

Managing Value Co- Creation / Destruction: A longitudinal education capital programme/project case study

Abstract

Drawing on a longitudinal empirical study of an education capital programme/project, this paper investigates value interactions at the interface between programme customers, project stakeholders and construction providers. It provides empirical evidence that value formation is not only associated with value co-creation, but also with value co-destruction. The case study showed that a mature and synergistic network relationship (that successfully aligned the expectations of a strong key account management team (KAM team), multi-headed customer and wider project stakeholders) could, if not well managed, turn into incongruent relationships, relationship uncoupling and resource withdrawal. These findings suggest that project managers must drive strong KAM team relationships, so that they can align and adapt to customer requirements, and control the response to often changing wider stakeholder expectations.

Key Words: Co-creation, Expectations, Key Account Management (KAM), Relationships, Stakeholders, Value

Introduction

It is understood that Project Managers (PMs) have marketing responsibilities (Smyth, 2000; and Muller and Turner, 2010). That projects must be market-oriented (Chen, 2015), and contractors must segment and use relationships to deliver value, to both the client and the client's clients (Turner, 2014). However, organisations still frequently front load activity to win projects, based on promises alone (Smyth, 2015). There is a significant need to understand the practical complexities of managing relationships (Macneil, 1980; Hellard, 1993; Pryke & Smyth, 2006; Akintoye & Main, 2007; and Bildsten, 2014) through the management of projects (Morris, 2013).

This work aims to explore the impact of key account management individual and team-based relationships on project customer, programme provider and wider stakeholder positive (congruent) and destructive value (incongruence) interactions over a longitudinal time. It is envisaged that project-centred KAMs can adapt to span the boundary between programme and wider project stakeholders, so as to facilitate the co-creation of benefits and minimisation of sacrifices, while maintaining controlled delivery of programme value.

Approaches such as key account management (Hakanen, 2014) might support PMs in establishing relationships and so business development. But how such approaches impact and are impacted by the complex multi-stakeholder project environment is unknown. It is therefore important to describe the influence of competing key account management roles, and to ascertain how varying expectations are measured and managed through a project, so to avoid uncoupling (Millman and Wilson, 1995) and support business development.

The key literatures in the applied fields of key account management and project management are presented and discussed in relation to their role in managing stakeholder expectations. Then state of the art co-creation (Vargo and Lusch, 2004, 2008 and 2015) literature will provide a theoretical framework (Shapira, 2011; p. 1314) along with literature that provides a limited understanding of the inter-subjectivity of value trade-off and the downside of value formation (Echeverri and Skalen, 2011). It is hoped that this pluralism will provide a middle range theory (Green and Schweber, 2008;

Charmaz, 2006; Stinchcombe, 1968) to support PMs in building strong synergistic-KAM teams, and in critically responding to various expectations to achieve business development.

Key Account Management

Approaches such as key account management might support PMs in establishing relationships; however it has seldom been explored within the field of construction project management. Key account management supports relationship marketing (LaPlaca, 2014), is applied to B2B markets and creates predictable customer satisfaction, relational improvement and joint investment (Davies & Ryals, 2014), although the benefits delivered to suppliers and wider stakeholders is far less predictable. Key account management can fail. Friend *et al.* (2014) for example reported a number of common failures, including a lack of adaptive capability, relational breakdown and excessive costs.

Key account management is widespread in manufacturing operation and product selling (Nätti *et al.*, 2006; Sharma, 2006; & Hakanen, 2014); although has been given less attention in service-led and project-based organisations. Hakanen (2014) has provided a focus on the Key Account Management Team (KAM Team), and the co-creation of integrated solutions, extending work already done on integrated solutions (e.g. Brady, Davies, & Gann, 2005; Davies, Brady, & Hobday, 2007), and a relational network view of systems integration (e.g. Brax & Jonsson, 2009; Jaakkola & Hakanen, 2013; Tuli *et al.*, 2007; Windahl & Lakemond, 2006).

Hakanen, (2014) showed that KAM teams must acquire knowledge (e.g. identify customer problems, needs and value expectations, become acquainted with suppliers offerings, define knowledge flows and utilise integration tools), assimilate knowledge (e.g. elicit and share knowledge to customise offerings), and apply knowledge (e.g. enhance the customer's business, providing strategic insight, challenging the customer as an outsider, promote co-creation among actors, a unified voice at the KAM team – customer interface, and provide expected value through solution co-creation).

Some believe that key account management and PM functions must be separated to detach key account management from technical process and product delivery, to "...be alerted to deviations from

expectations, but not part of the machinery or they will never do anything else” (Mc Donald & Woodburn, 2000, p.237). Strong long-term and loyal relationships (Christopher *et al.* 1991) will move beyond single project prospecting, and from pre-, early- and middle-KAM to a more credible partnership- or synergistic-KAM that involves cross-boundary blurring (Millman and Wilson, 1995). Synergistic-KAM no longer about selling alone, instead it is a relational approach to grow and integrate networks as is explained through the conception of the inversion of the traditional bow-tie (Smyth 2015).

This literature characterises the changing nature of the customer-supplier relationship (e.g. from positive integrated relationships to uncoupled), although to support PMs it must show how KAMs can manage a complex network of wider stakeholder expectations.

Expectations and Stakeholders in the Management of Projects

PMs must manage stakeholder perceptions to deliver project outcomes (Liu and Walker, 1998) and reconcile the complexity of stakeholder experiences, expectations and judgements (Mills, 2013). Expertise is not fully shared, and so sense-making between participants is necessary (Weick, 1969; Mills, 2014). A PM may have to work with others to develop key accounts, although Smyth (2015) found misalignment between the “convergent” thinking of PMs and “divergent” thinking of business development managers (BDMs). BDMs are prone to open up the options to increase perceived value for the customer (so developing expectations), whereas PMs try to close down and fix options to reduce risk and maintain control (the management of expectations). This can have significant consequences for KAMs.

There are significant differences in how stakeholders are involved in the management of projects. Some customers will be engaged from the outset (e.g. to define expectations in bidding), other project stakeholders may not express their expectations until much later in the project (Mills and Austin, 2014). From the perspective of the contractor, emergent customer and wider stakeholder requirements are often seen as deviations, resulting in risk (and so rejected), rather than as an investment in repeat

business, market reputation and learning opportunities (Hällgren and Söderholm, 2010). Architects will manage inter-relationships as design emerges (Luck *et al.*, 2001; and Luck, 2003, 2007, and 2012) and as expectations change over time and differ between stakeholders (Mills, 2013 and 2015). PMs must also manage a dynamic learning process and respond appropriately in order to create loyalty and trust (Pinto *et al.*, 2009), while at the same time managing a “promise register”, which logs all technical and service value items added at the front end during the win-strategy (Smyth, 2015, p.113). According to Smyth “...it takes skilful project managers, supply chain managers and other part-time marketers (who are actively engaged with BDM) to deliver against promises”. Commitment is the result of delivering against promise (Gummesson, 2000), which for some is more important than time-cost-quality/scope criteria in project performance assessments upon completion (Langford and Rowland, 1995). The problem is often however, what is the customer willing to pay for, and which stakeholder relationships are they prepared to risk (e.g. by asking them to make sacrifices). Some customers are willing to live with some level of stakeholder dissatisfaction, others may not. According to Zeisel (1984) this is a familiar place for Architects; when there is often a gap between paying customer and users. This may inevitably create sacrifices that must be understood. McDonald & Woodburn (2000) highlights that relationships can be misunderstood (particularly on the supplier side) - a “delusion” which fails to achieve reciprocal security, sustained satisfaction, and agreed levels of trust that the other would not indulge in opportunism. This illustrates the need for regular feedback to align any misunderstanding.

Expectations are a multi-faceted and multi-dimensional concept (Busacca and Padula, 2005; Fellows, 2014). Both satisfaction and dissatisfaction can exist at the same time, felt towards different events, objects or elements (Babin and Griffin, 1998) and expectations, experiences and satisfaction are interacting (Mills, 2013). Greater understanding of these will support business development; particularly when projects may start with a customer’s early expression of expectations, rather than a request for a proposal or a formal briefing document. This according to Smyth (2015) creating inertia between the customer and supplier organisations that may not be penetrable by competitors, although the impact of wider stakeholders is not well researched.

The management of customer and wider expectations is contingent on dealing with critical events and building social capital (Smyth, 2015) as poor handling of critical events can erode relationship strength in what is a temporality of project environments (Lundin & Soderholm, 1995). It is these “moments of truth”, which must be managed if relationships are to flourish (Storbacka *et al.* 1994). FitzPatrick *et al.* (2015) elaborated a relational view of service-dominant logic to move away from the “fuzzy” conceptualisation of “service” to a more specific, socio-economic and intersubjective understanding of the relational phenomena such as collaboration, reciprocity, trust and interpersonal engagement. They envisage a network of interactions beyond dyadic and formal relationships beyond the singular buyer-seller exchange, a view well established in the construction management literature also (Pryke, 2012). This complexity is multiplied in project-based firms that consist of multi-levels and a complex system of social interactions (Cova and Salle, 2000). The management of customer and wider stakeholder expectations will therefore require strong understanding and reconciliation of various competing experience, expectations, and capabilities to achieve satisfactory and marketable project results.

Value Co-creation and Co-destruction

Vargo and Lusch (2008) captured the shift from goods, to service, while Grönroos, 1990, identified the mutual relational exchange and fulfilment of promises. Vargo and Lusch (2008) define the intangible, continuous and dynamic exchange of operant resources that applies “...competencies, or specialized human knowledge and skills, for and to the benefit of the receiver” (p.15). But, if service is the application of resources for the benefit of another party (Vargo and Lusch, 2008); this then excludes all non-beneficial exchanges (e.g. those outcomes that are perceived by some stakeholders as sacrifices). Stakeholders may not believe they have been part of an exchange, or that they have received a service. Moran and Ghoshal (1999) determine that the provision of resources does not ensure value, but rather “it is ... the ability to access, deploy, exchange, and combine them that lies at the heart of value creation” (p. 409).

Vargo and Lusch (2004) first focused entirely on the customer, but then subsequently developed axioms and re-phased foundational premises (Vargo and Lusch, 2015) that extended the focus to a “more comprehensive (than firm and customer) configuration of actors” to incorporate a wider appreciation of “value-in-use” and “value-in-context” (Chandler and Vargo, 2011). This has taken the consideration of value from a B2C and B2B context, to one that is within an actor-to-actor (A2A) focus, away from “...a single actor (customer or otherwise) or a firm and its customers to a “whole host of actors”. This accordingly confirms “...value creation takes place in network [or dynamic system]...[that] implies a dynamic component [changes in the way that resources and services are integrated]”, although has not elaborated on “...how value is inter-subjectively assessed by agents” (Shau *et al.* 2009), or how value is co-destructed (Echeverri and Skalen, 2011).

Gronroos and Voima (2012), argue that Vargo and Lusch’s (2008) conception that “everybody co-creates”, means that “co-production cannot take place [if the system is closed to the customer, or closed to the provider]”. Therefore, “co-creation occurs when two or more parties influence each other or...interact in a dialogical process [physically, virtually or mentally]” that is always in a “joint sphere”. In fact in the context of construction projects, some systems may deliberately be closed to the customer in design production, purely because of the perceived complexity, loss of control or lack of customer experience.

Echeverri and Skalen (2011) argue that the abundance of positive and none empirical accounts of value interaction in the literature is a concern, because value can also be destructed – as a result of a negative interaction, because a service provider’s actions may also make a customer worse off. They see value creation being not a common feature, but congruence arrived at through negotiation, where mis-understanding, the routine application of procedure or lack of engagement can result in value destruction (incongruent elements of practice). The single case study applied by Echeverri and Skalen (2011) provides five interactions that can either be independently, or mutually addressed by provider-customer to deliver both positive and negative interactions of value formation, that contribute to the inter-subjectivity assessed by actors.

Methodology

A longitudinal single-case study design (Eisenhardt, 1989; Miles and Huberman, 1994; Yin, 1994) is applied to investigate the value interactions at the interface between programme customers, project stakeholder and construction providers. An abductive research design obtained empirical evidence on the nature of value formation (e.g. be it value creation, or value destruction). Data was captured in the form of precise mathematics (to develop theory) and rich narratives (to inform research development) (Shapira, 2011). This was then used to explain the impact of key account management relationships.

Data Collection

A single education property programme and a primary school project was identified with experts, based on the timeframe of the project and its suitability for action research, the ease of access, size and complexity of the stakeholders involved. The sample included multiple research interventions (pre-, during and post- project) with participants programme customers, construction providers and project stakeholders (Table 1).

Table 1. Research Participants Engaged Pre-, During and Post the Project

	Participants (Abbreviations), [n=multiple participants]	Pre- Project	Project			Post Project
			Prep' & Brief'	Concept Design	Detail Design	
Programme Stakeholders	LEA customer	✓	✓	✓	✓	✓
	Customer PM / Programme Manager [n= 3]	✓	✓	✓	✓	✓
	Educational Advisor [n= 9]		✓		✓	
	Constructor partner [n= 3]					
	<ul style="list-style-type: none"> • Main Contractor (PM KAM) • Architect (Arch KAM) • New Main Contractor (New PM) 	✓	✓	✓	✓	✓
	Environmental Experts [n= 2]		✓	✓	✓	
Project Stakeholders	Local Councillor		✓	✓	✓	
	Regeneration		✓	✓		
	Planning		✓	✓	✓	
	User Customer (e.g. Head teacher)		✓	✓	✓	✓
	Practicing Teacher		✓		✓	
	Building managers [n= 2]		✓	✓	✓	

Three analyses were combined to understand how programme and project stakeholders co-created/destroyed value pre-, during and post a project (Figure 1). A retrospective (Orum *et al.* (1991)

analysis of critical relational events captured over a 15 year period was done through action research (2 years 2006-8), during this time narratives provided insight on the way it used to be (2001-2006), and ongoing research relationships (2006-14) provided second hand observations through the eyes of the programme and customer project manager.

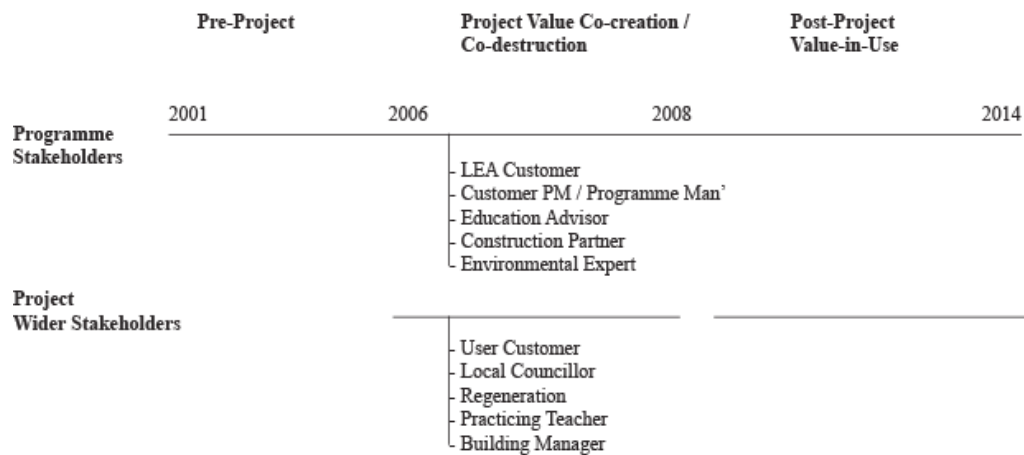


Figure 1. Pre, During and Post Project Sample Frame

A mixed method approach to process research was used to understand and build sense (Langley, 1999). Involvement in action research provided narrative, descriptive and chronological accounts pre and post- the project, although not all approving, deciding or consulting interventions were researched. Quantification, during the project (2006-2008) was possible through the application of a systematic value measurement instrument called Value in Design (VALiD) applied 2006 – 2008 (Mills, 2013).

Data Analysis

The temporal and consecutive nature of all project data allowed discreet time period and event analysis (Langley, 1999). To understand the relational dynamics during the pre-, during and post-project system; critical relationship events were described and subsequently organised into temporal brackets. Table 2 shows critical relationship events over time (pre-project, during and post project).

Table 2. Pre-, During and Post-Project Critical Relationship Events

Stage / Date	Critical Relationship Event	User Customer (Project)	Programme-Customer and Customer PM		Programme Suppliers
		(School Leadership/Headteacher and Teachers)	(Local Authority Client)	(Client Programme and Project Manager)	(Constructor Partner - Contractor and Architect)
Pre-Project	(i)	Poor Building Condition, Central Location, Housing, Deprivation	Capital Funding Won and Framework Established		Contractor Wide Training in KAM
					<div style="border: 1px solid black; padding: 5px;"> <p>Contractor KAM Successfully Delivers Previous Projects and Builds Strong Relationships With School Leadership</p> <p>Contractor Knowledgeable of the Customer Strategic Briefing Information, and Customer Policy and so able to Anticipates Framework Requirements</p> </div>
May 2006 Project	(ii)	Interest from Local Councillors and Local Government Officials	Initial Budget and Scope Agreed	Commitment Made to Invest in Project	<div style="border: 1px solid black; padding: 5px;"> <p>Architect Engaged in Exemplar Design</p> <p>KAM Moves to Another Client and New PM Appointed</p> </div>
	(iii)	Head Establishes Approves Communications Strategy		Framework Strategic Briefing Document Imposed	<div style="border: 1px solid black; padding: 5px;"> <p>Offsite / Standardised Design Agreed</p> <p>Architect Continues to Engage Users. Results in Architect Driven Design Change</p> </div>
		Stakeholders Consulted on Design	Additional Sure Start Funding Won	Continuous Design Review	
	(iv)	Head Joins Capital Programme Steering Group (CPSG)			<div style="border: 1px solid black; padding: 5px;"> <p>Contractor Refuses to Pay for Programme Level Activities</p> </div>
		Teachers and Wider Stakeholders Engaged	<div style="border: 1px solid black; padding: 5px;"> <p>Customer Informal Design Meeting with Architect and Brief Finalised</p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p>Continuous Framework Special Interest Group (SIG)</p> </div>	
		Site Disruption	Final Budget Agreed	Design Agreed and Finalised	Production Information is High Risk to Contractor
	School Takes Ownership of the Building		Compliance Check Against Strategic Briefing Document and Policy Standards	Contractor Acquisition Site Disruption / Vandalism	
On-site Customer Relationships					
Feb 2008 Post Project	(v)	Project POE Curtailing of Capital Funding	<div style="border: 1px solid black; padding: 5px;"> <p>Framework Renewal – Contractor Not Re-appointed</p> </div>		<div style="border: 1px solid black; padding: 5px;"> <p>Contractor Changes Architect on Grounds of Risk and Control, Then Puts in Claim for Overspend</p> <p>Architect used by Alternative Framework Contractor</p> </div>
	(vi)		<div style="border: 1px solid black; padding: 5px;"> <p>Customer Moves to New Organisation</p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p>Customer Programme Promotes Contractors Prior to Contract Award</p> <p>Customer Programme Team Disbanded</p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p>KAM Awarded New Contract on the Basis of Good Working Relationships and Reputation for High Quality</p> </div>
		School Achieves “Good” Ofsted Levels of Attainment	Leader Commends Project Design	Learning and Relationships Move to New Customer Programmes	Both Contractor and Architect Win national Awards for School Designs

Mature and Synergistic Expectations within a Strong KAM Team (Temporal Bracket 1)

The first critical relationship event (i, Table 1) embodies previous shared experience, expectation and evidence of successful delivery. The success of the customers capital framework and various projects between the PM KAM and Customer PM / Programme manager (who had grown their capability together), had establish trust between the parties and the framework had built a strong reputation. This was evident in the award of contracts (i, Table 1). A summary of the relationship is shown in Figure 2. The architect had a longstanding and positive relationship with the contractors PM KAM (a, Figure 2) and the customer DMU (a, b, and e, Figure 2). These three actors frequently drove exemplar schemes that set the benchmark for quality in the programme (Pre-2006), and the PM KAM and Arch KAM formed a strong KAM team (c, Figure 2).

The Arch KAM and PM KAM had built strong relationships with Headteachers through project interactions, for example the development of a primary school exemplar, and through attendance at special interest group events (d and g, Figure 2). Frequent dialogues with them, both within and outside the project system, built strong positive relationships and positive alignment of values through socialisation.

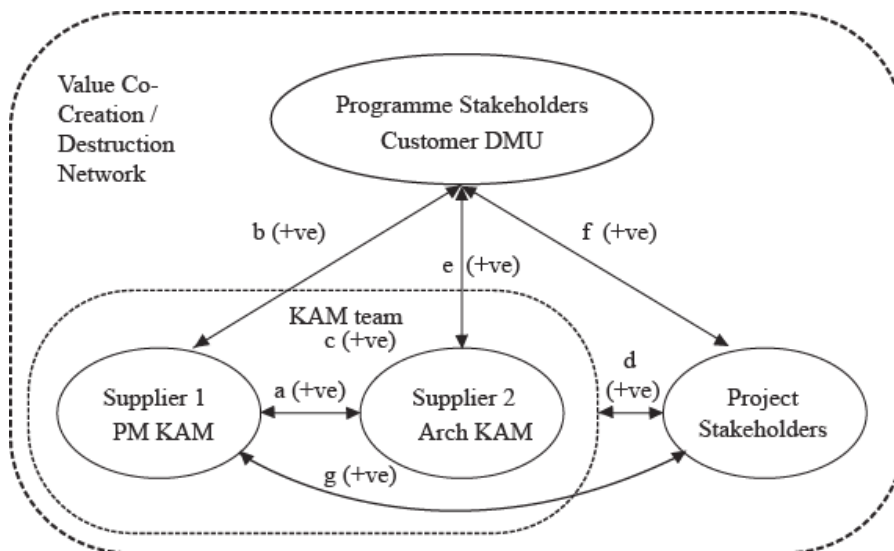


Figure 2. Value System (Temporal Bracket 1)

Incongruent KAM Team, Customer and Stakeholder Expectations (Temporal Bracket 2)

The second critical relationship event (ii, Table 1) was that the PM KAM within the contractor organisation felt that a mature interdisciplinary relationship was established within the KAM team, and so a new project manager (New PM) could deliver the project, while the PM KAM could step out of project-centric role, to perform a key account management role at a programme level. The New PM took on this role part of the way through design, and it was decided that the PM KAM would continue to connect with the project stakeholders. In the transition the PM KAM, passed on knowledge about how the KAM team had operated in the past, in a meeting with the New PM and Arch KAM, the PM KAM stated:

“We [The Contractor and Architect] do not down spec’, we strongly resist any change in quality, [as every completed project is the exemplar for our next project]”.

They saw their KAM team being exemplary in the customer’s capital framework and articulated shared expectations for quality, project delivery and relationships.

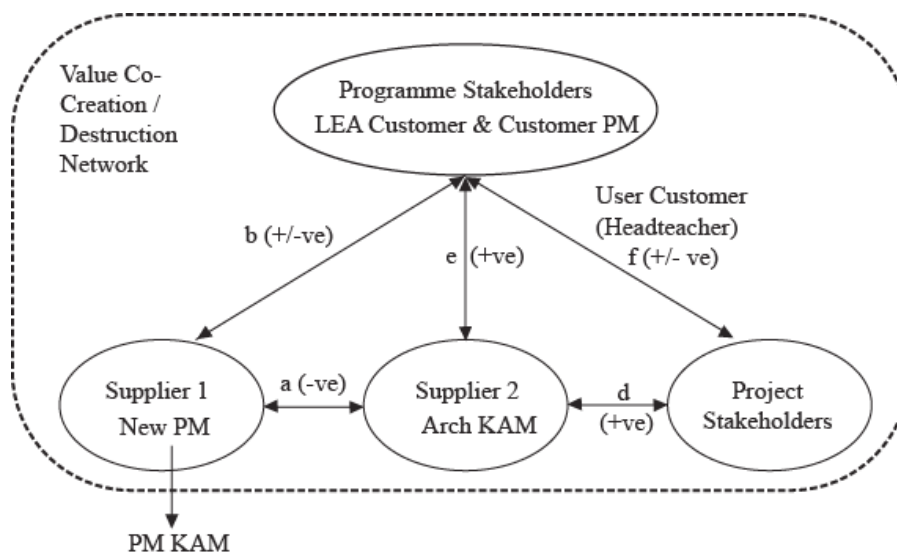


Figure 3. Value System (Temporal Bracket 2)

The Arch KAM’s practice was very geographically close to the schools central and prominent position, this meant that a strong positive relationship was built with the project stakeholders (d, Figure 3), and the Arch KAM chose to work with them and the Customer DMU to engage local residents, parents and teachers in a design festival and series of design consultation activities. The PM

KAM chose not to attend these events as no fee had been budgeted for and so the connecting relationship (g, present in Figure 2) was not made during design.

At the same time, the Arch KAM had ongoing communications with the Customer DMU (outside of the project with the customer programme, but this established strongly the relationship e, Figure 3). This engagement, with the LEA and User Customer (Headteacher) who was engaged with the customer programme, drove up expectations within this team (e, f, d, Figure 3). Project expectations were frequently changing and influencing the Arch KAM project design. This provided the contractor New PM with a significant problem in ensuring delivery on time and to cost, which was compounded by the fact that the contractor had chosen a pre-fabricated solution that required early design fixity. The minutes show that design coordination and cost control had become increasingly difficult for the New PM and that the relationship (a, Figure 3) was significantly strained.

“[The New PM] struggled with ensuring [The Arch KAM] work is within the cost plan... and items have appeared on [The Arch KAM] drawings, which are not in the cost plan. There is a danger that the clients (and planners) expectations will be raised as a result. [The contractor has] promised to reign in [The Architect’s] artistic licence.”

This situation was impacted also by other events beyond the changing of the PM KAM, including pressure from the Customer PM / Programme manager to get a wider scope and higher specification (against the agreed budget), by enforcing strategic briefing documentation (which were viewed by the framework partners as somewhat of a wish list) alongside emerging stakeholder expectations (critical relationship event iii, Table 1). To add to this, the client withheld the finalisation of the budget and brief, as he continued to informally agree the design with the Arch KAM and engaged with wider project stakeholders to agree additional revenue streams that never came to fruition. This impacted the relationship between the Customer DMU and New PM (b, Figure 3). The PM KAM had foreseen this problem. In a discussion with the New PM he stated that there would most likely be a “multi-headed client” and that the New PM would require a “steep learning curve”. The PM KAM stated that there would be a need for (in relationship b, Figure 3) “clear lines of responsibility”, “a single point of contact”, “[controlled] timing of changes [and design fixity]”, “[ways to deal with] changing

budgets... new stakeholders...[and]...re-design” and that what was necessary was “realistic aspirations”.

Delivery was compounded by the fact that the Customer DMU had devised a significant programme of project stakeholder consultation (f, Figure 3), which the Arch KAM (d, Figure 3) was significantly engaged (critical relationship event iii, Table 1), but the PM KAM (b, Figure 3) chose not to engage with fully at a project level. The need to address evolving project expectations as well as keeping control of rising costs was a significant undertaking for the New PM. The elicitation and delivery against stakeholder expectations led to increased risk for the new PM and contractor who were employed to keep control of time, cost and quality.

A dialogue of compromise did occur between the Customer LEA and Customer User (f, Figure 3). Table 3 provides example sacrifices (the compromises made by these two project stakeholders).

Table 3. Example Project Customer Requirement Sacrifices

Customer Stakeholders	Requirement Sacrifices	Project Stakeholder Compromise
LEA Customer	<ul style="list-style-type: none"> • “The schools working environment must not be compromised”. • “BB99 [must be achieved], although there are opportunities to provide more variety of spaces if stakeholders work effectively together”. 	School leadership, Teachers, Public, Regeneration, Planning, Local Councillor
	<ul style="list-style-type: none"> • “If the cost of adaptability is too high then this can be sacrificed. It should be designed in at the budget cost as far as possible”. • “Furniture may need to be re-cycled with a long term plan of renewal”. • “Car parking may need to be reduced as resources are limited”. • “Background sounds do not have to be enjoyable, just appropriately low e.g. quite where thinking is required and load when a space is being used physically used with excitement”. • “Air conditioning may be too costly to install, however the structure should enable it to be retrospectively put in place”. • “The adjustability of an environment may need to be compromised to ensure that environments are appropriate”. • “The budget could go up if there is real proof that value would be added e.g. infrastructure or technology”. • “Handover date may be compromised (e.g. in order to make an impact, build enthusiasm with pupils and parents we may need to delay, however only if there is no cost”). 	Environmental and Sustainability Advisers School leadership, Teachers and Other Agencies, Pupils Pupils, School leadership, Teachers and Other Agencies, Environmental and Sustainability Advisers Project Manager, Architect, Client Project Manager, All Other Stakeholders.
Customer User (Headteacher)	<ul style="list-style-type: none"> • “[The] school recognise that they may need to put in place a 2/3 programme to buy white boards and computers/desks” • “Understand that may need to re-use some furniture, and have a long-term programme of renewal”. • “We may need to stagger play times, but that will be clearer when we 	Pupils, School leadership, Teachers and Other Agencies

What was observed, was that decisions made by the LEA customer and Customer User (Headteacher) such as to reduce the number of car parking spaces, position the building away from the street, and to use underfloor heating, led to continued dissatisfaction for some wider project stakeholders, which subsequently impacted their judgement of the projects value. Figure 4 quantifies both the benefits and sacrifices of all stakeholders. It shows the assessments made by project users, Customer PM/programme suppliers and wider stakeholders (using a stacked bar graph) at two project stages (e.g. Concept and Detailed Design) and for each dimension for which value was assessed: build quality, functionality, impact, delivery and operation. The findings show that the project participants judged value differently and that their temporal and baseline expectations and experienced varied. Project-business level stakeholders saw smaller incremental benefits, their baseline expectations were lower (realistic and aligned with their experience) and so they more accurately judged value. Project-level and wider stakeholders on the other hand perceived greater step-change and need for improvements, and so greater perceived benefit. In addition, perceptions of benefits realised improved over time for all participants. Sacrifices were perceived to reduce over times (Figure 4), however the New PM only partially managed the reduction of sacrifices through the Arch KAM (a and d, Figure 3) and through the Customer programme stakeholders (b and f, Figure 3)

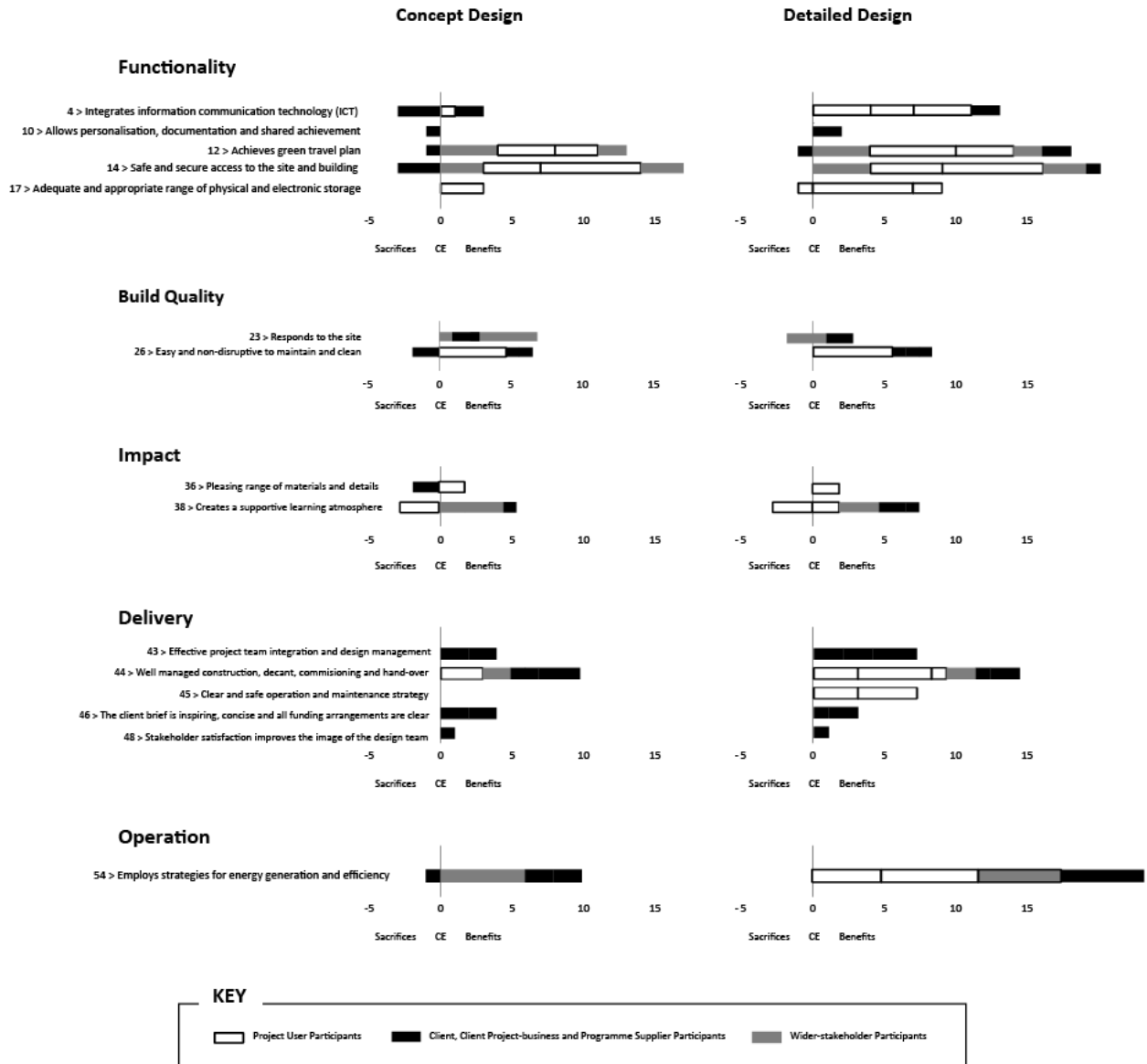


Figure 4. Perceived Project, Business and Stakeholder Sacrifices in Concept and Detailed Design

The experienced programme customer and suppliers most frequently perceived sacrifices in concept design, while project stakeholders most frequently perceived sacrifices in detailed design. This perceptual delay may show the additional level of uncertainty that project-based wider stakeholder have, and the need for emergent learning to enable them to make judgements of sacrifice. It also shows occasions where there are difference in the extent of sacrifices and benefits perceived on the same issue and at the same project stage. For example functionality item 12, achieves green travel plan. Project and wider stakeholders perceive relatively large benefits, while project-business

participants perceive a sacrifice in both concept and detailed design; maybe illustrating an opportunity for learning and agreeing the project expectation.

Mismanagement of client requirements and project and wider stakeholders expectations can create perceived sacrifices, for example 3 items (Green travel plan, safe and secure access to the site and creates a supportive learning environment) were judged to be sacrifices in both concept and detailed development design. These relationships had not therefore been managed effectively.

Relationship Uncoupling and Resource Withdrawal (Temporal Bracket 3)

The New PM tried to enforce financial controls to prohibit payment for work done at a programme level by the Arch KAM (critical relationship event iv, Table 1). In addition, the New PM chose not to be a part of learning at a programme level, negatively impacting the relationship (b, Figure 5, a key client requirement that was not delivered and one of the reasons why a framework programme was established). The Arch KAM decided to continue to engage with these activities, deeming that the value was in creating an exemplar design, understanding client expectations and winning future business. As such the Arch KAM strengthened his relationship, while the New PM's reduced at a programme level.

When the project went over budget the contractor put in a claim due to the customers changing requirements (resulting from the strength of the LEA customer, User customer and Arch KAM relationship). The customer DMU stated that the Arch KAM was the responsibility of the contractor. The New PM at this time saw that the Arch KAM (who was a sub-contractor) presented too higher risk for ongoing projects and so uncoupled their relationship (critical relationship event v, Table 1), and so the relationship (a in Figure 2 and 3) is no longer present in Figure 5.

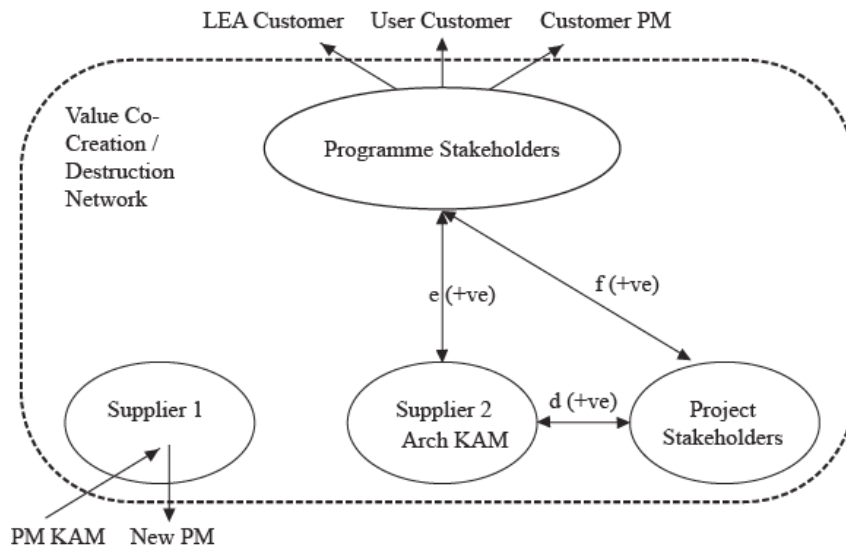


Figure 5. Value System (Temporal Bracket 3)

A few months later a review of capital spending and the re-appointment of constructor partners to the customers capital programme decided to uncoupled the contractor (resulting in the loss of relationship b that was seen in Figure 2 and 3). The rationale was that the scheme had gone over budget and that the contractor had failed to keep control of expectations and so had jeopardised future schemes.

Post the project (and some years on when the capital programme had finished) a new contract was awarded to the old PM KAM who now worked for another contractor on the basis of a trusted relationship. Internally, within the client organisation, the informality of the project procurement was deemed to be inappropriate, and the advocacy of the relationship too strong (e.g. lacking rigour and contestability). This resulted in the un-coupling of the internal client project management team and the reappointment of new programme stakeholders and suppliers.

Ultimately, even when all relationships had become un-coupled (the last row in Table 1), all parties had achieved value of one kind or another. What remained was the exemplar school design. The Contractor was highly successful in Building Schools for the Future (BSF). They were also named Best School Contractor at the British Council for School Environments (BCSE) Industry Awards.

While the leader of the DMU seven years on, said:

“The example of the importance of design and architecture to [the region] I'm probably most proud of is... our schools programme...schools like ...[school name]. Buildings that are not only highly functional, buildings that work, but also buildings that look fantastic. Buildings that send a message of worth to the communities they serve. Buildings that neighbourhoods can take pride in”.

Discussion

This work shows that value interactions can be temporally bracketed over time and that overall project relationships can exhibit both positive (congruent) and destructive value (incongruent) characteristics. This is somewhat different to Vargo and Lusch (2004) positivist view, and although more recently Vargo and Lusch (2015) have moved value from a focus on B2C and B2B to an actor-to-actor (A2A) network view, this work confirms Shau *et al.* (2009) view that “...value is inter-subjectively assessed by agents”, and that value can be co-destroyed (Echeverri and Skalen, 2011).

Echeverri and Skalen (2011) observe value- co-creation and co-destruction in day-to-day relational interaction, although key account management approaches (Millman and Wilson, 1995), propose broader relational stages. For example the case study showed that a mature and synergistic expectations within a strong KAM team (Temporal Bracket 1), developed into an incongruent relationship between the KAM team and the expectation of the customers and stakeholder expectations (Temporal Bracket 2). Finally, this discord resulted in relationship uncoupling and resource withdrawal (Temporal Bracket 3). This later position was as a result of mis-understanding, it was the impact of routine application of procedure and lack of engagement, which confirms the existence of both on “value co-creation” (Vargo and Lusch, 2004, 2008 and 2015) and “value destruction” (incongruent elements of practice) (Echeverri and Skalen, 2011).

The KAM roles, when integrated and project-based, facilitated value creation (Gronroos and Voima, 2012), and spanned operational boundaries (Hakanen, 2014) to align various stakeholder interests. During the three temporal brackets there were examples of “adaptive capability” (Friend, *et al.* 2014)

being used, although the New PM, who was not specifically in a KAMs role, was part of the “machinery” (McDonald & Woodburn, 2000), but still responsible for managing project expectations because the KAM was focused on programme stakeholders, rather than project stakeholders. Albeit subjectively compared to Friend, *et al.* (2014) there was KAM failures. The New PM was adaptive (understanding, adaptive and responsive in attitude) and good at establishing a project relationship (collaborative, trustworthy and responsive to expectations), but was not adaptive or strong in forming programme relationships and costs did escalate. Again subjectively compared to Davies & Ryals (2013) the KAMs attitudes and behaviours in adapting to the customers culture, embedding into the wider stakeholders network, cross-functional team formation, strategic prioritisation, and strategic planning could have been improved. There were also B2B relationships within the KAM team that created a negative environment for value exchange, mistrust, and reliability, flexibility, stability and communication issues. PM must therefore build strong KAM teams with many of these features, if they are to be adaptive to customer and wider stakeholder expectations.

The results do indicate that the success or failure of key account management is more complex than this suggests. That in fact relationships are relative to other project participants, influenced by team behaviour, change over time and are judged by a wide range of programme and project stakeholders. These findings also support positive and negative value. Gronroos and Voima, (2012), used “platform” to define the intersection between on the one hand, the potential to creatively explore value, and on the other the destruction of (Gronroos and Voima, 2012). The term “baseline”, is favoured in this work to describe the baseline expectation, and judgements of value that are different between stakeholders and emerge over time. Evidence suggests that value co-creation and value destruction can be characterised differently (in terms of benefits and sacrifices) for programme level and project level stakeholders (Figure 6) and that both influence key account management relationships.

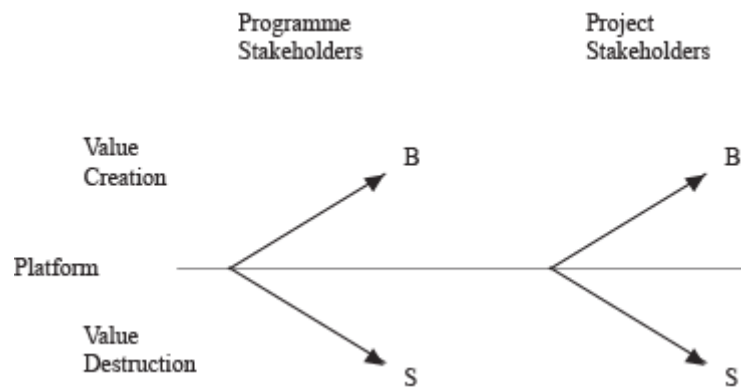


Figure 6. Value Co-creation and Value-destruction at Two Levels of Stakeholder Organisation

The separation of the social role of the PM KAM, Arch KsAM and the technical role of the New PMs may have reduced the "...[alert] to deviations from expectations" (McDonald and Woodburn, 2000, p.237), for subsequent management, although perhaps most importantly it prevented a strong compromising relationship to be formed. The Arch KAM and LEA customer relationship stimulated "divergence" in expectations (Smyth, 2015). The New PM perhaps responded to customer expectation to achieve relationship development (Millman and Wilson, 1995) but in doing so, struggled to get the "convergence" and fixity in delivering the project to time and cost. The lack of his engagement created a risk of opportunism (Grayson and Amber, 1999). No one perhaps foresaw the negative implication of these actions on the wider programme or enterprise relationship, and the resulting uncoupling (Millman and Wilson, 1995) and forgoing of the long-term relationship (Hadjikhani, 1996), but there was a lack of alignment of expectations and envisioned future (Helkkula *et al.*, 2012).

It was shown that the project participants judged value differently, and that the temporal baseline expectations and experience of stakeholders varied to create both beneficial and sacrificial interactions (Figure 6) which contributed to both value co-creation and destruction. For the approving board, the project was many years after the project was completed judged as a significant benefit, but because it went significantly over budget (and as a result jeopardised other schools in the programme), it was judged as a sacrifice. For the deciding customer the project created project benefits, and for the consulted wider stakeholders post-project benefits were perceived in operation (value-in-use). This refines the knowledge and measurement of co-creation and co-destruction (Echeverri and Skalen, 2011), and provides nuance to the grand theorising of value exchange (Vargo

and Lusch, 2015). Simplification of emergent stakeholder perceived benefits and sacrifices (Figure 4) is challenging, although for the purposes of illustration, Figure 7 summarises the critical value creation and value destruction events (using Arnstein, (1969) to define the levels of participation of stakeholders). Ultimately, it was the approving board that decided the term of the KAM relationship, and the perceived benefits to the project customers and wider stakeholders, ultimately did not make up for the sacrifice to the programme.

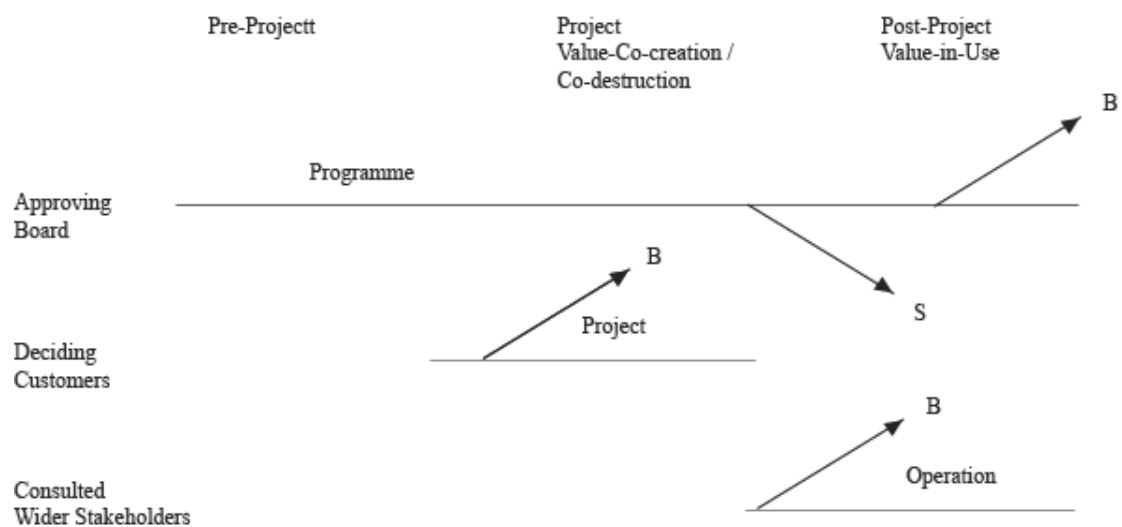


Figure 7. Critical Value Creation and Value Destruction Events

This work confirms the complexity and multi-directional relationships beyond the dyadic (Gummesson, 1994, Morgan and Hunt, 1994 and Cova and Salle, 2000) and difficulties in managing changing requirements (Pinto and Rouhiainen, 2001; Cova and Salle, 2005; Smyth, 2015). It also confirms the multiple levels of influence of a DMU (Winch, 2002) and the long-term life of relationships (Berry, 1983) and value-in-use (Chandler and Vargo, 2011). What is further contributed here is a more specific understanding of how key account management relationships can both create and destruct value. Dealing with the complexity of multiple network actors, competing levels of interaction and influence must focus on establishing and maintaining effective dialogue. This is aligned with Lusch *et al.* (2006) who place greater priority on this than formal management approaches.

Figure 8 attempts to illustrate the hierarchy that exists in aggregating a view of value from at the lowest level stakeholder unique value criteria that have baseline and judgements of benefits and sacrifices; through to programme level baselines and judgements of benefits and sacrifices. It is in the intermediary project level where there is competing value co-creation and co-destruction between projects. Significant opportunities exist, to understand how biases and discrepant baseline expectations (reference points) (Kahneman and Tversky, 1979; Kahneman, 1994; Flyvbjerg *et al.* 2005; Fellows, 2014) may influence programme and project value.

	Pre-Projectt	Project Value-Co-creation / Co-destruction	Post-Project Value-in-Use
Programme Stakeholders	Baseline and B / S Judgement		
Project Stakeholders	Baseline and B / S Judgement	Project 1	Stakeholder 1
			2
			3
			4
			5
			n
			Baseline and B / S Judgement
		Project 2	Stakeholder 1
			2
			3
			4
			5
			n
			Baseline and B / S Judgement

Figure 8. Competing Project Value Co-creation / Destruction between Programme and Wider Project Stakeholders

The application of Value in Design (VALiD) quantifies the differences, knowledge gaps and biases between project participant perceptions. In addition, it addresses the need for KAM to develop “reliable satisfaction customer diagnostic mechanisms and measures of performance” (Smyth, 2015), to continuously tailor and customise product/services to individual needs (McDonald *et al.* 1997), to minimise sacrifices (Gilmore & Pine, 2000), a principle that is yet incorporated by Vargo and Lusch (2015).

Conclusions

This work shows that value interactions can be temporally bracketed over time and that overall project key account management relationships can exhibit both positive (congruent) and destructive value (incongruence) characteristics.

A longitudinal and in depth case study illuminated how key account management roles interact and change over time and between organisations and teams. It shows the effect of this relationship then on the creation (and destruction) of value. Lessons can be learned from the management first of critical events, then in making client requirements prioritisation and creating trade-off dialogues with wider stakeholders on how their expectations can be realised.

The case study showed that a mature and synergistic relationship between the expectations of a strong KAM team, multi-headed customer and wider project stakeholders could turn into an incongruent relationship that resulted in relationship uncoupling and resource withdrawal.

There is a need for strong project-centred KAMs with adaptive capability to span the boundary between programme and wider project stakeholders, so as to facilitate the co-creation of benefits and minimisation of sacrifices, while maintaining controlled delivery of programme value.

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