

# **CO-CREATION AND CO-DESTRUCTION OF EXPERIENTIAL VALUE: A SERVICE PERSPECTIVE**

## **ABSTRACT**

### **Purpose**

One way in which to induce an advantageous position is to improve the value outcomes experienced from commissioned projects and to serve the range of project stakeholders. The purpose of this study is to consider project stakeholders, such as end-users, as active co-creators of value, and to take notice of interactive capabilities and service design practices. This may influence experiential and financial value outcomes.

### **Findings**

Findings show that project managers pay insufficient attention to the service experience. Findings also demonstrate users are treated as destroyers of value, rather than as co-creators of value. In addition to this, findings suggest contextual aspects, such as unethical behaviour, misalignment of values, power asymmetry and lack of contextual awareness, may affect a stakeholder relationship and ultimately the project outcomes.

### **Design/methodology/approach**

A single case displayed as a pilot study helps to establish the transferability of the co-creation and the service experience to the construction context in the asset-specific markets.

### **Practical implications**

The implication for the construction context is to create awareness of interactive capabilities and service design practices, which permit enhancement of experiential value outcomes.

### **Originality/value**

Service-Dominant Logic is used as a variant perspective to analyse the project usefulness and benefits for a range of stakeholders. The originality comes from the initial exploration of how benefits could be collaboratively configured through interactive capabilities and service design practices with a range of stakeholders.

**Keywords:** Co-creation, co-creation capabilities, co-destruction, service experiences, value.

## 1. INTRODUCTION

Client organisations constantly strive to improve their policy and market position. Thus, clients develop business models and execute strategies through projects, in order to create and deliver value to a range of stakeholders (Morgan et al. 2008; Laursen and Svejvig 2016). However, Smyth (2015) argues that many construction projects insufficiently meet essential client benefits, thus resulting in the project and operational effectiveness being compromised. Furthermore, some projects deliver unwanted service experiences to their varied users, turning the projects into a destruction of value (cf. Echeverri and Skålén 2011; Mills and Razmdoost 2016), which affects the business models (DaSilva and Trkman 2014).

A major cause of ineffective service experienced and rendered has been marked due to an engineering and product centricity, from an early stage of a project, that has dominated exchange across the project providers (Fuentes and Smyth 2016). Perspectives in the service-related literature suggest that the assessment of value is ultimately carried out by the project users, and other relevant stakeholders (Vargo and Lusch 2004). They either benefit or suffer from the service rendered. Thus, a potential solution to enhance value outcomes experienced from commissioned projects may lie in collaboratively designing value propositions with the relevant stakeholders from an early project stage.

This collaborative approach moves towards a transformational manner to undertake projects being demanded in many economies. This approach may be informed through the theoretical perspectives of Service-Dominant Logic (SDL) proposed by Vargo and Lusch (2004; 2016). SDL suggests a collaborative logic, where service exchange - rather than product exchange - is pivotal to the effective creation and delivery of value outcomes. SDL has become an albeit contested paradigm in the value literature. It is until now the most relevant framework to understand and explain how value can be (co-)created and delivered through exchange among configurations of stakeholders (cf. Grönroos 2011; Vargo and Lusch 2016). Nevertheless, these theoretical constructs have been scarcely addressed in construction (Smyth et al. 2016). For example, the stakeholder management has previously addressed the management of key stakeholders within the asset-specific sector. However, the co-creation of value pointing towards service experiences has been neglected. Therefore, the purpose of this research is to explore how stakeholders may be not regarded as passive actors, but rather as partners of the project, shifting to the notion of the co-creator of value, in order to enhance the service experience. In doing this, the functionality of value co-creation needs to be explored in the project business. interactive capabilities and service design practices are initially explored. Establishing the gap between current service theory and practice is a prime task for the analysis in this research. The discussion and application of service design tools can address the means by which any gaps can be bridged and how service assumptions can enhance current silos practices.

The paper is structured as follows: an exploration of the key notions of service-related concepts, including value co-creation and service experience. Next, a single case study is reported on as part of a wider body of research. The case study is based on a contentious construction undertaking, which resulted in the destruction of value, particularly affecting two types of value

outcomes: human experience and financial. This case study contains key elements to explore the negative consequences of regarding stakeholders as passive actors, rather than as co-creators of value. In addition to this, the functionality of the value co-creation process is explored, where four contextual aspects have been found to affect the process, specifically: unethical behaviour, misalignment of values, power asymmetry and lack of contextual awareness. The paper ends with an application of interactive capabilities and service design tools linked to the case study.

## 2. LITERATURE REVIEW

### 2.1 A service approach to creating value

Client organisations, as sponsors and owners, carry out programmes and projects, with the main purpose being to provide benefits to their project stakeholders (Laursen and Svejvig 2016). However, Bettencourt et al. (2014) remark that a vast majority of construction projects have been focused on the production of tangible assets, leaving aside the benefits to users and other relevant stakeholders. In this production and transactional approach to managing projects, the sole creators of value are suppliers, and *all* value is embedded in their tangible assets, coming from the firm and its supply chain (Porter 1985; Davies and Hobday 2005). This type of value is then realised *for* the suppliers through product and financial exchange often referred to as *value-in-exchange*. With this approach, clients, end-users are often treated as passive recipients of value. However, researchers have documented the ineffective delivery of benefits by using this type of exchange (Aarikka-Stenroos and Jaakkola 2012; Hakanen 2014). Thus, client organisations need to find other ways of exchange in the project business in order to ensure the delivery of value outcomes for a range of stakeholders.

Value in terms of benefits delivery and impact has increasingly been addressed in project management research (Morris 2013). An example of this is the value management and the value-for-money concept (Kelly et. al. 2004). These concepts have been applied in the construction sector. However, these are inclined towards achieving a cost reduction rather than in improving the delivery of value (Smyth 2015). As an alternative perspective to exploring value, Vargo and Lusch in 2004 proposed the Service-Dominant Logic (SDL) paradigm. It aims to explain service as the fundamental form of exchange through the mobilisation of resources in order to offer superior value, particularly to clients. From this perspective, *service*, as - singular -, is defined as, “*the application of competencies (knowledge and skills) for the benefit of another entity or the entity itself*” (Lusch and Vargo 2014, p. 12). Thus, *value* is defined in terms of its usefulness and its benefits for the client, which emerge during the usage of a service, often referred to as *value-in-use* (cf. Bowman and Ambrosini 2000; Grönroos and Gummerus 2014). This value-in-use perspective reaches back to Aristotle. He considered value in relation to the utility of (projects) things. This use-value perspective was later used in the political economy (e.g. Bastiat 1848; Marx 1867) and recently re-considered in SDL.

In SDL, (operant) resources, such as skills, knowledge, and people, are the main source of strategic value (Vargo and Lusch 2016). This is in contrast to the traditional focus of value, where value is embedded in their tangible assets (operand resources). According to Vargo and Lusch (2016), the SDL perspective does not preclude a focus on the tangible assets but considers that projects render a service through the use and receipt of tangible assets. This suggests that value is phenomenologically determined by the relevant stakeholders, who suffer or benefit from it. The perception of the realised value may be in the form of qualitative aspects, such as physical, cognitive, affective and emotional (Berry and Carbone 2007; Verhoef et al. 2009). This qualitative perception of value form part of the service experience of a project, which may be configured, in particular at the front-end of projects, through a process of value co-creation.

## 2.2 The co-creation of value

A prime tenet of the SDL literature is the co-creation of value. It can be defined as a concurrent, collaborative and interactive process to improve project outcomes, through a mobilisation of static and dynamic resources (Grönroos 2011; Galvagno and Dalli 2014). Primarily, direct stakeholder interactions are the main source of co-creation and lie at the heart of service provision. Through interactions, value can be (co-)created by working with relevant actors of a service (Akaka et al. 2013). Actors consist, for instance, of other supply chain members, partners, competitors, regulators, and other stakeholders “*always including the beneficiary*” (Vargo and Lusch 2016, p. 4). This suggests that the service is collaborative and relational through co-creation practices. However, the management of construction processes can prove negative to stakeholders, derived from “*fatal management decisions and actions*”, particularly at the early stage of a project (Grönroos 2011, p. 288). This may instead result in the co-destruction of value (Echeverri and Skålén 2011), which can be defined as a negative interaction that makes actors worse off (Mills and Razmdoost 2016). This destruction of value is observable as a project outcome, through conflicts, scope-creeping, and resource-consuming (Mele 2011).

Fuentes and Smyth (2016) argue that to date, the research on value co-creation and co-destruction has focused upon high volume and repetitive products and services. Projects are different to repetitive solutions, as they are specific assets, presenting unique, uncertain and complex characteristics (Lundin and Söderholm 1995; Shenhar and Dvir 2007; Winch 2010; Geraldi et al. 2011). Thus, primary empirical work on co-creation in the project business is limited (see Jacobsson and Roth 2014; Liu et al. 2014; Mills and Razmdoost 2016; Smyth et al. 2017; Eriksson et al. 2017). For example, Liu et al. (2014) found that knowledge and expertise from external actors can facilitate the decision-making process in uncertain situations. But overall, further investigation and analytical transferability of the co-creation concepts need to be developed and operationalised for project settings (Wright and Russell 2012).

As an attempt to bridge the gap between theory and practice in co-creation, generic capabilities are proposed in Table 1. These may provide initial guidance to practitioners on some of the different types of interactions, which can be applied in the project business. The extent of the capabilities can be examined and awareness may permit enhancement of value outcomes beyond current project practices. However, the application of these interactive capabilities may

need a different approach to managing stakeholders. Traditionally, the literature on stakeholder management has focused on addressing the external-stimulus. However, insufficient attention has been paid to the co-creation of service experiences, which is addressed in the following sections.

| Generic Capability                   | Co-creation | Comments for the project context   |
|--------------------------------------|-------------|--|
| Individuated Interaction Capability  |             | The process of soliciting knowledge and understanding what the client wants at a generic level, with the flexibility to tailor the services and customise the content to maximise the potential for value co-creation. |
| Relational Interaction Capability    |             | Ability to respond to client and stakeholder wishes in the design process, in procurement and contractual terms, supported by proactive relationship management processes.   |
| Ethical Interaction Capability       |             | Application of a client-orientated focus tempered by business acumen to satisfy corporate social responsibility, the triple bottom line, and the moral economy.  |
| Empowered Interaction Capability     |             | Facilitating responsibility in teams, supporting actions, and aligning processes in accordance with the requirements.  |
| Developmental Interaction Capability |             | Developing programmes and codes of conduct to facilitate interaction and advise other parties of the primary associate protocols.  |
| Concerted Interaction Capability     |             | Synchronise processes and actions so they are aligned with customer processes and protocols as part of the service design co-creation.   |
| Learning Capability                  |             | Facilitating generation of competencies and to absorbing lessons from the learning around the requirements for adaptive absorption and delivery.   |

*Table 1: Value co-creation capabilities for the project context (Source: Developed and adapted from Karpen et al. 2011; influence by Davies and Hobday 2005; Smyth, 2015; taken from Fuentes and Smyth, 2016).*

### 2.3 Management with stakeholders to enhance the delivery of value

A stakeholder can be defined as “any group or individual who can affect or is affected by the achievement of the firm’s objectives” (Freeman 1984, p. 25); by the project outcomes (Cleland 1986); or by the project mission (Winch 2017). Thus, an effective management *with* stakeholders is critical to delivering benefits to a wide range of stakeholders. Earlier discussions in stakeholder management, which remain valid until today, argue that businesses create and derive value mainly towards the financiers, such as investors, banks, and sponsors (Clarke 1998). However, some authors (cf. Freeman 1984; Donaldson and Preston 1995) argue

that managers need to take into consideration the relevant stakeholders' expectations, values, and concerns in the decision-making process. According to Olander and Landin (2008), project managers are responsible for communicating both positive and negative project impacts. Huemann and Zuchi (2014) argue that although stakeholder engagement, through dialogue, may possibly result in conflicts, critiques, and challenges, these may be seen as valuable contributions to achieving win-win situations. Donaldson and Dunfee (1999) indicate that engagement with the most relevant and affected stakeholders might be considered a social responsibility of any organisation. However, studies have reported the contrary, arguing that practitioners manage stakeholders with unethical behaviour and opportunism (Werder 2011).

Therefore, in order to achieve effective management with stakeholders, managers require discipline, vision, and leadership (Freeman 2010) and new processes to support an inclusive type of management (Eskerod et al. 2015). Processes and techniques have been developed to identify and categorise stakeholders (cf. Mitchell et al. 1997; Aaltonen et al. 2015). These have initially created a bond among relevant stakeholders and, as a result, have increased dialogue and communication (Turkulainen et al 2015). However, the literature on stakeholder has primarily focused on the management of relevant stakeholders, as well as the categorisation of, and communication between them. However, insufficient attention has been paid to the co-creation of service experiences, in particular for the end-users. The following section outlines in more detail the methods with which service experiences could be co-created.

#### 2.4 Designing for service experience

In the past, design was focused on the making of tangible resources (Kimbell 2011). However, modern applications of (service) design have extended its scope to consider the use of resources over time, with a focus on the end-users' consumption (Romme 2003). In this manner, designing for service experiences may become a market differentiator in the project sector (Agarwal and Selen 2011). Prahalad and Ramaswamy (2004) argue that stakeholders, such as end-users, could play a more active role in the design of service and in this manner, their expectations could be better addressed.

While the literature in co-creation largely remain at a theoretical level, Wetter-Edman et al. (2014) point out that service design could operationalise some of the constructs of co-creation. Service design is mostly rooted in practical applications, which are varied. For example, from a user perspective, *journey mapping* is a storytelling tool to capture key user experiences and their relationships with a product or a service, over time and across multiple channels (Clatworthy 2011; Erin and Flowers 2016). This may facilitate visualisation of the overall user experience in order to prevent negative experiences (pain points) or transform them into positive ones (gain points) (Clatworthy 2011). The customer journey could be possibly combined with other service design tools, such as the blueprinting tool (Shostack 1984). Blueprinting is a flowchart that enables an organisation to visualise a service, from the surface to the core or the organisation. In this tool, two main blocks are addressed: (1) the front-stage<sup>1</sup>, which exposes the service delivery process through actions from service actors (Zomerdijk and Voss 2009). (2) the back-stage, which is the core of an organisation and may be a combination

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<sup>1</sup> To clarify, across service-related literature, the front-stage refers to the service delivery process observable by users (Zomerdijk and Voss 2009). In project-related literature, the front-end refers to the early stage of a project, where most of the value can be shaped and configured (Morris 2013).

of supportive resources in the form of systems, processes, and capabilities (Spohrer et al. 2007). The orchestration of the resources in the back-stage is then critical to support both the service delivery process and the end-to-end user journey.

The application of these tools has been adopted in other sectors, such as information technology, banking, and hospitality, yet these have not been taken into consideration in asset-specific markets. It has been stated in the built environment context:

*“it is not immediately obvious which aspects of the manufacturers-moving-into-service[s] literature are relevant, and it would be foolhardy to suggest that the construction sector should simply follow established trends elsewhere.”*

(Leiringer and Bröchner 2010, p. 1124)

Thus, a single case displayed as a pilot study helps to establish and highlight the transferability of the co-creation and the service experience to the construction context in the asset specific markets.

### **3. RESEARCH DESIGN**

#### **3.1 Research Context**

Universities, as client organisations, carry out projects to provide adequate facilities, infrastructure, and support systems to a range of stakeholders, such as students, professionals, and academic staff. A major UK university had to carry out a refurbishment of one of its residence halls. Essential structural repairs to the building were required in order to maintain and preserve the site. Although the students were living in the residence hall, the client organisation decided to take the risk and carried out this project during the academic term of 2015. The client organisation then tendered and awarded the project to a refurbishment contractor. In this project, the client organisation dealt with two key stakeholders: (1) the supplier, which constituted an upward relationship; and (2) the end-users, which were the students living in the residence hall, constituting a downward relationship. However, the client mismanaged its two key stakeholders, both during the project front-end and execution, which resulted in conflicts and in the destruction of value. This directly affected: (1) the end-user experience, as the refurbishment negatively influenced the students' routines and (2) the client's business model, as financial compensations were provided to students due to the inadequate service. Thus, this case study represents a prime opportunity to explore the challenges of the phenomenon of value co-creation from a Business-to-Business perspective.

#### **3.2 Research Methodology**

Critical realism (CR) is a field of social science, which provides philosophical underpinnings to explore the social reality of a project case study. The conception of reality in CR is stratified

into three interconnected domains: real, actual and empirical (Bhaskar 1975). For project settings, this suggests that empirical events and project outcomes can be examined on a deeper level of reality to understand what made them occur. This may exhibit how powers, liabilities and other contextual forces influence the observable project outcomes (Bhaskar 2008; Smyth and Morris 2007). In connection with CR, abductive reasoning is used as a form of inference to understand the causes behind project outcomes (Sayer 2000). Due to the experiential and contextual nature of the co-creation perspective, this study employed a qualitative approach, for a deep exploration of the human experiences within their social context (Denzin and Lincoln 2000).

### 3.3 Research Methods

For this qualitative exploratory study, one case study was retrospectively examined. It must be noted that this single case study is part of a wider body of research. The retrospective nature of the examination allowed the tracking of the critical events in the project path that made outcomes occur (Gustafsson 2002). Six interviews were the main instrument of data collection (Yin 1984), including participants from the client organisation and end-users. The interviews were undertaken between March and April 2017, with an average duration of 30 minutes, as described in table 2. Interviews were carried out using a semi-structured questionnaire to allow flexibility in the discussion (Creswell and Creswell 2017). The interview protocol remained consistent throughout the entire research project.

The main themes explored were:

- The interactions of the client organisations with different stakeholders during: (1) the front-end stage; (2) the execution stage; and (3) the post-completion stage.
- The impact and usefulness of the project during the service experience and service rendered.
- The contextual conditions that influenced the project.
- Lessons learned from the project.

All interviews were audio-recorded and transcribed. Notes were also taken during each interview to capture cognitive aspects. Transcripts and empirical events were then discussed with the main research supervisor and other peers. Supported by the research suggestions of Yin (2017), project and procurement documentation, strike campaign documents, project complaints, social media, and newspapers were valuable supplements.



| Item | Job Title           | Participant from    | Type of contract                       | Years in the role at the time of refurbishment |
|------|---------------------|---------------------|--|--|
| 1    | Head of Procurement | Client organisation | Permanent                              | 16   |
| 2    | Procurement Manager | Client organisation | Permanent                              | 6  |
| 3    | Procurement Officer | Client organisation | Permanent                              | 1  |
| 4    | Residence Manager   | Client organisation | Permanent                              | 2  |
| 5    | Student             | End-user            | Temporary<br>(with the residence hall) | Not applicable                                 |
| 6    | Student             | End-user            |  |  |

*Table 2. Description of participants in refurbishment case study*

### 3.4 Data Analysis

The actor-to-actor interaction (Grönroos 2017) was taken as a unit of analysis for this study. The data was analysed as follows. Firstly, familiarisation with the primary and secondary data. This was done by reading and listening to all transcripts and audios several times. In line with CR, sensitising categories were initially assigned from a theoretical framework, which was based on the theorisation of value co-creation (cf. Vargo and Lusch 2016; Grönroos 2017). Categories were modifiable along the process, added and changed deductively. Then, and in line with the philosophical underpinning of CR, openness was introduced in the exploration to capture all relevant data.

To analyse the data selected, this research employed a qualitative content analysis, aiming for casual explanation by selecting and highlighting text. Data were then managed in a separate database (Glaser and Laudel 2013). Along the entire process, the original (highlighted) text was continuously considered to ensure adherence to the original text-in-context. From there, initial patterns were formed. However, these patterns were still based on the empirical domain (Bhaskar 2008). Thus, to move from the empirical to the real domain retrodution was applied (Danermark et al. 2002).

To ensure the validation of the findings and to eliminate research bias, results were presented with participants of the research project. In addition to this, early findings were discussed with seven researchers from the project management and the marketing school in Finland. Feedback was gathered and incorporated into the results (Lincon and Guba 1985). In addition to this, project documentation was checked to ensure the credibility against the results, which were then compared with previous theoretical constructs.

### 3.5 Limitations

The main limitation experienced for this study was the non-participation of the supplier organisation, despite being approached on several occasions to do so. This is acknowledged, yet might also be indicative of the extent to which service design is taken seriously from the supplier's perspective of value and service experience. Therefore, the expected number of interviews were less in number than expected, which limits the exploration of the phenomena, but other secondary data were used to support this data set.

## 4. FINDINGS

This section presents the case study findings. It is divided into two themes: (1) the end-user experience during the refurbishment project; (2) conflicts between the relevant stakeholders with regards to the service provided. The consequences of these two key issues culminated in a negative service experience for the end-user, which directly affected the business model from the client organisation, as explored in the following sections.

### 4.1 Service experience from the user perspective

During the execution phase, students living in the residence found this refurbishment to be causing mental and physical discomfort. This led to students' complaints regarding the unacceptable living conditions. Reports summing up the situation stated:

*"You couldn't study in your own room if you wanted to... I wasted a lot of time because I'd have to go somewhere else to study and spend time complaining"*

*End-User*

*"I understand this may have caused some considerable amount of inconvenience [to end-users] such as privacy, disruption, workmen noise and workmen walking past bedroom windows"*

*Residence Manager*

Evidence demonstrates that end-users were treated as consumers of the project, rather than being considered as project partners. Disruptive works were scheduled during inappropriate times for the students, such as in the exam revision period. Outcomes of this inadequate service led to students reporting invasion of privacy inside and outside their rooms. In addition to this, the appointed contractor produced constant disruption outside agreed contractual working hours. This prevented users from comfortable living and from completing their daily routines. This ultimately affected the relationship between users and the client organisation.

Furthermore, the client, as a pivotal stakeholder, was unable to manage the appointed supplier during the contract. The perception about the supplier performance was perceived by client representatives as follows:

*“I was not in the ground on this project, but that is probably [working outside agreed contractual hours] how the contractor manage to under-price the job and win the tender, by starting at 7 in the morning, therefore being able to work longer, therefore being able to hit the deadline”*

*Head of Procurement*

*“One of the problems with the contract, it was that the client assumed that the supplier would do what it has written in the contract [but] suppliers won’t do what it is in the contract unless they are particularly conscientious”*

*Procurement Manager*

As the client organisation was not expecting the contractor to work outside agreed working hours, insufficient advance warning about scheduled works resulted in contractors showing up in the student's rooms without prior notification. In addition to this, students reported offensive encounters with the workers outside the rooms, which included the use of racist comments, as mentioned in customer complaints reports. End-users wasted time in ensuring their complaints were heard, rather than focusing on their jobs-to-do, such as exams. While the supplier fell short of expectations, probably, it was the responsibility of the client organisation to manage the contract and the supplier. Overall, this desynchronised service between the client and supplier organisation affected the users' service experience, which led to conflicts between students and the client organisation.

#### 4.2 Conflicts between the relevant stakeholders

Due to the inadequate functionality of the service and the lack of service support across the development sequence, end-users presented complaints to client organisation. However, these complaints were met with indifference by the client organisation. In addition to this, end-users perceived mistreatment through different channels of communication. For example, e-mails from the residence team were unethical and inappropriate. Students reported a tone of victim-blaming in the communications from the residence management team. Furthermore, during direct interactions, such as in problem-solving meetings, client representatives demonstrated a lack of service empathy towards the end-users' problems. Reports summing up the situation stated:

*“They [accommodation staff] said in a very friendly e-mail [sarcasm] that people who were not paying the rent [due to the strike], would not be allowed to graduate. That was sh\*t, that was illegal...it caused pains...I had a meeting with the [accommodation] manager and I remember quite clearly he said: I have checked with my legal team and it is not illegal [to impose academic sanctions on the student community]”*

*End-User*

*“When it came down to everyday business, nobody thought before like -we have a service to support- and users got dissatisfied”*

*Procurement Manager*

Overall, end-users perceived this experiential outcome to be one of student mistreatment. Thus, due to the lack of support during the project execution, students called for strike action. This confrontation resulted in the suspension of project works during the exam period. However, the client organisation (university) illegally and unethically threatened to withhold the students' degrees for taking part in the strike (Times Higher Education 2015). While the university later modified their position in the conflict, the confrontation led to compensations being given to the student community, totalling £300,000 (The Evening Standard 2015). Overall, the consequences of the destruction of the service experience resulted in substantial costs, which were much larger than those anticipated in the original low-value contract. This ultimately affected the client's business model and its reputation within the UK Higher Education Sector.

## **5. DISCUSSION**

Findings addressed in previous sections about the end-user experience and conflicts between the relevant stakeholders demonstrate that the client organisation (university) worked in isolation in key decision-making activities. The client approached its two key stakeholders: the supplier and the end-users, in a transactional, rather than in a relational management. For example, the analysis suggests that the planning stage of this project was limited to project inputs (specification and management) around cost and technical aspects. The analysis from the project documentation demonstrated limited inputs about the end-user experience. In this project, the client organisation had the responsibility to undertake risk-assessments to understand how the service would affect the end-users' living experience. This indicates that the focus in some construction projects is engineering and production oriented. In these cases, the perception of value comes from the financial assessment, the quality of engineering inputs and its supply chain (Bettencourt et al. 2014). However, some aspects of a project, in particular when dealing with uncertainty, such as the lack of understanding of users' expectations and needs, may be better managed in a relational approach.

It is fair to state that the supplier was highly capable and experienced in the technical and technological content. It would be unreasonable to include the users in the technical design stage. Nevertheless, the relational aspects and interaction between the work activities and the end-users were problematic. This demonstrates that the users could have been included. Overall, neither the client nor the supplier managed to invest for understanding: (1) usage situations, and end-users' unique concerns and behaviors (cf. Vargo and Lusch 2004); (2) contextual conditions, such as the exam period for the students (cf. Engwall 2003).

## 5.1 The functionality of value co-creation in project settings

According to SDL, projects could be considered as a provision of service. In contrast to Vargo and Lusch's (2016) service assumptions, this study demonstrates that a service might not be always beneficial throughout its functionality. This leads to the suggestion that project managers need to pay insufficient attention to the consumption of assets. Consumption is widely considered a post-completion activity and outside of the responsibilities of a project manager. However, extrapolating a service theorisation (Vargo and Lusch 2016), and considering the refurbishment characteristics presented here, one can argue that: *consumption takes place both within the execution and post-completion stage and it is part of the service experience to be managed at the front-end of a project.*

To illustrate this, Figure 1 shows the management of the service experience in projects, which could be divided into three phases: a) Phase 0, which represents the most intense phase to co-create value; b) Phase 1, which represents the first phase of the value-in-use during execution; and c) Phase 2, which represents second phase of the value-in-use during post-completion. Figure 1 suggests that service experience, consisting of Phase 1 and 2 (execution and post-completion), has a link back to Phase 0 (front-end stage), where value propositions could be collaboratively shaped.

In Phase 0 of Figure 1, collaboration among relevant stakeholders aims to increase the scope the relationship. If the results from the project interactions undertaken in Phase 0 positively influence the process of consumption in value-in-use Phase 1 and 2, this leads to value co-creation. Conversely, if the results are deemed negative, the consumption process results in a value destruction. For example, in this study, the end-users as relevant stakeholders were widely disregarded in the decision-making process during Phase 0 (Donaldson and Preston, 1995); and perceived as destroyers of value through wear and tear, and hence asset depreciation (cf. Freeman 1984; Vargo and Lusch 2016). Thus, it was the client and providers who were the co-destroyers of value during Phase 0 and 1. The destruction of value was empirically observed through the financial compensations, conflicts, scope-creeping and resource-consuming (cf. Echeverri and Skålén 2011). These proved that "*fatal management decisions and actions*" were taken during Phase 0 (Grönroos 2011, p. 288).

Continuing with the exploration of Figure 1, Phase 1 and 2, may take two perspectives according to the state of the site:

a) for new builds, where the construction starts from the foundations up, value may emerge at Phase 1, as value-in-use, for the client organisation but remains a value proposition to the end-users. Typically, users are not part of the service experience in this stage, thus it is only the client, who experiences the value-in-use. Then, in Phase 2 at the post-completion stage, value takes its final form, with the end-users now involved and part of the value-in-use.

However,

b) for existing sites, such as this case study, students were living within the building so end-users experienced the project execution at first hand. Thus, value may emerge as value-in-use for the end-users as well as for the client organisation during Phase 1. They therefore formed part of the service experience both during Phase 1: Execution and Phase 2: Post-completion.

The funnel starting in Phase 0, as shown in Figure 1, represents the co-creation scope, which is an area where relationships could be cultivated to enhance the value outcomes. However, the co-creation scope could be gradually diminished due to a number of contextual aspects, as presented in this refurbishment project, such as:

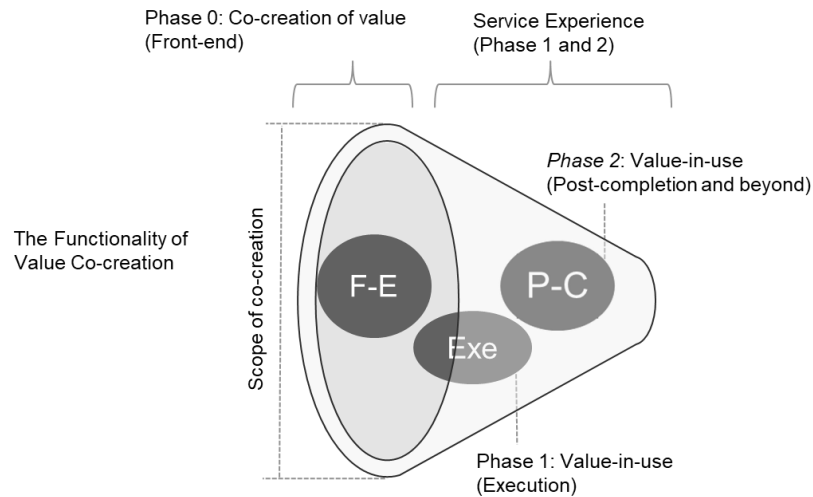
(1) Unethical behaviour, which can be referred to as an action that falls outside of social norms (Werder 2011). For example, students reported that works were being carried out before and after agreed working hours. It is clear that the contractor managed to lower -unethically- the cost of the job by working outside of the agreed hours. On the other hand, during the refurbishment, the client organisation published false information about the suspension of works. These all worsened the credibility and relationship with the end-users.

(2) Misalignment of values, which can be referred to as the disconnection of working principles, which misguide project actions and ultimately the project purpose (Mills et al. 2009). In this case, the values transmitted through the project from the client organisation leaned heavily towards the financial self-interest of the providers, rather than to the benefits of end-users (Clarke 1998).

(3) Power asymmetry, which can be referred to as an imbalance of power among actors, usually affecting the weakest one in the service exchange. An example of this is the client organisation using their power to illegally threaten to withhold the degrees of students who took part in the strike. The Competition and Markets Authority (CMA), a non-ministerial government department in the UK protected the students in the conflict. They forced the university to rectify its position in the conflict and recognised the unacceptable living conditions (Times Higher Education 2015).

(4) Lack of contextual awareness, which can be referred to as the lack of ability to understand the consequences of actions in the service recipient actors' routines. In this case, it was found that client representatives have varied or - in some cases - insufficient, working experience in their current roles. Thus, client representatives were unable to positively influence the service process, as they were unaware of the students' routines and context.

Overall, these four contextual aspects may reduce the scope of co-creation across the development sequence, leading to co-destruction. In this case study, the client organisation worked in isolation, yet functional silos of expertise are insufficient and collaborative interactions with internal and external actors are an important part of configuring improved practice. A potential solution on how the client organisation could have addressed this service may be informed by the connection between service design and co-creation practices, which is addressed in the following section.



*Figure 1: The functionality of value co-creation in a project setting  
(Developed from Fuentes and Smyth 2016)*

## 5.2 Designing for service experience

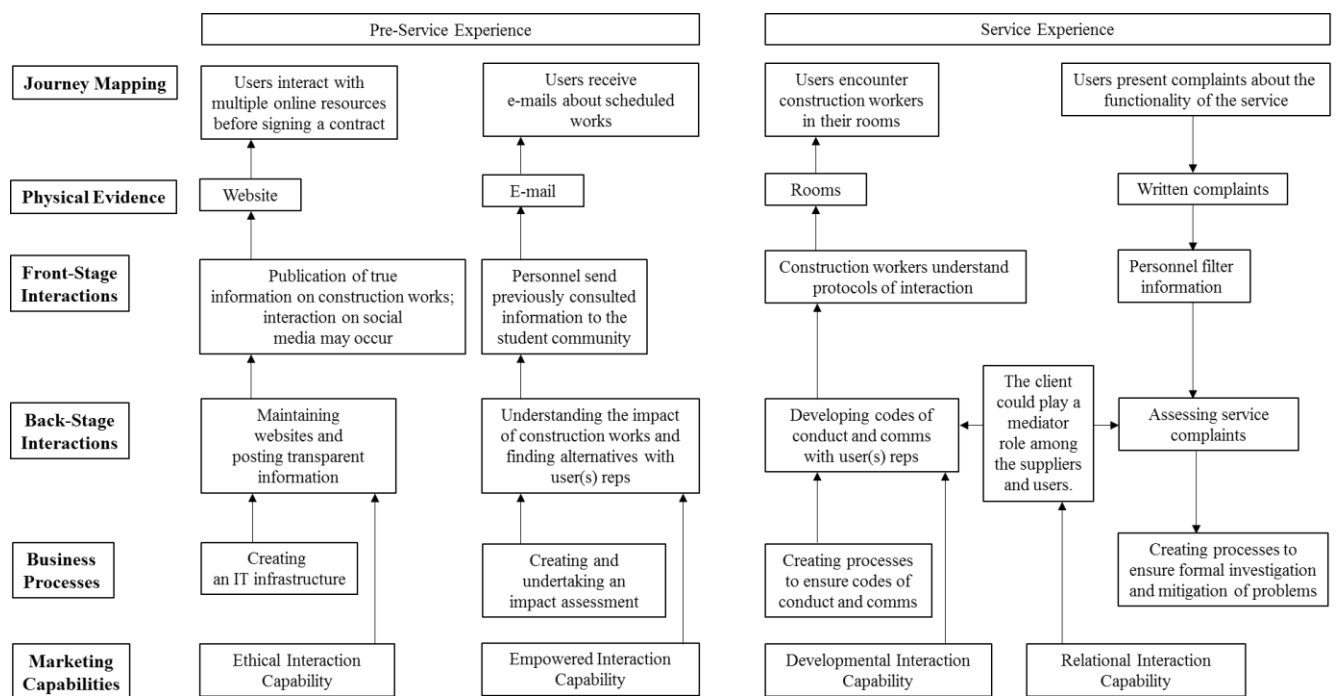
The client and provider ended up colliding with each other by failing to address the service problems due to the lack of a service system. The client organisation could have prevented this situation by applying interactive capabilities and service design tools. This might have led to regarding stakeholders as partners of the project, rather than as passive users, thus shifting to the notion of the co-creator.

To address the service gaps in this case study, the application of service design tools (presented in section 2.4) have been combined with the mobilisation of some interactive capabilities (presented in section 2.2). In particular, two service design tools have been considered, as seen Figure 2: a) the blueprinting tool and b) the customer journey tool. For the application of the customer journey tool, in the first instance, the appointed project manager could have identified the relationship between end-users and the service across different channels of interaction, as seen in Figure 2. For this case study, solely the key negative experiences, or pain points, were considered in order to initially map the customer journey across the project development sequence. For example, negative experiences included the insufficient advance warning about scheduled works, which resulted in contractors showing up in the student's rooms without prior notification.

While the customer journey allows project managers to visualise the interactions between end-user and the provider, the resources from the provider organisation needed to be orchestrated to support the customer journey or service experiences. Thus, the blueprinting tool could have been used to visualise what processes and capabilities may have been mobilised during this

project within the provider organisation. As an example of the mobilisation of capabilities, the client organisation could have organised collaborative sessions with the student representatives in order to prevent potential pain points. There, the client could have applied an *empowered interaction capability* in order to enable the end-users to communicate potential value, such as an understanding of the exam calendar, users' routines, behaviours, and their concerns. Thus, construction dates could have been agreed directly with the student community. In addition to this, the client could have used a *developmental interaction capability*, so codes of conduct and protocols of communications could have been agreed and developed in collaboration with the student representatives. This could have facilitated interactions among the key stakeholders by ensuring that interactions, communications, as well as the tone of the message and their content, were appropriate. This interaction could have produced valuable information and could have flowed through the business requirements in procurement, and impact assessment. In this manner, through a *relational interaction capability*, the client organisation could have played an intermediary role between the supplier and end-users.

The results from the mobilisation of these service design tools and capabilities could have ensured: (a) the consideration of relevant stakeholders, in this case the end-users, in the decision-making process as active co-creators of the service experience (cf. Donaldson and Preston 1995). (b) the visualisation of the complete service experience from the end-user perspective (cf. Razmdoost and Smyth 2015). (c) the visualisation of how the service experience could have been supported from the provider perspective. (d) the avoidance of negative costs within the clients' business model; (e) the prevention of pain points, and the transformation of these pain points into customer delight (Pryke 2017). Altogether, this could have ensured the effective delivery of value outcomes to the relevant stakeholders.



Note: This diagram has been built based solely on negative experiences from our case study to highlight the service gaps and understand how the client organisation could have used service design tools and some interactive capabilities from Table 1 to close these gaps.



*Figure 2. Application of journey mapping and service blueprinting tools in the refurbishment project (Author's own).*

## 6. CONCLUSION

An initial exploration of the service-related perspectives has been put forward, through the concepts of co-creation and co-destruction. In this case study, the supplier-client interactions, which together failed to sufficiently understand the end-users' expectations and concerns, ultimately affected two types of value outcomes: human experience and financial. In this case study, the end-users, as relevant stakeholders, were widely disregarded in the decision-making process. Thus, it was the client and providers who were the co-destroyers of value. Although this case study was characterised by the absence of co-creation within the triad relationship: supplier-client-user, this does not mean that a co-creation process is required for an entire project – strongly advocated for by Vargo and Lusch 2016. That could result in a *destructive* process in the project business. This implies that project managers need to understand what aspects of a project could be relational while others remain transactional. In addition to this, where a relational approach is undertaken, this study demonstrates that contextual aspects, such as unethical behaviour, value misalignment, power asymmetry and lack of contextual awareness, may reduce the scope of a co-creation process and ultimately be detrimental to the project outcomes.

This paper argues that projects might have the potential to configure and design value propositions through interactive capabilities and design practices. The mobilisation of these resources would require project managers to regard stakeholders, such as end-users and other relevant actors, not as passive actors or as destroyers of value, but rather as partners in the creation of value. To the best of my knowledge, this paper is the first attempt to explore the service design practices in asset-specific markets. The implication for the construction context is to create awareness of co-creation capabilities and service design practices, which permits enhancement of experiential value outcomes beyond current functional silos practices. However, one cannot deny that these service design tools and interactive capabilities may require significant investment.

As a recommendation to project managers, there is a need to address key service experiences across a project development sequence. However, it is fair to state it would be inadequate to suggest addressing of all service interactions because it may become resource-consuming. Nevertheless, the management of key service experiences may enable project teams to: (1) avoid financial leakage and compromised business models as shown in this case study; and (2) collaboratively design an optimal value-in-use for a range of stakeholders. A more varied group of stakeholders may pose a more complicated challenge to the use of these service design tools. Thus, further research is required in the management of service experiences particularly in more complex projects (see Patrício et al. 2011; Teixeira et al. 2012).

Overall, this case study demonstrates the need for learning and undertaking co-creation and service design practices in the project business. While the construction sector has been highly reluctant to fully embrace these and other modern service processes, other sectors, such as information technology, banking, and hospitality have been widely deploying these new

processes. This might be considered as one root cause, among many others, for which many construction projects constantly fail against the traditional constraints: time–cost–quality. However, and most importantly, many of them fail to meet not only the expectations of the financiers but also the needs of the client and end-users.

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