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Local community engagement issues and their impact on social value plans

Abstract

Purpose: Transport megaprojects often struggle to offer Social Value (SV) that meets local communities' needs. This is embedded in how local communities' views are captured and incorporated in SV plans through Local Community Engagement (LCE). By problematising the literature this article aims to identify LCE issues and their impacts on SV plans at the front-end of transport megaprojects.

Study design/methodology/approach: The theoretical lens of the study is the practice theory developed by Schatzki (2016, 2005). We conceptualised LCE as a practice and conducted 32 semi-structured interviews with UK practitioners. We collected data in three steps from three types of practitioners involved in LCE practice and SV planning namely project managers, LCE experts, and SV experts.

Findings: With a thematic analysis we identified 18 LCE issues and clustered them in five themes. These issues impact LCE with five mechanisms. Findings show there is a weak link between LCE, and SV plans due to the issues that reduce LCE to a tick-box exercise and provide a distorted view of local communities. This reduces SV plans to the bare minimum for project approval instead of offering relevant SV to local communities. Addressing the issues goes beyond changing the approach of project teams to engagement (from instrumental to normative) and requires changing the practices.

Originality/value: For the first time the study uses practice theory to conceptualise LCE as practice following the notion of project as practice. The study problematises the literature to address the underrepresented link between LCE and SV plans.

KEYWORDS: Large Transport Infrastructure, Social Value, Local Community Engagement, Front-End, Practice Theory, Project as Practice.

1 Introduction

Transport megaprojects are large-scale complex projects with long-lasting socio-economic impacts (Locatelli *et al.*, 2017) on different aspects of society, including health and well-being (McAndrews and Marcus, 2014; Starbird *et al.*, 2019), access to amenities and social activities (Lucas, 2012), and sense of identity (Alexander and Hamilton, 2015). These wider non-financial aspects can improve the lives of local communities are called Social Value (SV) (Lowe *et al.*, 2018). SV comprises but is not limited to "*welfare of the society including the quality of life, effects on public health, accessibility of public to various facilities, impacts on demographics and housing, effects on vulnerable groups, preservation of cultural heritage, national pride, community cohesion, promotion of active transportation, etc.*" (El-Gohary *et al.*, 2006, p. 601).

When it comes to local communities, which are the people who live close to a project (DiMaddaloni and Davis, 2018; Dunham *et al.*, 2006), impacts of transport megaprojects are often negative during the execution (short-term) or even during operations (long-term) (Hamann *et al.*, 2021; Mindell and Karlsen, 2012; Rowangould *et al.*, 2016). Negative aspects include communities dealing with issues such as disruption (Xie *et al.*, 2017), noise and air pollution (Rowangould *et al.*, 2016), safety (Hamann *et al.*, 2021), severance and unwanted traffic (Mindell and Karlsen, 2012). For instance, Van Eldijk *et al.* (2020) explain how transport megaprojects interrupt local accessibility during and after the execution and Stanley and Lucas (2008) investigate the role of the transport projects on social exclusion. Also, McAndrews and Marcus (2014) and Mindell and Karlsen (2012) investigate the negative impact of transport projects on local communities' health.

The negative impacts of transport megaprojects are recurring (van Eldijk *et al.*, 2020; Starbird *et al.*, 2019) often because local communities' needs are not incorporated into the projects' front-end decisions (Aaltonen *et al.*, 2016; Samset and Volden, 2016; Volden, 2019a). The front-end is an exploratory process for generating necessary information to shape the project concept (Babaei *et al.*, 2021). Project management literature blames project teams and their instrumental approach to Local Community Engagement (LCE) as the main issue for not capturing local communities' views (Aaltonen *et al.*, 2016; Aaltonen and Kujala, 2010; DiMaddaloni and Davis, 2018; Eskerod *et al.*, 2016). LCE consists in

collecting the views of local people and incorporating them into project decisions (Rowe and Frewer, 2005). Also, project teams include people who make decisions, manage, and plan the projects. Project teams with an instrumental approach view local communities as a risk to their project (Aaltonen *et al.*, 2016; Di Maddaloni and Davis, 2018) and try to minimise LCE and its impact on projects before receiving the execution (Aaltonen and Kujala, 2010; Williams *et al.*, 2019). The literature mentions that project teams should have inclusive LCE, which happens if they change their approach to engagement to a normative approach (Aaltonen and Kujala, 2016; Di Maddaloni and Davis, 2018). The normative approach intends to create value for all stakeholders (Freeman *et al.*, 2007; Parmar *et al.*, 2010).

This paper is built on problematisation (Hällgren, 2012; Sandberg and Alvesson, 2011a) of the individualistic assumption for explaining project management practices in the literature (Blomquist *et al.*, 2010; Cicmil *et al.*, 2006; Lalonde *et al.*, 2010). This assumption explains project management practices (in this case LCE) based on the logic/act of individuals -or project teams- (Cicmil *et al.*, 2006; Lalonde *et al.*, 2010, 2012). With this view, the literature reduces LCE issues to individuals' instrumental approaches (project teams' acts/logic) neglecting the complex nature of project management practices (Cicmil *et al.*, 2006; Lalonde *et al.*, 2010, 2012) in particular LCE. That is why the solution to LCE issues is restricted to one-size-fits-all problems (Lalonde *et al.*, 2010), which is changing the approach of the project teams (Aaltonen and Kujala, 2016; Eskerod *et al.*, 2016; Di Maddaloni and Davis, 2018). Moreover, the literature focuses on the connection between projects and local communities, overlooking the link between LCE and SV plans. From a normative perspective, an inclusive engagement should incorporate a wide range of project stakeholders' views to create value for them (Freeman *et al.*, 2010; Mcvea and Freeman, 2005). For LCE this means project teams should engage genuinely with local communities to add local views to front-end decisions, not to satisfy planning procedures or greenwashing the projects. One of the manifestations of the impact of local community views on front-end decisions is how local communities' needs are met in SV plans. Therefore, addressing the link between SV plans and LCE allows for understanding the interaction between LCE practice and SV plans and shows underlying dynamics, relationships, and impacts of LCE on SV. This, consequently, helps projects to improve LCE practices that result in delivering relevant SVi.e. SV that is aligned with local communities' views and can meet their needs.

We use Schatzki's (2005) perspective on practice theory as a theoretical lens to explain the relevance of the interaction between project teams and different practices that shape LCE. Practice theory is "*a family of orientations that take orderly materially mediated doing and sayings ('practices') and their aggregations as central for the understanding of organisational and social phenomena*" (Nicolini and Monteiro, 2016, p. 3). Schatzki (2005) views organisations as "*a bundle of interrelated practices and arrangements*". In his view, individuals' actions/behaviours cannot determine the organisations' practices although they impact them (Nicolini, 2012; Schatzki, 2016). Therefore the practice is the starting point for researching any social phenomenon (Nicolini, 2012). Practice here means "*open spatial-temporal manifolds of activity organized by understandings, rules, and teleoaffective structures*" (Schatzki, 2016, p. 5). *Teleaffective* structures are formations that connect several practices to the same termination and goal, organise their interactions and provide insight into which contributors make sense of their projects (Welch, 2020).

From a practice theory perspective, LCE is a bundle of practices and arrangements. The practices include LCE, front-end and implementing megaprojects. Arrangements include people, engagement venues, organisations who contribute to practices and the procedures they follow etc. All these practices and arrangements are interrelated and together shape LCE practice, determine its outcomes and behaviour of its contributors. In this approach project teams' logic/act is only a part of a bundle and cannot determine the whole process by itself although impacts it. Therefore, practice theory highlights a broad image of practices and arrangements that shape LCE illustrating the relationships between LCE and other practices.

We use dialectic approach to practice theory to find paradoxes, inconsistencies and issues associated with the different practices (Nicolini and Monteiro, 2016) that shape LCE. This study aims to identify LCE issues and their impact on SV plans. Using practice theory for research requires practice to be the unit of analysis (Nicolini, 2012; Shove *et al.*, 2012); therefore, the unit of analysis in this study is the engagement practice between the project teams and local communities. This article answers the following research question: *Why does current LCE practice at the front-end of transport megaprojects not result in developing relevant SV plans?* to answer to the research question first we identify LCE issues then we illustrate the impact of the issues on SV plans. We focused on transport megaprojects

since they impact local communities significantly and often negatively, and LCE can play a critical role in planning and delivering them (Cascetta *et al.*, 2015).

The article's next section (section 2) is a literature review explaining the study's background, and then (section 3) details the methodology. Section 4 presents the findings, and section 5 presents a discussion and details the study's contribution to policy and practice. Lastly, section 6 provides the conclusions.

2 Literature review

2.1 Practice theory in project management research

Practice theory originates in the works of Wittgenstein and Heidegger (Galvin and Sunikka-Blank, 2016; Halkier *et al.*, 2011; Sandberg and Tsoukas, 2011; Shove *et al.*, 2012). Heidegger in his ontology views the relationship of humans with the world as *being in the world* instead of defining it as a subject-object relationship (Heidegger, 1953). There are various approaches to practice theory (Sandberg and Tsoukas, 2011), but all of them have three common elements for explaining social phenomena, namely: (1) view practices as continual series of actions, (2) do not follow a dualism view (subject-object), (3) relationship between different elements of practice are interlinked and mutually impact one another (Feldman and Orlikowski, 2011). From a practice theory standpoint, *"we are [human beings] never separated but always already entwined with others and things in specific socio-material practice worlds"* (Sandberg and Tsoukas, 2011, p. 343).

Based on Schatzki's point of view organisations are bundles of human practices and material arrangements (Schatzki, 2016) and *"any practice is an organized, open-ended spatial-temporal manifold of actions"* (Schatzki, 2005, p. 426). Three elements organise the practice namely rules, understanding of doing tasks and teleoefective structures (Nicolini, 2012; Schatzki, 2016, 2005). Also, material arrangements is a setting of objects that include meeting rooms, procedures, desks, tables etc. (Schatzki, 2016, 2005). In this setting social phenomena are parts of a bundle in which different practices, different arrangements, and arrangements and practices are interlinked and impact one another in various ways (Schatzki, 2016, 2005). Human beings coexist in practice- arrangement bundles (Schatzki, 2005).

In project studies, practice theory is discussed as an alternative approach that can bridge the gap between practice and theory (Blomquist *et al.*, 2010; Cicmil *et al.*, 2006; Svejvig, 2021). Cicmil *et al.* (2006) express that practice theory can overcome the shortcomings of the traditional process view in project management research, which views the projects as part of an organisational structure and overlooks the day-to-day work of managing projects and its complexities. In addition, practice theory can address the issues of the researchers that approach the project relationships from a narrow logical view and try to find "make-believe statements on project management issues" (Feldman and Orlikowski, 2011). Different authors use practice theory to conceptualise project management or some of its aspects as a practice, namely *project management as practice* (Blomquist *et al.*, 2010; Kalogeropoulos *et al.*, 2020; Lalonde *et al.*, 2010; Svejvig, 2021), *project governance as practice* (Brunet, 2019), *front-end as practice* (Burger *et al.*, 2019) and *social value planning as practice* (Raiden and King, 2021). For instance, Kalogeropoulos *et al.* (2020) use Bourdieu's approach to practice theory (Bourdieu, 1990) to explain the impact of the individual on project management practices and decision making. Practice theory has also been used to explain the decision-making workshops at the front-end (Burger *et al.*, 2019) or to conceptualise project governance (Brunet, 2019).

2.2 The front-end of large transport infrastructure and stakeholders

The front-end is a critical process for shaping a project concept (Edkins *et al.*, 2013; Fuentes *et al.*, 2019; Kim *et al.*, 2021; Samset *et al.*, 2013) based on ex-ante evaluation of risk, value, cost (te Boveldt *et al.*, 2022; Oliveira and Pinho, 2010; Samset and Christensen, 2017). The front-end of transport megaprojects involves traffic and revenue forecasts (Kim *et al.*, 2021) and cost-benefit analysis (Locatelli *et al.*, 2017) converting stakeholders' interests into the project objectives (Morrow, 2011; Morris, 2013). However, the front-end is often poorly done (Cascetta *et al.*, 2015) because of the inherent ambiguity at the early stages (Giezen *et al.*, 2015; Li *et al.*, 2012; Wang *et al.*, 2021), stakeholders' dynamic during the front-end (Aaltonen *et al.*, 2016), ever-changing project context (Davis, 2014; Meier, 2008; Morris and Geraldi, 2011; Samset and Volden, 2017), and politicians

influence on decision-making (Aaltonen *et al.*, 2008; Aragonés-Beltrán *et al.*, 2017; Gomes *et al.*, 2010).

One of the essential tasks at the front-end is identifying the interests of multiple stakeholders (Culmsee and Awati, 2012; Eskerod *et al.*, 2016; Zwikael *et al.*, 2018). Stakeholders' interests are contradictory, triggering conflicts and competition (Doloi, 2012; Mok *et al.*, 2015; Olander, 2007; Zhai *et al.*, 2008), leading to trade-offs (Bourne and Walker, 2005; Davis, 2014). Historically more influential stakeholders steer the early decisions to their advantage (Aaltonen *et al.*, 2008; Aragonés-Beltrán *et al.*, 2017; Doloi, 2012; Fuentes *et al.*, 2019; Gomes *et al.*, 2010; Greenwood, 2007; Samset and Christensen, 2017; Shiferaw *et al.*, 2012). That initiates opposition among stakeholders with less influence, such as local communities (Naderpajouh *et al.*, 2014), which damages the reputation of the organisations that undertake the development (Aaltonen and Kujala, 2016; Teo and Loosemore, 2017; Wang *et al.*, 2021) and delays or stops projects (Ng *et al.*, 2012; Ward and Chapman, 2008).

Often project teams ignore the local community's requests or manipulate them (Aaltonen and Kujala, 2010; Olander and Landin, 2008) to avoid conflicts at early stages and secure transport megaprojects' approval. This approach is counterproductive and only postpones the conflict until the latter phases, jeopardising project's success (Klakegg, 2009). Another approach is engaging local communities in front-end decision-making to reach a mutual agreement (Doloi, 2012; Mok *et al.*, 2015; Olander, 2007; Zhai *et al.*, 2008). While the first approach is more convenient at the megaprojects' front-end, studies show that the latter offers more value to them and local communities (Eskerod *et al.*, 2016). This requires reflecting the local community's views in project decisions associated with the design and choosing the alternatives (Cascetta *et al.*, 2015) etc., through open and proactive LCE (Aaltonen *et al.*, 2016; Olander and Landin, 2008).

2.3 Local community engagement and large transport infrastructure

LCE is a process for capturing communities' needs and applying them into project concepts (Mottee *et al.*, 2020). Local communities play an essential role in evaluating project performance (Turner and Zolin, 2012), and their views should receive more attention from project teams (Cascetta *et al.*, 2015; DiMaddaloni and Davis, 2017). Although LCE is important for projects and has a long tradition in

transport megaprojects (McAndrews and Marcus, 2015), local communities are often one of the most neglected megaprojects' stakeholders both in study and practice (DiMaddaloni and Davis, 2017).

Project studies identify the root of the problem in the instrumental approach to stakeholder engagement (DiMaddaloni and Davis, 2018). The instrumental approach promotes "management of stakeholders" and prioritises creating value for shareholders (Donaldson and Preston, 1995). On the contrary, the normative approach is about "management for stakeholders" to create value for a broad range of stakeholders (Freeman *et al.*, 2007, 2010). The literature recommends project teams to have a normative approach and promote inclusive LCE (Aaltonen *et al.*, 2016; DiMaddaloni and Davis, 2018).

The notion of an inclusive LCE, raises the question of "what is the local community?" In the literature, there is no straightforward answer to this question, but it is clear that the local community is a diverse and heterogeneous entity (DiMaddaloni and Davis, 2018; Teo and Loosemore, 2017). DiMaddaloni and Davis (2018, p. 552) define a local community based on six categories: "*These categories include 'community of interests', 'silent majority', 'opportunists', 'negatively affected', 'beneficiary' and 'unconditional opponents'*". Local community needs represent the requirements SV plans should address, and project teams should align project objectives with them (Doloi, 2018; Eizenberg and Jabareen, 2017; Keeys and Huemann, 2017).

LCE has different forms and definitions (Mok *et al.*, 2015; Reed, 2008; Yang, Shen, Bourne, *et al.*, 2011). Deegan and Parkin (2011) divide engagement into three categories: communication, consultation, and participation based on the flow of information between engagement teams and local communities. Reed (2018), identifies two directions for information flow in LCE namely top-down and bottom-up. He also classifies the sharing information approach into "*communication, consultation, deliberation and co-production*" (p11). Engagement teams often use various approaches to planning the LCE since people have different preferences in engaging in the process (Yang, Shen, Ho, *et al.*, 2011). Although engagement methods impact its outcomes, there is no absolute best method of engagement (Reed *et al.*, 2018). Often factors such as project size, resource availability, the significance of the problems, and the capability to impact the decisions determine which engagement method is appropriate for the respective local community (Reed *et al.*, 2018; Yang, Shen, Ho, *et al.*, 2011). Engagement should start as early as possible in the project lifecycle (Doloi, 2018; Stringer *et al.*, 2006;

Yang, Shen, Bourne, *et al.*, 2011), but in many instances, it is not the case (Aaltonen and Kujala, 2010). Project teams prefer to secure the project approval instead of engaging with the local community and exploring their needs.

2.4 Social value in Transport megaprojects

Transport megaprojects provide society with a broad range of values (Keeyes and Huemann, 2017), but often they not only do not offer SV to the local communities (Starbird *et al.*, 2019) but also cause problems for them. For instance transport projects cause social exclusion (Lucas, 2012; Xia *et al.*, 2016) by creating barriers to access to employment opportunities, health, education, etc. (Niehaus *et al.*, 2016). This happen due to unwanted traffic (Mindell and Karlsen, 2012) during the construction or planning issues that not using the local communities' views at the front-end (McAndrews and Marcus, 2014). Syed *et al.* (2013) show that lower-income communities have more transport barriers compared to higher incomes and this impacts their health. Addressing this problem requires more attention considering the statistics that show the low-income communities have more medical conditions than high-income ones (World Bank, 2014). Also, transport megaprojects can cause safety risks for local communities (Hamann *et al.*, 2021; Starbird *et al.*, 2019) and create disruptions (Mok *et al.*, 2017).

If SVs are aligned with communities' needs, they reduce the adverse impacts of megaprojects at the local level (Gil, 2021; Starbird *et al.*, 2019). Local communities judge megaprojects based on their long-term impact that the SV it provides to them (Mok *et al.*, 2015; Turner and Zolin, 2012; Yang *et al.*, 2010). Therefore projects' SV should be aligned with local communities' needs to improve projects performance (Yang *et al.*, 2020).

Different frameworks are available for measuring SV (Doloi, 2018; Esteves *et al.*, 2012), but the basic idea behind them is to give financial value to the activities that project developers are going to do for local communities. For instance, National TOMS (National Social Value Portal, 2019) and HACK (in the construction sector) are some of the common ones. Laying out SV plans at the front-end of megaprojects consists of two steps. The first step is to identify the local community's needs for project services (Mulholland *et al.*, 2020). This often happens through LCE and meetings with, at least in the UK, Parish Councils. Second, quantifying the financial benefits of these social services using the

abovementioned frameworks (National Social Value Portal, 2019). However, transport megaprojects often fail to generate SV for local communities (Motte *et al.*, 2020) because the project teams focus on proving financial feasibility (Samset and Volden, 2016; Volden, 2019b). Also, measuring the outcomes of the SV plans is generally overlooked at the back-end of projects due to the qualitative nature of the SV (Glasson *et al.*, 2021; Mulholland *et al.*, 2019, 2020).

Three factors impact SV plans for local communities: people, transport, and land use (Lucas, 2012). LCE links these three factors and helps generate relevant SV plans (Mulholland *et al.*, 2020), and it is a key input for SV plans at the front-end (Doloi, 2012, 2018; Lee *et al.*, 2020). Therefore, the engagement and its output significantly impact SV plans for local communities and indirectly form their perception of megaprojects' performance (Cuganesan and Floris, 2020; Turner and Zolin, 2012). This highlights the importance of conducting an adequate LCE for laying out relevant SV plans for local communities. An adequate engagement is an engagement that captures local communities' needs. In this regard, identifying the issues associated with LCE and their impact on the SV plans leads to generating more relevant value for local communities.

3 Methodology

3.1 Conceptual Framework local community engagement as a practice

According to practice theory, practices are the starting point for researching organisations (Nicolini and Monteiro, 2016) and in this study, we investigate LCE practice at the front-end of transport megaprojects. We conceptualise LCE practice as a bundle of practices (front-end practice and megaproject implementation practice) and material arrangements (people, engagement venues, organisations and procedures they follow etc.). Therefore, we neither view LCE as the behaviour of the project teams, local people, and politicians etc., nor as a single top-down structured process. In our view, LCE practice is a series of actions in a dynamic context (front-end of transport megaprojects) that gives meaning to interactions between local people and project teams. By dynamic, we mean that there are ongoing changes (and their context) during the front-end that impact LCE practice.

The practices and arrangements are interrelated and impact one another in a continual series of actions in which power relations, space (location), physical amenities (engagement venues), and time (stage of the project, duration of the engagement process at the front-end etc.), give meaning to the behaviour of different contributors (local community, project teams, local authorities).

Following Grant and Osanloo (2014), the abovementioned elements result in the conceptual framework in Figure 1. As mentioned, the practices are interrelated and impact one another. In this framework, we do not consider SV plan as a practice but as an outcome and SV planning as a practice is not in the scope of the study and excluded from the research variables. Therefore, we will investigate five variables for the study. These practices include LCE practice, front-end practice, and transport megaproject implementation practice. We also select local community and engagement team as two other variables since they perform the practices and what they do is formed by the relationship between practices and arrangements.

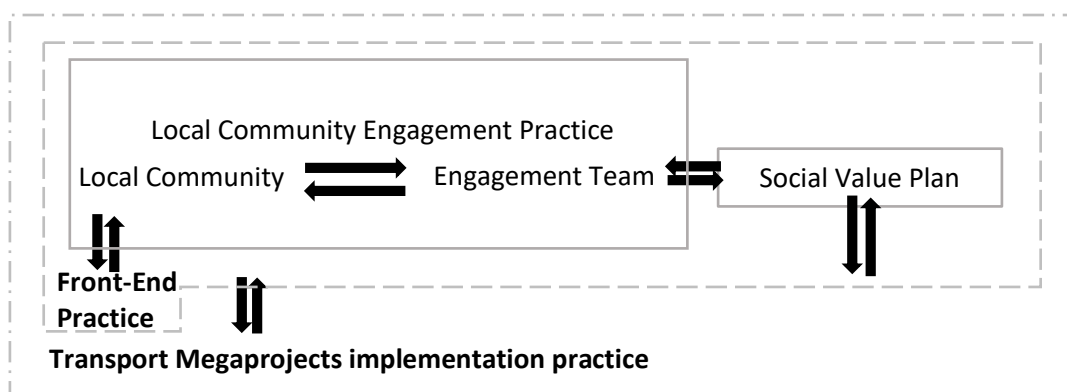


Figure 1 Conceptual framework of local community engagement at the front-end of large transport infrastructure

3.2 Research design and Data collection

The empirical context of our research is the UK. In the UK, since 2012, SV plans have been enforced by legal requirements to be presented as part of front-end documents (Social Value Act, 2012). We conducted 32 semi-structured interviews from 9/11/2020 to 16/8/2021 with UK based experts. Table one shows the interviewees, their positions, and each interview duration. Semi-structured interviews allow for collecting rich data through deep conversations (Saunders *et al.*, 2015). We first prepared a

preliminary questionnaire based on the conceptual framework and tested it in a pilot interview (Creswell and Poth, 2018). Then, we amended the questionnaire to reflect the insights from the pilot interview.

Figure 2 summarises our research design.

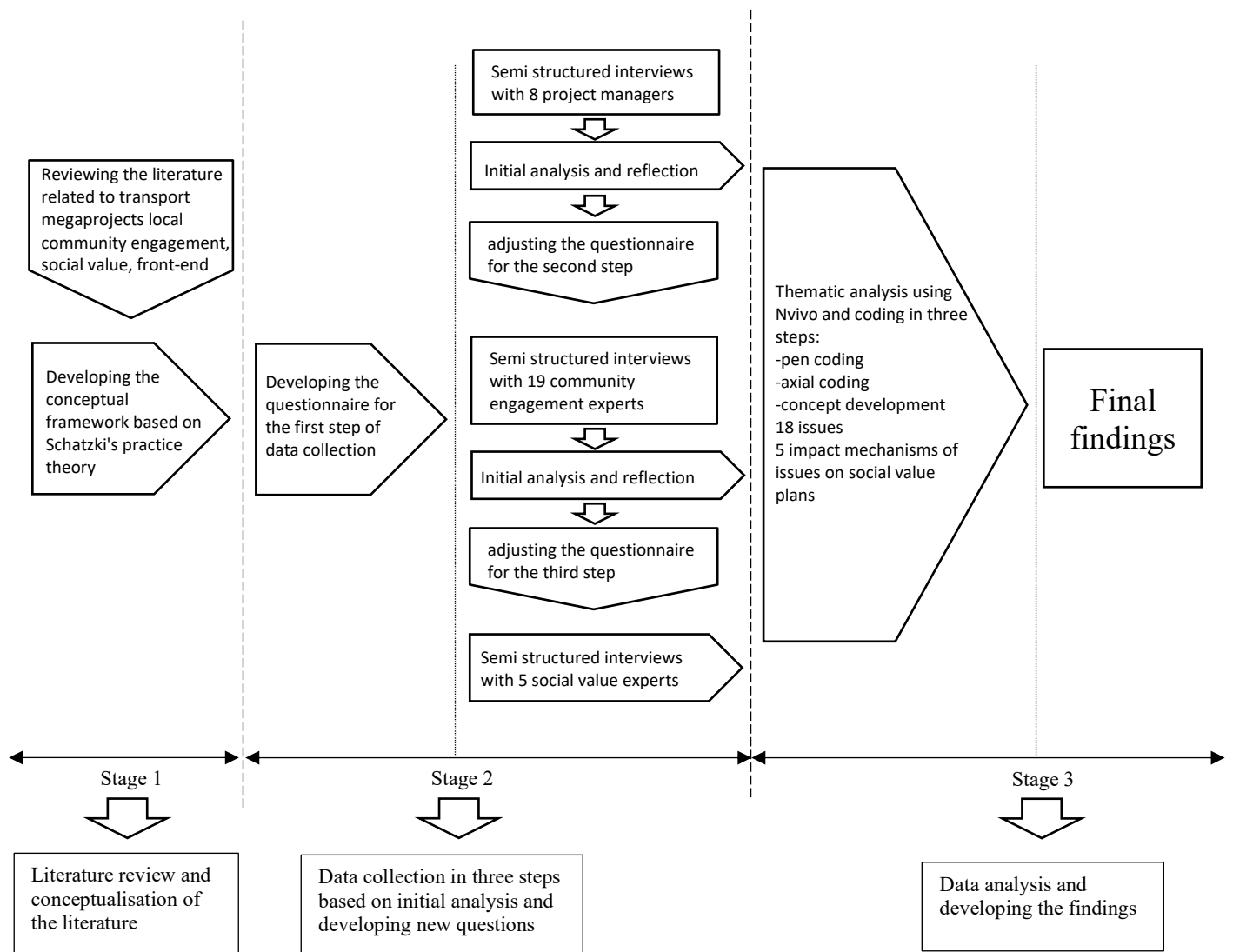


Figure 2 Conceptualisation of the research process

3.2.1 Sample selection

Since we had a dialectic orientation to the research to find paradoxes, inconsistencies and problems associated with the different practices that shape LCE (Nicolini and Monteiro, 2016) we selected our sample based on different practices involved in LCE practice. We decided the best representative of LCE and its impact on SV plans are experts in transport projects, mostly Crossrail and High-Speed Rail

Two. We focused on transport projects because they have a long interaction with local communities and offer more space to the communities to impact the projects than other types of infrastructures. Therefore, we looked for project managers, stakeholder and community engagement managers, SV managers and directors, sustainability managers and directors etc., who have worked on those infrastructure projects.

3.2.2 Interview process

The interviews started with a pilot interview in which we tested and refined our questionnaire. The lead author interviewed senior project managers with experience in transport for the first eight interviews. In the second stage, we focused on local community engagement professionals including local community engagement managers, engagement directors and consultants etc. In the third stage to collect data about the connection between engagement issues and SV plans, we interviewed SV and sustainability experts such as SV and legacy managers, SV advisors etc. who had experience in working in UK transport megaprojects.

We adjusted relevant questions in each stage to make the questionnaire more relevant to the new experts' group, as shown in table two. This enabled us reflect on our latest insights on the questionnaire and make it compatible with the new experts' knowledge (Creswell and Poth, 2018). The author continued the process until data saturation happened, and no new concept emerged in the analysis (Corbin and Strauss, 2015a).

Interviewee	Designation	Experience (years)	Duration (min)	Interviewee	Designation	Experience (years)	Duration (min)
N0 (pilot)	Business development manager	15	60	N17	Community and stakeholder liaison	23	107
N1	Director in a transport ministry	22	75	N18	Community Consultation specialist	19	66
N2	Project Director	31	108	N19	Director of policy and infrastructure	29	41
N3	Project Director	38	81	N20	Associate director of engagement	22	77
N4	Principle consultant	44	141	N21	Consultation manager	15	61
N5	Project manager	20	68	N22	Associate stakeholder and consultation manager	13	45
N6	Project Director	30	30	N23	Engagement and communication consultant	18	50
N7	Project manager	30	45	N24	Head of consultation and engagement	9	59
N8	Project manager	21	47	N25	Senior communication manager	14	56
N9	Strategic manager	25	59	N26	Director at an engagement firm	20	59
N10	Examining inspector	30	47	N27	Consultation manager	20	55
N11	Head of infrastructure	28	68	N28	Community relations and social values manager	23	71
N12	Key account director	24	58	N29	Associate director of social value and legacy	20	67
N13	Project director	28	80	N30	Social value manager	13	52
N14	Head of engagement	24	78	N31	Director at social value firm	16	44
N15	Community engagement manager	23	100	N32	Social value manager	17	54
N16	Associated director in an engagement firm	20	61	Average (min)	66 (min)	Total (min)	2170

Table 1 Interviewees' experience and interviews time

Question	Stage 1	Stage 2	Stage 3
What is front-end for you?	●	●	●
What procedures do you follow for collecting local community views at the front-end?	●		
To what extent do you think it is necessary to collect local community views and why?	●		
To what extent can you meet local communities' objectives in your project's plans?	●		
To what extent you are willing to change the projects based on local community views?	●		
Do you think local communities are able to express their issues/needs/requirements? What they usually mention as their concerns?	●	●	●
What is the process of local community engagement at the front-end?		●	
What are the barriers against having a good local community engagement?		●	
What is the role of diversity and inclusivity in engagement? how do you ensure it?		●	
Do you see any pattern in demography of the people who join the engagement?		●	
What is the role of non-Governmental organisations in engagement? what they do during the engagement?		●	
What is the role of the politics in engagement? how they impact the process?		●	
How do you increase the diversity in engagement? What is the role of young people in engagement?		●	
How local community engagement can improve?		●	●
What is the social value planning process at the front-end? what do you do?			●
To what extent social value plans at the moment can meet the needs of the local communities?			●
To what extent project teams are committed to social value planning?			●
What is the role of non-Governmental organisations in planning social value?			●
What is the impact of lack of diversity in engagement on social value plans?			●
To what extent do social value plans reflect local people's views?			●
How social value plans can improve?			●

Table 2 Research questions and associated interview questions

3.3 Data analysis

The author analysed the interviews in parallel with the data collection. The data analysis consisted of three steps: (1) coding the transcripts, (2) categorising the codes under the themes, and (3) connecting the themes and making sense of the findings (Creswell and Poth, 2018). We used the thematic analysis approach following Vaismoradi *et al.* (2013) to code the data with the software Nvivo.

3.3.1 Analysis process

In the first step, we used thematic analysis and open coding to break down the transcripts into small concepts (Aronson, 1995). The initial result was an extensive list of issues. After analysing the first five interviews, the author moved all codes to a new folder to shape the themes (Vaismoradi *et al.*, 2016). In addition, the author formed the list of the impacts and repeated the same process. In the second step, we categorised codes under the relevant themes. We gave specific attention to the language, verbs, and the context the interviewees talked about (Corbin and Strauss, 2015b). More robust data emerged by

increasing the number of interviews, which left us with 18 issues that categorised under five themes. For identifying the impacts, we connected the codes and categories in several iterations to create a broad image of the findings. In this step, the author focused on the relationship between engagement issues and SV plans to conceptualise and explain the key issues and their impacts. We derived five mechanisms through which LCE issues impact on SV plans. Since the analysis started, we documented our insights about the concepts and their relationship by writing memos (Yin, 2016). This helped us to increase the robustness of the presented data. At the end of the analysis, we identified previously mentioned 18 issues (clustered in five themes according to the conceptual framework), nine impacts on engagement dynamics and five impacts on SV plans. The following sections explain the findings.

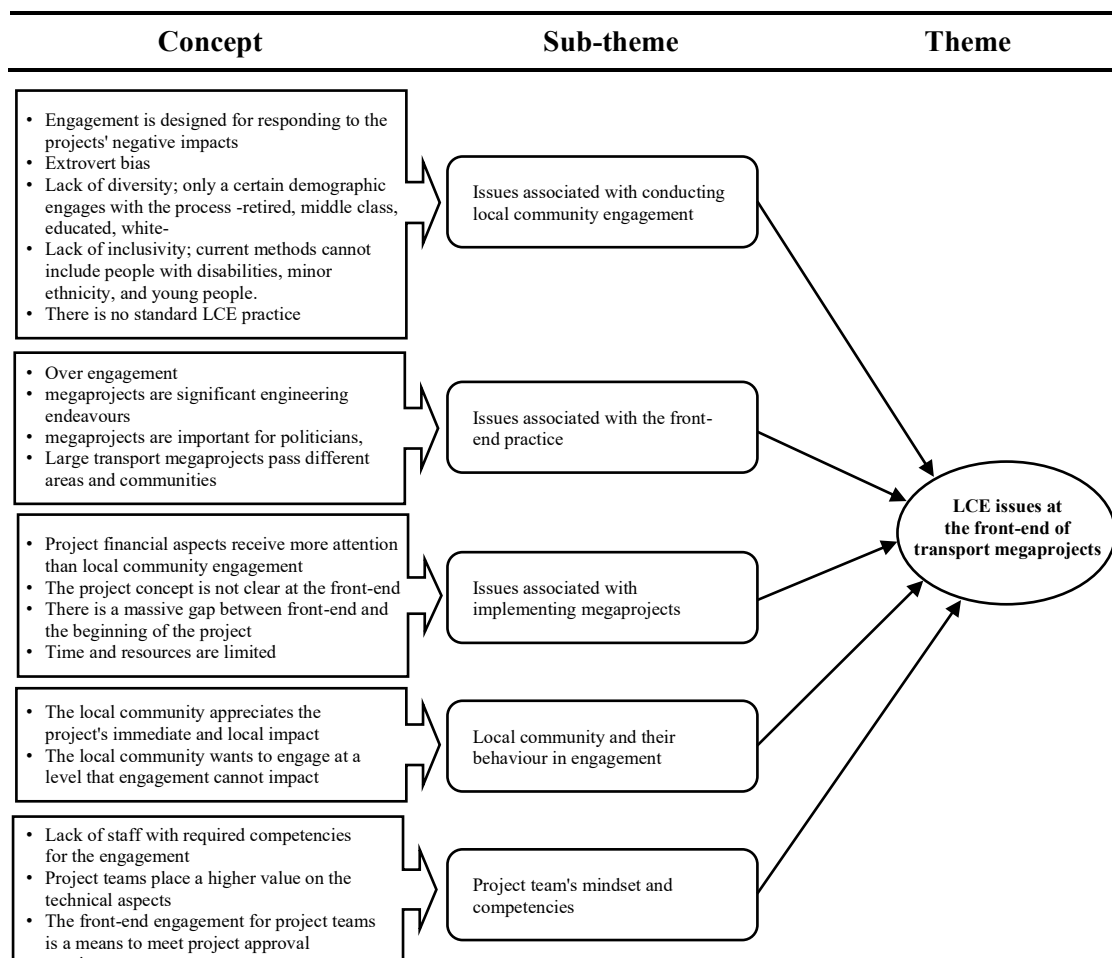


Table 3 Coding structure: local community engagement issues; based on (Gioia et al., 2013)

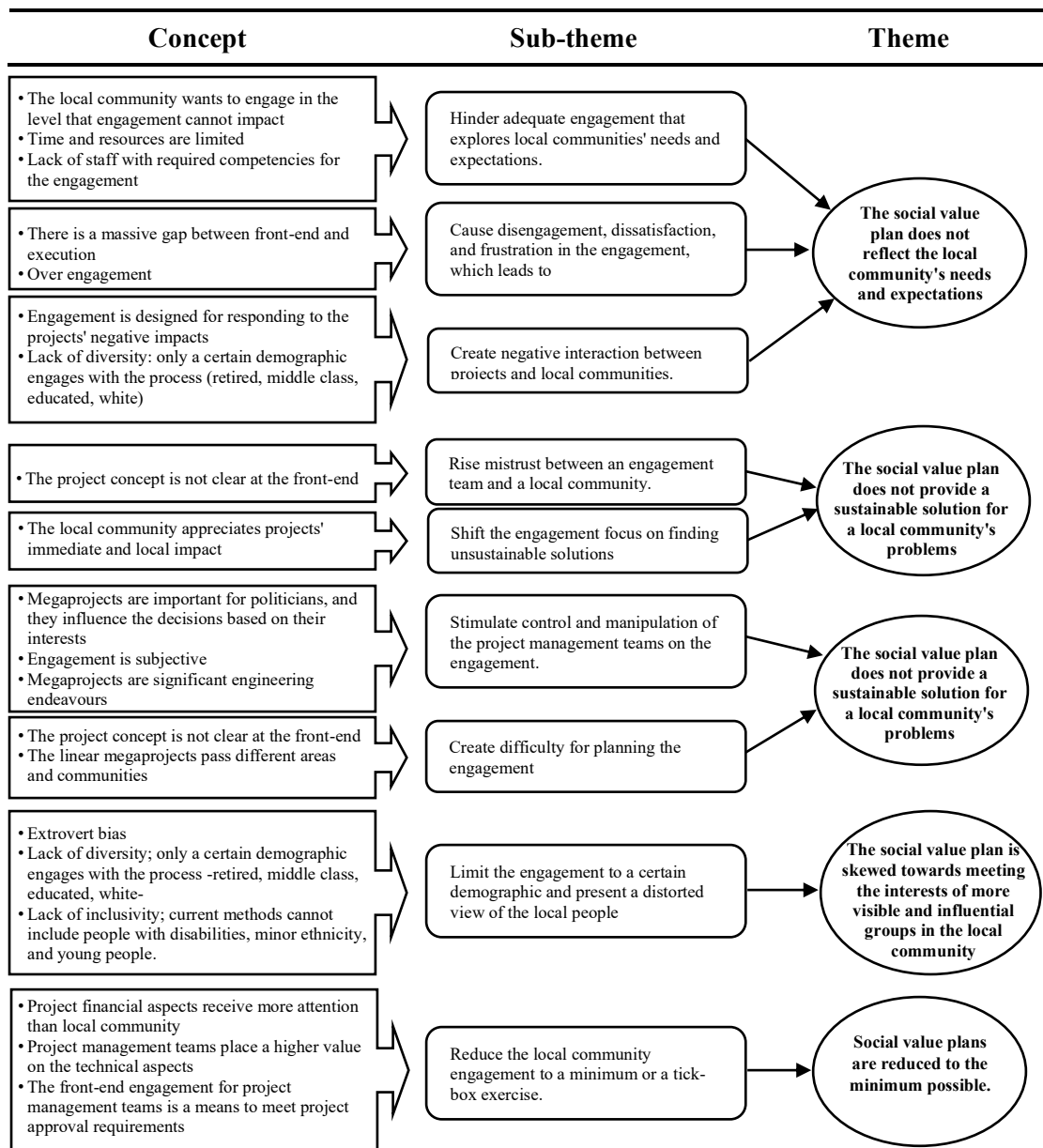


Table 4 Coding structure: impact of the local community issues on social value plans, based on (Gioia et al., 2013)

4 Findings

4.1 Local community engagement issues at the front-end of large transport infrastructure

To answer the research question, we first identified and explained LCE issues and then showed their impact on LCE dynamics and SV plans. We identified 18 issues for the LCE at the front-end of transport megaprojects and categorised them into five themes; namely: (1) Issues associated with conducting LCE, (2) Issues associated with the front-end characteristics, (3) Issues associated with the nature of transport megaprojects (4) Local community and their behaviour in engagement and (5) Project teams' mindset and competencies. This section presents issues in each theme and their impact on LCE and SV plans. In addition, we recommend corrective actions to alleviate each issue's. These actions are neglected in many LCE due to a lack of budget, lack of companies' commitment to LCE, lack of best practices to follow, time pressure, etc.

4.1.1 Issues associated with conducting local community engagement practice

This theme refers to issues associated with conducting LCE. Although the interviewees believed LCE is essential for understanding local communities' needs and making and maintaining a good relationship with them, data analysis shows that LCE often is not implemented for laying out SV or understanding the community needs. The interviewees believed they mainly plan SV based on the statistics and needs of clients or local authorities. In addition, they expressed they can plan SV without LCE; however, they might not be able to maximise the positive impact on the communities. One of the most important interviewees' remarks about LCE was the lack of the best practice to benchmark their activities and improve their practice.

LCE is not a standard practice

Conducting LCE is subjective to infrastructure size, organisational culture, and project teams' knowledge about LCE benefits contribute to this issue. By organisational culture, we mean the values,

practices and guidelines the organisations' employees follow (van Marrewijk, 2007). Subjectivity increases the planning flexibility, but it decreases the engagement quality and exposes it to manipulation.

Organisations are often more committed to LCE in megaprojects than smaller transport projects because of their access to the resources, and the LCE at the front-end of transport megaprojects is regulated. In addition, larger organisations use LCE to boost their reputation. These reasons restrict but do not prevent organisations from manipulating the engagement process or results. When organisations are not committed to practising appropriate engagement, SV plans cannot capture and reflect the local community's views. Educating project teams about the benefits of LCE and SV help manage this issue.

Engagement is designed for responding to the projects' negative impacts

The interaction between projects and local communities is negative. The priority of LCE is often to reduce the risk of community opposition because it mainly welcomes people whose lives are disrupted. This happens because of the organic reaction of local communities who face a huge change in their area. All interviewees stressed that engaging opposition is necessary; as interviewee No11 mentioned, *"when you ignore oppositions, they are still your oppositions"*. However, only interacting with oppositions does not allow for meaningful engagement and restricts the chance of exploring chances to plan relevant SV. Managing the risks that might arise from the community opposition is essential, but it should not be the only focus of LCE. Early engagement, especially before making sensitive decisions, can increase cooperation and reduce negative interactions. Also, engaging young people and end-users who may benefit from a transport megaproject help introduce its value to local communities and create positive interactions. However, in many cases, engagement is only a means of communicating a predetermined decision and managing any complaints.

Lack of diversity

Diversity is about who gets engaged with LCE in terms of different age groups, ethnicities, genders etc. (Mcgrath *et al.*, 1995). One of the most important challenges project teams are dealing with is what is the representative sample? As interviewee number 28 mentions *" what is the right type of sample for*

your research it's x number of thousand responses and interviews and all the rest of it, but you could interview a thousand versions of me!". Often LCE does not represent local communities' heterogeneity however this also depends on the demography of the area because some areas (for instance rural areas) have less diversity.

Interviewees mentioned that participants demography predominantly is, white, retired, middle-class, and educated; therefore, engagement is not diverse. The interviewees believed that this demographic often does not represent the local community. It consists of the people whose lives are usually stable, and do not benefit from new development. Lack of diversity skews the engagement results and SV plans towards more influential groups in communities. The interviewees suggested that the engagement should specifically target so-called "hard to reach" groups who may benefit from the projects. These include but are not limited to minorities (ethnic, religion, etc.), young people and end-users who are often missing in the meetings.

Lack of inclusivity

Inclusivity is about how different individuals who engaged in the practice impact on the decisions (Mor Barak and Cherin, 1998). Although the interviewees mentioned that they use various methods to reach local communities, they often fail to provide people with disabilities, minorities, and young people with appropriate amenities to encourage them to contribute to the practice. One reason is that people with varying disabilities are often grouped in one category (disabled) whilst they consist of different groups with different needs and require individualised amenities to contribute, which is often not available. The same issue happens to minorities (ethnic, religion, etc.), that are often broad brushed in LCE planning. For instance, interviewee number 14 expressed that *"one of the consultations was for putting in some new parking restrictions in predominantly Muslim community. We set up the consultation in a Methodist Church people didn't come to us! It was an easy building because it had a nice hall and we could use it but to attract the general population and everybody who might be interested in the project, we sort of enclosed ourselves in the wrong environment. Had we done our homework properly?"*

This issue skews the engagement outcomes towards more visible community groups. Consequently, SV plans do not reflect the needs and limitations of all groups and do not accommodate "hard to reach" groups.

Visiting the local areas before the engagement, avoiding generalising stakeholders, and connecting to community gatekeepers facilitate receiving first-hand information about the local communities. Gatekeepers are influential people in local communities who have access to relevant information. In addition, engagement teams should try different engagement channels and represent diverse age groups, ethnicities, and genders and, where possible, include local employees to connect with the community.

Extrovert bias

Extrovert bias is the tendency of people to give more attention to those who are more talkative, active and sociable (Cain, 2012). In the engagement venues usually, some people are louder than the others and try to impact the decisions.

This issue has three effects on the engagement process; first, it allows the vocal groups who usually have agendas to manipulate LCE. Second, it skews the engagement results towards more socially active and influential people who do not necessarily represent the local community. Third, it causes some people with different views to not share their ideas for fear of rejection from the community, and this effect is more severe in small communities or groups. Experienced engagement teams are familiar with this behaviour pattern and manage extrovert bias.

4.1.2 Issues associated with the front-end practice

This theme consists of four items and represents the issues associated with the front-end practice and its connection to LCE. The interviewees were familiar with the front-end and its impact on LCE. They believed LCE should be conducted as early as possible to have enough room to impact the project decisions. In many cases, LCE is just a means to inform local communities about the decisions not engaging them with decision making.

The project concept is not clear at the front-end

The front-end is an iterative process, and the project concept faces several modifications during this period. Local communities expect consistency in delivering information. Changes in the transport megaprojects' concept alter the disseminated information and send an inconsistent message. Providing the local community with inconsistent information damages the trust between the community and the engagement team, and rebuilding this trust is challenging. This issue creates difficulty in planning engagement. For instance, interview number 27 expressed that *"we kind of didn't even know what it is but it was kind of a bus scheme or a light rail scheme across a county so yeah [we] really didn't understand what it is at that point, we couldn't decide what kind of engagement to do because we felt that it was too early to go out to communities"*. It also causes negative interaction between projects and local communities. The negative interaction limits opportunities for creating SV. In these cases, project teams might repeat past projects' SV plans or do it to the minimum possible to meet the planning requirements. At the front-end, an engagement team must have an appropriate engagement plan that accommodates changes in the megaprojects' concept.

Project financial aspects receive more attention than local community engagement

The interviewees said that the front-end is for evaluating the project's financial aspects, and engagement for creating SV is not aligned with this. The interviewees mentioned that priority at the front-end is the assessment of projects' costs and benefits. The next priorities are the technical and environmental aspects, and the project's SV receives the least attention. Therefore, defining SV based on the local community view is usually an afterthought and the least important factor in front-end decision-making.

Time and resources are limited

All interviewees stated that LCE suffers from limited time and budget, especially in small projects. Often the quality of the engagement is sacrificed to meet project deadlines. Interviewees also mentioned that appropriate engagement takes time and budget, but it is difficult to estimate the cost and time of the process due to an unclear number of participants. Not allocating enough budget and time reduces

the engagement to a tick-box exercise. This causes potential SV to remain unexplored, and SV plans do not reflect communities' views.

There is a massive gap between front-end and execution

The project start date is often unclear at the front-end. Interviewees stressed that local communities engage when they see changes in their area, and often they do not unless they feel an urgency. This limits the engagement to those affected negatively, and the process becomes a fertile ground for conflict and opposition, creating negative interaction.

Engagement teams should keep their communication links open during the front-end and provide the local community with feedback about the engagement results to avoid this issue. In addition, engagement teams must only update the community with essential news and avoid communications when there is not new thing to share.

4.1.3 Issues associated with the Implementing transport megaprojects

This theme includes issues related to transport megaprojects' nature. Project size has a crucial impact on LCE and SV plans because resources and opportunities are more available in large projects. Also, in megaprojects, project teams should follow a robust engagement procedure to receive project approval. On the negative side, megaprojects do not offer enough room to local communities to impact the decisions about different alternatives.

Large transport projects are important for politicians

Most interviewees believed politicians could positively and negatively impact front-end engagement; however, some only emphasised the negative effects. On the positive side, the local community uses the local members of parliament (MPs) to increase their bargaining power to change project decisions. On the negative side, politicians influence the front-end decisions based on their party's interests and disregard other factors. Politicians' influence often negatively impacts megaprojects, whereas the positive influence is usually limited to smaller projects at the local level. The negative impact of politicians can influence project laying out and manipulate SV plans.

Transport megaprojects are significant engineering endeavours

The technical sophistication of transport megaprojects gives engineers and project teams the upper hand in decision-making since they can justify their decisions with technical reasons. This issue causes project teams and engineers to offer predetermined solutions to project problems without considering local communities' views about the possible alternatives. This limits local communities from impacting the decisions and reduces the possibility of designing relevant SV. The interviewees believed that transport megaprojects' technical aspects are important, but local communities should be able to present their views about alternative solutions where possible.

Large transport projects pass different areas and communities

This issue is specific to transport megaprojects because they pass various local communities with different demographics, and the engagement teams should engage with all of them. This requires different strategies for engagement, more effort, time and cost. For instance, interview number 22 mentioned, *"in a long linear infrastructure project, you will have lots of different types of the community along that line, so when you're implementing policy and process, it's really difficult to get a position that works for all of those different communities"*. Also, designing SV for different communities requires understanding their differences. For instance, interviewee number 21 said that *"because transport projects are linear by their nature, therefore, you're going to be impacting on a number of diverse communities whose priorities are going to be in very diverse ways as well and therefore to take into account all of those sensitivities is always challenging"*.

Over-engagement

The issue refers to an overwhelming situation when people should participate in multiple engagement meetings. This happens under two conditions: first is when all companies (i.e., different contractors) involved in developing a megaproject conduct LCE individually as interview number x states *"I think there's a real thing which is consultation fatigue because the people who participate in consultations tend to be the same people ... and you do find a lot of pushback from these people when you try and do*

formal consultation with them because there is a lot to consult on it!". The second is when one company regularly conducts meetings with no new updates as interview number 20 mentions *"don't have a sort of drum beat of community meetings where you go out month after month after month it just doesn't make any sense and ended up being sort of counterproductive really!"*. The consequence of this issue is engagement fatigue, which disengages local people. Over-engagement reduces the number of participants and limits them to the opposition. Companies can deal with this issue by conducting joint engagement and limiting their communication to share updates.

4.1.4 Local community and their behaviour in engagement

The theme consists of the issues associated with the local community's approach to engagement. The interviewees were mindful of the heterogeneity of the local community and its impact on engagement. They also mentioned local communities' previous exposure to such projects contributes to their trust and interaction with the process. Moreover, experienced local communities can evidence their claims appropriately. However, this does not mean that the less experienced communities cannot support their claims; the difference is how they do it. Furthermore, networking may allow local communities to share their experience with other communities and receive political support from local MPs. Also, Non-Governmental Organisations (NGOs) offer technical support and help local communities form an opposition.

The local community appreciates projects' immediate and local impacts

Local communities are more responsive to changes and disruptions transport megaprojects bring to their areas than its national benefit. For instance, interviewee number 4 about the tendency of local communities to engage at the front-end expressed: *"I would say it's fairly marginal at that stage because people are getting on with their day-to-day life, unless it's having a major impact on them in a bad way."* Also, local communities do not trust the promises made by the engagement teams and mostly welcome quick and tangible solutions. In this situation, the focus of LCE is to find a quick fix to problems. This situation does not allow for demonstrating the project value to the local community

because project teams often seek a resolution that appeases the opposition. Building trust between the engagement team and the local community and enhancing the community's knowledge about the SV a transport megaproject offers can help manage this issue.

Local communities have limited impact on project decisions

During the engagement, participants ask questions irrelevant to the engagement agenda. In one interesting case, interviewee number 20 said *"a local community kept asking these questions to interrupt the engagement because they think if they waste time over the engagement, the project will not be implemented"*. While the interviewees' believed people have legitimate concerns, they stated local community's impact is limited to certain matters. This issue puts the engagement team in a complicated situation since, on the one hand, they cannot commit to anything beyond the scope of the engagement. On the other hand, local communities' concerns are legitimate, and it is unprofessional to upset them by dismissing their questions. Transparency with the local community about the engagement agenda and their level of influence from the outset helps manage this situation. This issue disengages local communities, and the resulting SV plan will not reflect the community's views.

4.1.5 Project teams' mindset and competencies

The theme represents the project teams' approach to LCE and their capabilities to do it right. Our findings show that project teams are recently more committed to LCE with a normative approach as interviewee number 16 stated, *"I have seen quite a remarkable step-change because when I started working for the company X which was 13 years ago, there was a lot of that kind of we don't need to engage we know what we're doing kind of thing"*. This change results from enforcement rules for documenting LCE at the front-end and increasing the project teams' knowledge of LCE benefits.

Project teams place a higher value on the technical aspects

The issue is associated with the engineers and project teams who only appreciate transport megaprojects engineering and technical aspects. Interviewee 04 mentioned *"I think they are probably not considered*

[local communities] as worthy of making much of a contribution that was my instinct from this, they're just the people, I don't think they can give a lot of feedback, not in the engineering construction projects". They do not take LCE benefits seriously. This issue causes the project teams and engineers to miss the opportunity to offer relevant SV to local communities and make a difference in the local people's life. Also, project teams use technical reasons to justify their decisions disregarding local communities' concerns. This limits SV plans to the minimum possible and triggers opposition.

The front-end engagement for project teams is a means to meet project approval requirements

Project teams view LCE as a part of securing project approval, not creating SV for local communities. Often engagement is implemented when the project option has already been decided. This means LCE only communicates the predetermined decisions to comply with regulations. In this situation, LCE cannot impact the decisions. As interviewee 16 mentions *"I believe it's absolutely crucial and I see so many organisations not quite getting it and using it as a box ticking exercise and thinking that it doesn't actually have any value and that sort of thing"*. Viewing engagement as a formal process for getting the project approval reduces the engagement to a tick-box exercise and leaves the local community without any scope to impact front-end decisions and SV plans.

Lack of staff with competencies for the engagement

Project teams do not have the competencies for conducting LCE. For example, some interviewees witnessed their engineer colleagues' difficulties interacting with local people. They said that engagement requires competencies such as empathy, communication, technical knowledge, and most essential and, rarest of all, the capability to explain technical subjects in a simple language. Local communities often are interested in knowing about the project but not in technical details. Using technical jargon makes local communities feel undermined and creates a wrong impression. It also bores the participants during the meeting, preventing effective interaction. Without effective communication, LCE cannot collect the local community's needs, and SV plans will not benefit the community. Interviewees highlighted the role of experience, relevant education, and training in managing this issue.

4.2 The impact of LCE issues on social value plans

Our analysis shows that LCE has limited impact on SV plans. This happens because project teams do not dedicate appropriate attention to plan SV based on LCE. As interviewee number 30 said, "*social value is not one size fits all!*", to get appropriate results project teams should develop bespoke SV plans based on LCE needs and this only happens through appropriate LCE practice.

The abovementioned issues play a crucial role in minimising the impact of LCE on SV plans. We identified five impact mechanisms in which the issues impact SV plans.

Mechanism1 (M1): SV plans do not address local communities' needs explicitly. When engagement creates negative interactions, it causes disengagement and frustration, hindering adequate engagement. Therefore, LCE results will not capture the local community's view. Consequently, the SV plan cannot address local community needs explicitly and only focuses on complying with the project approval requirements. Issues related to M1:

1. Hinder adequate engagement that captures local communities' needs.
2. Cause disengagement, dissatisfaction, and frustration in the engagement, which leads to opposition.
3. Create negative interaction between projects and local communities.

Mechanism2 (M2): SV plans do not provide a sustainable solution for a local community's problems. Local communities are concerned about their local areas, and historically there has been mistrust between them and project teams. That is why they are looking for quick and tangible results from the engagement. Issues in M2 cause:

1. Shift the engagement focus on finding unsustainable solutions.
2. Raise mistrust between an engagement team and a local community.

Mechanism3 (M3): Social value plans are designed for the project teams and organisations' convenience to receive the project approval. LCE planning and implementation are costly and time-consuming and often involve the risk of opposition among local communities. Therefore, project teams try to minimise,

control and manipulate the engagement to push forward their agendas. This causes the SV plan to address the manipulated objectives instead of the real needs of the local community. Issues in M3:

1. Stimulate control and manipulation of the project teams on the engagement.
2. Create difficulty in planning the engagement.

Mechanism4 (M4): Social value plan is skewed toward meeting the interests of more visible and influential groups in the local community. Local communities are heterogeneous entities, but our findings show that the engagement does not appreciate this critical aspect even though practitioners were knowledgeable about it. Issues in M4:

1. Limit the engagement to a certain demographic and present a distorted view of the local people

Mechanism5 (M5): Social value plans are reduced to the minimum possible. Minimum possible means either laying out SV plans based on the secondary data without conducting adequate LCE or copying the SV plan from other projects for the new project. Issues in M5:

1. Reduce the LCE to a minimum or a tick-box exercise.
- 2.

5 Discussion

According to practice theory, organisations are shaped around material arrangements and human practices (Schatzki, 2016, 2005). Using practice theory, we conceptualised LCE at the front-end of transport megaprojects based on three practices (LCE, front-end, megaproject implementation) and local communities and project teams as the people who perform the practices. These practices and arrangements form LCE practice and determine how good or bad it is conducted.

5.1 Contribution to Theory

Our study contributes to the theory in two ways. First it addresses the problem in the literature using practice theory. Second it addresses the underrepresented link between LCE and SV plan.

Regarding the first contribution the practice theory enabled us to problematise (Hällgren, 2012; Sandberg and Alvesson, 2011b, 2011a) the individualistic view to LCE (Blomquist *et al.*, 2010) that reduces engagement issues to individuals' instrumental approaches (project teams' acts/logic) (Aaltonen *et al.*, 2016; Aaltonen and Kujala, 2010; DiMaddaloni and Davis, 2018; Eskerod *et al.*, 2016; Eskerod and Huemann, 2013). neglecting the complex nature of practices that shape LCE (Cicmil *et al.*, 2006; Lalonde *et al.*, 2010, 2012). Based on this view the solution for all LCE issues is changing the approach of the project teams from instrumental to normative (Aaltonen *et al.*, 2016; Di Maddaloni and Davis, 2018).

Our analysis shows LCE issues are rooted in different practices and arrangements. Arrangements such as transport projects' size, the size and culture of the organisations that undertake the front-end, knowledge of project teams about benefits of LCE and the specifications of the area in which the project is going to be implemented (factors such as demography, geology, environment, economic etc.) determines the issues. These arrangements in addition to LCE, front-end and implementing transport megaproject practice form the behaviours of project teams and local communities. Here project teams' behaviour and in particular their instrumental approach is shaped by practices and arrangements, because people do what makes sense to them (Nicolini, 2012) based on the context of the practice (Lalonde *et al.*, 2010). This suggests changing the project teams' approach from instrumental to normative will not be feasible without adjusting the abovementioned practices and arrangements to promote normative behaviour. Furthermore, merely changing project teams' approach at best, may lead to pockets of good practices but cannot make a sustainable change in LCE practice. This finding is in contrast to the literature which views an instrumental approach to LCE as the main issue of LCE (DiMaddaloni and Davis, 2018; Di Maddaloni and Derakhshan, 2019).

Our findings suggest LCE practice requires holistic changes in practising front-end, LCE and in a broader view transport megaproject planning and implementation practices as well as the respective arrangements. Consequently, addressing LCE issues requires

- altering LCE and front-end practice to make it more SV-oriented, changing organisational culture by embedding the SV as one of the primary project outcomes,

- educating project teams about LCE benefits and impacts on megaprojects' long-term performance,
- building capacity in local communities to interact effectively and positively with the project teams
- robust regulations for implementing LCE including rewards and penalties. The regulations should also enforce planning SV based on LCE outcomes.

Regarding the second contribution our study shows that the SV planning based on LCE is either neglected by project teams or only considered as the bare minimum to comply with the regulations. These are the results of negative impacts of LCE issues on SV plans at the front-end of transport megaprojects. That is why LCE cannot lead to planning relevant SV for local communities. A key issue here is the financial approach to the front-end practice in which the main objective is to secure project financial feasibility (Samset and Volden, 2016; Volden and Andersen, 2018). In this view, LCE practice and SV plans are not acknowledged serious and essential parts of practising front-end and usually receive the least attention in project decisions. Therefore, often SV plans for transport project developers are an afterthought activity.

Other issues such as lack of equality, diversity, and inclusivity, in addition to extrovert bias, limit LCE, to a certain demographic (old, middle class, educated and dominant ethnicity) and more influential people, which do not represent local communities' view. This also creates negative interaction between project teams and local communities (DiMaddaloni and Davis, 2018; Di Maddaloni and Derakhshan, 2019) restricting presenting the projects' potential value. These issues cannot be addressed merely by changing the approach to the engagement and require changing the aforementioned practices and arrangements. In this change SV should be a core factor in decision making. Infrastructure megaproject implementation should be seen in a broader view and becomes a practice for creating value for the society. Ultimately, our study shows that LCE leads to designing relevant SV if it includes "the right people" instead of "more people".

5.2 Contribution to practice

Table three includes LCE issues, their impact on the engagement dynamics and SV plans, and the corrective actions to improve practices. These actions often are neglected during LCE due to a lack of commitment from companies, resources, best practice guidelines etc. implementing the suggestions improves LCE and increases the possibility of generating relevant SV. In the following paragraphs, we detail some of the key suggestions.

Before LCE starts, engagement teams should inform local communities about the possibility of impacting decisions clearly and transparently (even if this possibility is minimal or does not exist) with right justifications. Pre-engagement sessions before the formal engagement are constructive for estimating how a local community will interact with an engagement team. This should be completed by liaising with local community gatekeepers.

Engagement teams should be diverse to encourage wide participation from a local community. The teams should include women, people of mixed ages, gender, social, religious, and ethnic backgrounds. Also, the engagement teams should include local people to facilitate deeper interaction with local communities. However, the engagement teams should avoid creating stigmas about their teammates and generating ideas such as only certain members of the team can engage with a certain community or group.

Often engagement does not attract younger people and end-users. However, since younger generations are more likely to benefit from new projects, engaging them is critical to improving SV plans. Currently, this mostly happens through school engagements, although not in all projects. Therefore, project teams should use creative ways that interest younger people, including trendy social media.

There is a competency shortage and a lack of knowledge about LCE. For instance, an essential competency for engagement is explaining the project's technical aspects in a simple and community-friendly language. Therefore, engagement teams should receive appropriate training to improve their practices. Also, Project teams' knowledge of LCE and SV benefits for projects motivates them to commit to LCE and SV plans.

Over-engagement can happen when many organisations want to engage with a local community at once and separately (clients, sponsors, main contractors etc.). Robust planning, effective cooperation with other companies, and conducting joint LCE and SV plans, when possible. Companies also must avoid engaging with local communities when there is nothing new to share with them and only communicate necessary and consistent information however communication channels with local communities always be open.

Transport megaprojects, such as high-speed railways, pass different communities. Therefore, they require various planning approaches and may plan SV differently for each community based on its priorities. This adds to the engagement cost when the project is due to various requirements.

6 Conclusions

We problematised individualistic view to LCE based on practice theory. We view LCE as a bundle of interrelated practices and arrangements at the front-end of transport megaprojects instead of act of the individuals project teams. Our finding shows that LCE have a very limited impact on SV plans at the front-end of transport megaprojects and this causes that SV plans do not offer relevant SV to local communities. LCE issues play a critical role in limiting the impact of LCE on SV plans.

We identified 18 issues for LCE at the front-end of transport megaprojects. The issues come from five interrelated sources: LCE, front-end, transport megaproject, project teams' behaviour, and local communities' behaviour. Therefore, merely changing the project teams' approach cannot alter LCE for good. Instead, appropriate practices can address issues such as lack of equality, diversity, and inclusivity in the engagement. Also, front-end practices need to be more social value-oriented instead of being cost and benefits driven.

LCE issues impact SV plans with five mechanisms:(1) SV plans do not explicitly address local communities' needs, (2) SV plans do not provide a sustainable solution for a local community's problems, (3) Social value plans are designed for the project teams and organisations' convenience to receive the project approval, (4) Social value plan is skewed toward meeting the interests of more visible and influential groups in the local community, and (5) Social value plans are reduced to the minimum possible. Changing this situation requires altering LCE and front-end practice, changing organisational

culture, educating project teams about LCE and SV benefits and impacts, and building capacity in local communities to interact effectively and positively with the project teams.

The study suggests that arrangements and practices associated with LCE at the front-end of transport megaprojects should change together towards a more inclusive and local community-friendly setting to address the issues and accommodate local communities' views in front-end decisions. Future studies can focus on testing how this change can happen. Also, future research should consider the need for new practices that promote mutual SV creation that support the role of LCE in decision-making for projects SV. Furthermore, the behaviour of the local communities requires closer investigation to identify how they can engage better with the projects. The NGOs and charities in LCE and SV plans can impact the practice and needs to be addressed investigation.

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Appendix 1:

Theme	Issues	Effect on the engagement	Impact on social value
Issues associated with conducting local community engagement	Engagement is not a standard practice	It enables project teams to interrupt or limit the engagement to a minimum	A social value plan becomes the minimum possible for receiving the project approval; it does not represent the local community's needs.
	Engagement is designed for responding to the projects' negative impacts	Creates negative interaction in the engagement	Hinders creating social value
	Lack of diversity: only a certain demographic engages with the process (retired, middle class, educated, white)	Engagement will only interact with a fraction of a local community; Influential people can impact the decisions; It creates a negative interaction in the engagement	The social value plans are skewed and only serve a fraction of the society represented in the engagement. Also, negative interaction hinders creating social value.
	Lack of inclusivity: current methods cannot include people with disabilities, minor ethnicity, and young people.	Engagement will only interact with a fraction of a local community, and many people have no voice in the engagement	
	Extrovert bias	It gives more chance to the vocal people or groups to reflect their views and manipulate the process	
Issues associated with the front-end practice	The project concept is not clear at the front-end	It is hard to plan the engagement when the project concept is unclear because the local community needs to receive a consistent message to trust the project.	It can negatively impact the interaction between the project and the local community for laying out social value
	Project financial aspects receive more attention than local community engagement	Priority is given to the projects' financial aspects, and community engagement is considered as a formal process for getting the project approval, not creating social value	Social value is the least priority among other project aspects and often stays on the minimum possible
	Time and resources are limited	Makes engagement difficult to plan, Hinders deep and meaningful engagement	A social value plan stays on the minimum possible and does not offer relevant value to the society
	There is a massive gap between front-end and the beginning of the project	Disengages local communities from the process and creates negative interaction since often only oppositions will engage	In the minimum engagement and negative interaction, there is no chance to explore local needs and developing relevant social value plans
Issues associated with implementing megaprojects	megaprojects are important for politicians,	Politicians have considerable power to impact the front-end decisions regardless of the engagement results	Politicians can manipulate the social value plans, which might have either positive or negative impact on the community
	megaprojects are significant engineering endeavours	Engineers have a significant impact on megaprojects decisions, and that enables them to disregard the engagement results using engineering justifications	A social value plan receives less attention than other dimensions of the project and often stays on the minimum possible
	Large transport megaprojects pass different areas and communities	It makes engagement difficult to plan; adds to the engagement cost	Laying out social value for several communities is challenging and requires different strategies
	Over engagement	Engagement fatigue: It makes people unwilling to engage, and that reduces the engagement quality	Hinders generating adequate social value plans based on the local community needs
Local community and their behaviour in engagement	The local community appreciates the project's immediate and local impact	It creates dissatisfaction, forms an opposition, and focuses on unsustainable solutions for the problems.	Ends up with unsustainable solutions in social value plans
	The local community wants to engage at a level that engagement cannot impact	Local community engagement cannot contribute to creating social value since the engagement time spends to justify unnecessary matters	Hinders adequate engagement, and local community needs remain unexplored
Project team's mindset and competencies	Project teams place a higher value on the technical aspects	Project teams get fascinated by the project technical aspects and disregard megaprojects social value	Project social value will remain underrepresented in the local community
	The front-end engagement for project teams is a means to meet project approval requirements	Project teams conduct engagement to meet the project approval criteria and reduce the process to a tick-box exercise	A social value plan is a document for receiving a project approval, and it will not be relevant to the local community's needs
	Lack of staff with required competencies for the engagement	Damages the relationship and creates frustration and disengagement	Hinders adequate engagement, and local community needs remain unexplored

Table 5 Local community engagement issues and their impact on the engagement dynamics and social value plan

