journal of Project Organisation and Management*, 8(1), 1-23.
- Neely, A. (2009). Exploring the Financial Consequences of the Servitization of Manufacturing. *Operations Management Research*, 1(2), 103-118.
- Nordin, F., & Kowalkowski, C. (2010). Solutions offerings: a critical review and reconceptualisation. *Journal of Service Management*, 21(4), 441-459.
- OECD. (2005). *Next Generation Network Development in OECD Countries*. Retrieved 01 November, 2005, from <http://www.oecd.org/dataoecd/58/11/34696726.pdf>
- Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management*, 14(2), 160-172.
- Oliver, R. L. (2006). Co-Producers and Co-Participants in the Satisfaction Process. In R. F. Lusch & S. L. Vargo (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (pp. 118-127). New York: M.E. Sharpe, Inc.
- Ordanini, A., & Pasini, P. (2008). Service co-production and value co-creation: The case for a service-oriented architecture (SOA). *European Management Journal*, 26(5), 289-297.
- Packendorff, J. (1995). Inquiring into the temporary organization: new directions for project management research. *Scandinavian Journal of Management*, 11(4), 319-333.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation Experiences: The Next Practice in Value Creation. *Journal of Interactive Marketing*, 18(3), 5-14.
- Shostack, G. L. (1977). Breaking Free from Product Marketing. *Journal of Marketing*, 41(2), 73-80.
- Slack, N. (2005). Operations strategy: will it ever realize its potential? *Gestao e Producao*, 12(3), 323-332.
- Spohrer, J., Maglio, P. P., Bailey, J., & Gruhl, D. (2007). Steps toward a science of service systems. *Computer*, 40, 71-77.
- Storbacka, K. (2011). A solution business model: Capabilities and management practices for integrated solutions. *Industrial Marketing Management*, 40(5), 699-711.
- Tam, N. T., & Hadikusumo, B. H. W. (2016). Modelling of trust and working relationship in construction project management: a case study of Vietnam. *International Journal of Project Organisation and Management*, 8(4), 366-395.
- Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing innovation: integrating technological, market and organizational change* (3rd ed.). Chichester: John Wiley & Sons Ltd.
- Tidd, J., & Hull, F. M. (2003). *Service Innovation: Organizational Responses to Technological Opportunities & Market Imperatives*. London: Imperial College Press.

- Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking customer solutions: From product bundles to relational processes. *Journal of Marketing*, 71, 1-17.
- Turner, J. R., & Mueller, R. (2003). On the nature of the project as a temporary organization. *International Journal of Project Management*, 21(1), 1-8.
- Vandermerwe, S. (2001). *Customer Capitalism: The New Business Model of Increasing Returns*. London: Whurr Publishing.
- Vandermerwe, S. (2003). Getting "Customer Lock On" Through Innovation in Services. In J. Tidd & F. M. Hull (Eds.), *Service Innovation: Organizational Responses to Technological Opportunities & Market Imperatives* (pp. 55-80). London: Imperial College Press.
- Vandermerwe, S., & Rada, J. (1988). Servitization of business: Adding value by adding services. *European Management Journal*, 6(4), 314-324.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68(January 2004), 1-17.
- Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36, 1-10.
- Vargo, S. L., Lusch, R. F., & Morgan, F. W. (2006). Historical Perspectives on Service-Dominant Logic. In S. L. Vargo & R. F. Lusch (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (pp. 29-42). New York: M. E. Sharpe, Inc.
- Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26, 145-152.
- Vermeulen, P., & van der Aa, W. (2003). Organizing Innovation in Services. In J. Tidd & F. M. Hull (Eds.), *Service Innovation: Organizational Responses to Technological Opportunities and Market Imperatives* (pp. 35-53). London: Imperial College Press.
- Windahl, C., & Lakemond, N. (2006). Developing integrated solutions: The importance of relationships within the network. *Industrial Marketing Management*, 35, 806-818.
- Winter, M., Andersen, E. S., Elvin, R., & Levene, R. (2006). Focusing on business projects as an area for future research: An exploratory discussion of four different perspectives. *International Journal of Project Management*, 24, 699-709.
- Wise, R., & Baumgartner, P. (1999). Go downstream: the new profit imperative in manufacturing. *Harvard Business Review*(September-October), 133-141.