

# **Understanding of labelling and sustaining of innovation in construction: A sensemaking perspective**

## **Abstract**

Over the last few decades, innovation has been investigated in a variety of ways, reflecting different orientations and interests. However, the question of how organisational activities become recognised as innovations remains under-examined. The purpose of this paper is, therefore, to understand and explain how narratives of innovation are mobilised by construction sector practitioners. In order to achieve the aim, 30 semi-structured interviews were carried out with UK construction sector practitioners, whose self-identities are associated with the promotion of innovation. A sensemaking perspective is adopted as a theoretical lens for explaining the interview data. The empirical findings suggest that organisational activities become labelled as innovations through the process of collective inter-subjectivity. Organisational activities become labelled as innovations retrospectively and make sense prospectively. As narratives of innovation can be repeated and recalled, storytelling lends to the process of sustaining legitimacy.

*Keywords:* Construction, innovation, narratives, processes, sensemaking

## **Introduction**

The fact that the innovation label continues to attract audiences suggests that the message is popular, with at least some construction sector representatives. The Egan (1998) and the

Wolstenholme (2009) reports have, certainly, been responsible for popularising the innovation label amongst UK construction sector practitioners. In these reports, innovation is viewed as 'the successful exploitation of new ideas'. Government regulations are often seen as key drivers of construction innovations. The challenge for government, as a policy maker, is supposedly to create an environment that incentivises innovation. This storyline assumes innovation to be 'positive', whilst the meanings attached to the term by practising managers are rarely examined.

There is a growing body of research trying to understand innovation in construction. Much research focuses on examining enablers and barriers to innovation (Blayse and Manley, 2004; Bossink, 2004) and revealing typologies (Slaughter, 1998; Kissi *et al.*, 2012). Research papers on construction innovation often begin by discussions of how to make construction firms and projects more innovative, whilst the meaning of 'becoming innovative' is rarely questioned. The difficulties lie in attempts to formally operationalise innovation as the means that can be determined or measured (e.g. enablers/barriers, typologies).

More recently, research tends to view innovation as a process of a transformation of an innovative idea into a solution successfully applied in practice (Hartmann, 2006; Leiringer and Cardellino, 2008). This stream of the literature draws from a 'processual' perspective in broader organisational studies (Van de Ven, 1986; Van de Ven *et al.*, 2008). This perspective does not deny the role of entities, structures and substances, but focuses on the 'reality of organising', where innovation is being viewed as a dynamic and complex process. Yet, within this process practising managers' perspectives on how organisational activities become recognised as innovations, and how the label is sustained over time remain under-examined.

Scholars, who adopt a more or less processual perspective, increasingly emphasise the role of storytelling and sensemaking (Tsoukas and Chia, 2002; Garud *et al.*, 2013). Their

argument is that innovation requires the efforts from multiple actors and groups who become engaged in different parts of the process. By mobilising resources, multiple actors create understandings, negotiate consensual meanings, and engage in coordinated actions. Until recently, there has been very limited research on storytelling and sensemaking in the specific context of construction. Recent studies strongly emphasise socially constructed and discursive nature of propagated and sustained labels like lean thinking (Green and May, 2005), knowledge sharing (Fernie *et al.*, 2003) and partnering (Bresnen *et al.*, 2005; Hartmann and Bresnen, 2011). The discursiveness of an innovation term has been frequently noted in these recent studies, however, has not been examined in detail.

Rather than viewing innovation as an outcome that can be determined or measured, the current research suggests that it may be more appropriate to approach innovation as a sensemaking narrative, from the perspective of practising managers. The position adopted in the current research is that practitioners are part of the process of reality construction, and yet it is acknowledged that their actions are shaped and constrained by broader discourse of enterprise culture (Green, 2011). In contending that practitioners' own perspectives may impact decision-making and future actions (Sexton and Barrett, 2003; Hartmann, 2006), it is important to focus on their individual making sense processes.

The aim of this paper is to understand and explain how narratives of innovation are mobilised by UK construction sector practitioners. In order to achieve the aim and to position the research within the project organisation context, the specific objectives were identified as:

- To explain how some particular organisational activities become labelled as innovations.
- To examine how the innovation label is sustained over time.

This research adopts a sensemaking theoretical lens in order to investigate the research aim and objectives. The increasing interest in sensemaking stems from its assertion that it is more meaningful to ascertain how practitioners make sense of and enact organisational phenomena (Weick *et al.*, 2010), rather than to try and measure them. In arguing that narratives are multiple and embedded in situational contexts, storytelling helps practitioners to make sense of the experienced reality. From this perspective, narratives are actively involved in shaping situational contexts. A sensemaking perspective concerns labelling (and continuous re-labelling) of activities and sustaining labels over time. Utilising this perspective, sensemaking narratives of innovation mobilised by UK construction sector practitioners are examined in this paper.

The conceptual arguments are empirically investigated by drawing from 30 semi-structured interviews with UK construction sector practitioners who have engaged with the Constructing Excellence network-types organisation. Constructing Excellence is claimed to be the UK construction sector's single organisation for driving the innovation agenda. Amongst the 'important' values in the agenda are collaborative working, integration, continuous learning, improvement and innovation. It is contended that UK construction sector practitioners, who have engaged with the Constructing Excellence network, align themselves with the movement for innovation, socially constructing self-identities as innovation champions.

The paper begins by introducing a sensemaking perspective and discussing the applications of this framework into broader organisational studies, project management and the specific context of construction. This is followed by a detailed discussion and justification of the empirical research design. The paper continues by presenting the findings obtained

from the interview data. The results are then discussed in relation to the theoretical framework. Finally, some implications and future research directions are suggested.

## **Sensemaking perspective**

Sensemaking can be viewed as a theoretical process perspective through which it is possible to explain and understand how individuals make sense of ongoing organisational activities and circumstances (Weick, 1995). Sensemaking is about the question: 'How does something come to be an event for organizational members?' (Weick *et al.*, 2010, p.85). From a sensemaking perspective, real time involves construing an understanding of activities retrospectively (looking back) and prospectively (looking ahead); past experience and knowledge are brought forward and are used in new representation in the present that make sense of the future. Sensemaking is described as both a past- and future-oriented process.

Sensemaking is about noticing and labelling processes (Weick, 1995; Weick *et al.*, 2005). Sensemaking is attached to the context of an ongoing stream of activities surrounding organisational actors. From a flow of ongoing activities, organisational actors may or may not extract certain cues for closer attention (Weick *et al.*, 2010). In the context of noticing cues, sensemaking means interpreting and making sense of something that has already occurred during the organising process. From a point of view of an organisational actor, a completed act may be labelled (e.g. 'mistake', 'concern', 'bad sign' and 'opportunity'). According to Weick *et al.* (2005), labelling follows after the act has been completed. Over time, actors may label and continuously re-label organisational activities extracted from the flow.

Activities may be labelled in ways that predispose practitioners to find common sense (Weick *et al.*, 2005). To find the common sense, labelling ignores differences amongst actors and deploys cognitive representations. Weick *et al.* (2005) articulate that 'the labelling itself

fails to capture the dynamics of what is happening' because it follows after the completed act (p. 88). Gioia *et al.* (2000) and Corley and Gioia (2004) reinforce that although the descriptive labels that are used to describe 'who they are' and 'what they are doing' may be sustained over time, meanings and interpretations associated with these labels may change. As the process unfolds over time, activities may be re-labelled. Weick (1995, p. 31) suggested that when individuals enact, they:

Undertake undefined space, time, and action, and draw lines, establish categories, and coin new labels that create new features of the environment that did not exist.

The sensemaking perspective takes seriously subjective beliefs and opinions (individual), and inter-subjective (social) judgments as essential contributions towards a reasonable explanation of storytelling. Sensemaking encompasses inter-subjective processes amongst practitioners: common-sense and consensus between the subjective states by two or more individuals (Weick *et al.*, 2005). Sensemaking is a social process, not just the concerned of organisational actors, but shaped by other social actors and events (e.g. discussions and interactions). Communication is understood as a central component of sensemaking, described as an ongoing process of making sense of the situations in which actors collectively find themselves and their activities. The 'saying' leads to iteratively shared meanings and actions. This process is described as cyclic: acting is part of flux until talk offers the meaning (Weick *et al.*, 2010).

### **Applications of sensemaking**

A sensemaking perspective has been adopted in organisational studies explaining narratives of innovation mobilised by practitioners. Coopey *et al.* (1997), for example, interviewed managers in an IT company, claiming that innovations are socially enacted within the organisational context. Taking into account power relationships, managers' narratives were

served to confirm or reshape their personal identities within a flux of ongoing organisational activities. More recently, Seligman (2006) specifically discusses the seven properties of sensemaking regarding the innovation-decision process. Although without providing direct empirical evidence, he emphasises the need for an exploration of perceptions of innovation by practitioners through a sensemaking theoretical lens.

A sensemaking framework has been used in project management contexts. Thiry (2001), for instance, emphasises the importance of stakeholders' rhetoric as an essential sensemaking process. Challenging the positivist views that suggest 'well-defined problem' and 'improved solutions', an alternative social constructivist approach is offered. The argument is that applications of the sensemaking perspective in social contexts of conflicts and interactions are useful in order to understand practitioners' own individual viewpoints. More recently, Veenswijk and Berendse (2008) explore project narratives, consisting of several micro-stories through which particular project developments are discussed and contested in the Dutch public infrastructure sector. The authors demonstrate ongoing struggles over the meaning of 'organisational change' through project members' experiences and perspectives.

A sensemaking perspective has been utilised in the specific context of construction. Drawing upon ideas of soft systems methodology, action research and sensemaking, Fernie *et al.* (2003) explore how and why knowledge sharing is enacted and implemented in a variety of ways. They argue that it is much more meaningful to ascertain the extent to which practitioners found knowledge sharing meaningful, rather than to try and measure the amount of knowledge that has been shared. Adopting a methodological position justified with reference to Pettigrew's concept of processual analysis and Weick's notion of sensemaking,

Green *et al.* (2005) argue that enactments of terms like supply chain management cannot be understood in isolation from broader sectoral dynamics of change. Green (2011, p. 183) reinforces an influential shift towards a notion of sensemaking in construction:

Weick's (1995) notion of sense making has been hugely influential in shifting the emphasis from static ideas of theory towards dynamic, multi-participant notions of sense making. And it is within the latter context that it becomes useful to think of the way in which practising managers mobilize metaphors continuously as sense making mechanisms.

Green (2011) contends that the meanings ascribed to events are dependent on which lens people use, where the nature of reality is embedded in 'sensemaking mechanisms' adopted by practitioners. He argues that sensemaking is not only about reading, but also about writing. This indicates a shift in vocabulary towards 'language of sensemaking', drawing attention to propagation and sustenance of discursive terms that are frequently highlighted in government reports and strategies.

It is frequently contended that storylines of discursive terms mobilised by construction sector practitioners are shaped by the broader discourse of enterprise culture (Bresnen *et al.*, 2005; Larsen, 2011). Therefore, broader contexts cannot be oversimplified in the analysis. Green and May (2005) argue that the legitimacy of different scripts depend upon their persuasiveness as 'sensemaking mechanisms'. Building upon Weick's (1995) ideas, they contend that practitioners may attach more legitimacy to those narratives that help them to make sense of the reality that they experience. Narratives may enhance self-legitimation and may serve to sustain changes that are already underway. Dominant and legitimising stories may be promoted, but there is a danger of being 'trapped' into unthinkable ways in which practitioners may mobilise their narratives:

The difficulty lies in the way in which participating individuals seek to align themselves with the established agenda because they think this important for the purposes of career progression. Hence individuals willing to promote



arguments which go 'against the grain' are few-and-far between – it is simply perceived to be too much of a career risk to the individual, and too much of a commercial risk to their employing organisation.

Green (2011, p. 322)

The above quotation indicates that narratives may be directed towards the dominant stories which may be implausible for practitioners who mobilise them and even unthinkable. Practising managers may promote themselves as successful innovation champions in particular contexts in which they operate (Leiringer and Cardellino, 2008). They may enact (create) meanings to convince social audiences to agree with their messages. Narratives of innovation may be continuously propagated and sustained over time. As narratives may be repeated and recalled over time, storytelling may be embedded into maintaining legitimacy (Green, 2011). But each new generation of managers can re-narrate their journeys and re-label activities, and not necessarily follow the tried and tested.

In order to understand how sensemaking processes unfold over time throughout the construction project lifecycle, it is necessary to understand narratives emergent from retrospect, present experiences and presumptions about the future. Various activities labelled as innovations may be carried out throughout the lifecycle of construction projects: design, preparation, construction, maintenance or span design and construction. Throughout the construction project lifecycle, it is important to understand the connection between retrospection and propection. According to Chan (2012), projects actors often struggle to make sense of what they are required to do in the present and make sense of the future. It can be contended that answers to the question emerge from retrospect, connections with past experience through conversations with practitioners who act on behalf of larger social units. In some sense, projects become increasingly clearer as they unfold over time: emergent from retrospect they make sense of the present and future aspirations. There is, therefore,

the rationale in seeking the retrospective meanings of innovation accepted or discredited over time.

## **A semi-structured interview-based study**

### **Research approach**

An interview-based study was carried out to examine how organisational activities become labelled as innovations, and how the label is sustained over time. Thirty semi-structured interviews were carried out with UK construction practitioners who have engaged with the Constructing Excellence organisation between November 2012 and February 2013. The rationale behind a sampling strategy is that because of practitioners' engagement with the Constructing Excellence organisations, to some extent, they socially construct self-identities as innovation champions. It is assumed that examination of stories of innovation mobilised by these practitioners may shed light into how activities become labelled as innovation and how labels are sustained over time. Table 1 presents information about interviewees' role in the firms, years of experience, size of the firms and nature of projects. The interviewees were sourced from a variety of the firms: both small and medium enterprises (SMEs) or large firms, main or specialist contractors, consultancies or clients. The interviewees had various backgrounds diverse core qualifications. At the time of data collection most interviewees held senior positions in the construction firms.

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Insert Table 1 about here

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The interviews were one-to-one, taking place in offices. The time of the interviews varied from approximately half an hour to two hours in length. The length was influenced by the amount of time the interviewee had available.

The rationale behind choosing a semi-structured interview approach is that this method continues to be one of the most common sources in narrative research (Berg, 2009; Denzin and Lincoln, 2013). Narrative researchers contend that interviews allow the narrator to reflect upon life events and activities. The interview research approach allowed exploring how UK construction sector practitioners narrate their experiences through direct conversations between the interviewer and interviewees. The flexibility of semi-structured type of interview allows the interviewer to ask a series of regular questions, as well as to pursue areas spontaneously initiated. This resulted in a much more textured set of accounts than had only structured or informal questions. Questions asked included the following:

- Is innovation an individual or collective activity?
- To what extent are innovations immediately recognised as such by everyone in the organisation?
- How is an organisational activity labelled as an innovation?
- How are innovations sustained in the organisation?
- What needs to be done in order to sustain the label 'innovation'?

While stories can arise out of answers to questions that are not designed to elicit them, certain kinds of questions are especially likely to draw narratives out. For example, interviewees were asked to recount how innovations become labelled and sustained over time. It can be argued that these questions are likely to elicit stories. Rather than just asking to share stories about an event, follow-up questions were asked to stimulate the flow of

details and impressions. The transcribed interviews ranged in length from 2420 to 7911 words. The total length of all transcribed interviews is 128160 words.

Of particular note, the interviewer plays an important role in the interviewees' sensemaking processes (Maclean *et al.*, 2011). The context and audience (e.g. an interview situation) conceivably shape what meanings are expressed. Narrative researchers work closely with stories mobilised by individuals. When narrative researchers collect data through in-depth interviews, they work at transforming the interviewee-interviewer relationship into one of narrator and listener (Langley, 1999). The researcher's aim is not to discover whether narrators' accounts are accurate reflections of actual activities, but to understand and explain the meanings interviewees ascribe to those activities.

### **Data analysis**

Interview accounts were analysed with a purpose to 'unpack' micro-stories about labelling and sustaining innovations as mobilised by interviewees. An adopted sensemaking perspective guided research design, data collection and analysis. The research approach can be labelled as abductive (Orton, 1997; Leiringer *et al.*, 2009) in that an iterative approach was used between a sensemaking framework derived from the literature and emergent data. An abductive approach can be described as an interplay of conceptual ideas and illustrative empirical data of how UK construction sector practitioners label and sustain innovations. An initial reading and re-reading of transcripts identified social labelling, retrospective labelling and sustaining labelling as key themes. These sensemaking processes emerged in stories mobilised by interviewees. Reflecting upon multiple narratives, it became apparent that interviewees, in essence, reflected upon social and retrospective labelling, and sustaining legitimacy.

In analysing transcripts, a number of steps have been performed. Initially, the researcher read the transcripts, marking up stories, defined for analytical purposes as accounts given by interviewees of activities or series of events within storytelling. Overall, each interview was found to contain a story/stories. The data were then examined in terms of discern the specific sensemaking processes, assuming an abductive approach, with themes emerging from the stories. The researcher searched for evidence of processes that might be expressed that interviewees spontaneously enacted in mobilising narratives. Stories were taken as units of analysis, assessing whether there was evidence for each theme. Following several iterations and reflections, the central sensemaking processes were identified (Table 2).

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Insert Table 2 about here

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As evident, the innovation projects described by interviewees varied, reflecting upon situational contexts. In some respects, some examples were more tangible (e.g. new products, software, technology and buildings). There is a presumption that the innovation comprises some sort of a material entity. However, other examples were, in some sense, more intangible (e.g. way of working, behavioural change and engagement). In essence, these stories of innovation projects were framed tacitly and compellingly as another aspect of innovation – a social process, a sort of ‘living entity’. Some examples of innovation projects, to some extent, involved a mixture of tangible and intangible assertions. Across all examples described by interviewees the common themes emerged that are discussed below.

## Storytelling and sensemaking

### Social labelling

Most interviewees (19/63%) contended that innovations in the construction sector tend to be both individual and collective activities. In essence, the intra-subjective (individual) beliefs were described in alignment with inter-subjective (social, two, three or more communicative individuals) understandings. For example, one interviewee argued that innovation tends to start as an individual activity and then to become a collective exercise:

It started off with me and one another person. But you cannot do this in this sector alone. You have got to engage, and eventually we engaged with hundreds of people: funding agencies, funding bodies and spent millions of pounds to produce a technical innovation. No, you cannot do that in your own. (Project manager, Consultancy firm)

The above quotation resonates with a sensemaking perspective on sensemaking that acknowledges both individual and social processes (Weick, 1995). Sensemaking is described as both an individual and collective processes located within the actions and interactions between two or more individuals. This is in keeping with Coopey et al. (1997) and Garud (2013) who emphasise the intersubjective processes of creation of meaning. They further argued that sensemaking interactions may still be subject to the constraints of the existing practice. Thiry (2001) shares this viewpoint, contending that different actors individually make sense of a situation and collectively construct a shared understanding of the situation.

Other interviewees (11/37%) strongly emphasised that innovation tends to come from 'everybody's input' through social interactions with others and collective actions. This storyline was articulated especially clearly by one interviewee who argued that innovation is a collective, evolving activity:

To my mind because it is evolving activity, it has to be collective one. People spark ideas. That interaction that actually produces the next thought.

Whereas if you go in isolation you are very, very clever, you might possibly come up with something, and people do in terms of new products and things. But not necessarily in terms of evolving processes in a way to go forward. (Director, Consultancy firm)

Of particular note, in the above two quotations verbal nouns and verbs (e.g. looking, taking, carrying forward and engaging people) were used more frequently than nouns, emphasising social processes. The nature of innovation was described as a social, ongoing and dynamic process, rather than some kind of a material entity or a linear process. The attention was directed towards insights into the dynamics of time, processes, contextual and individual complexities.

### **Retrospective labelling**

In the analysis of the interviews retrospective labelling plays a purpose in explaining how particular organisational activities become recognised as innovations. The majority of interviewees (21/70%) claimed that organisational activities were often not recognised as innovations at the outset. Reflecting back at past periods in time, they considered organisational activities as 'solutions to a problem', 'challenges' or 'extra work', rather than as innovations per se. Organisational activities became labelled as the innovations or as 'being innovative' retrospectively – after activities have been completed. One of the interviewees, for example, explicitly stated that the label innovation appeared retrospectively, accompanied with a chief executive arriving with some sort of 'innovation-oriented mindset':

I think innovation was not the word which was in a vocabulary of the organization. So, it was not something that was used in that quite explicit sense. I think we would retrospectively look at the origins of that, and it was seen as quite innovative and an opportunity to do something quite clever. But it is a chief executive who arrived with a very sort of innovation-oriented mindset. We have introduced the word "innovation" into the vocabulary of the organization. So, now it is very much seen as an innovation. (Strategic project director, Public construction firm)

This is keeping with Van de Ven (1986) who argued that innovations become part of the conceptual structure of the social system and appear in retrospect. He further contended that innovations remain institutionalised for as long as the 'regime remains in power' (Van de Ven, 1986, p. 593). The retrospective labelling theme is consistent with the core idea of retrospection within a sensemaking framework is that people can only know what exists by paying attention to what has already happened (Weick, 1995; Weick *et al.*, 2005). Interviewees reported that from a flow of ongoing organisational activities some became labelled as innovations. By paying attention to retrospective time, the interviewees interpreted and made sense of activities that have already occurred during organising processes.

Emerging from retrospection and past experiences, most interviewees acted and made presumptions about the future (26/87%). Past actions and activities became clearer as they unfolded over time. Both looking backward (retrospectively) and looking forward (prospectively) thinking was embedded in the process of labelling activities as innovations. One interviewee, for example, made a clear connection between retrospection and prospection:

I think in the context of innovation we all bring our experience of previous projects and previous lives and cooperative lives into the project. I think the innovation is about looking forward: how do we organize all that experience, all that creative thinking in a context of the firm and get the best of everybody to get delivered.  
(Strategic project director, Public construction firm)

The above quotation resonates with sensemaking that is described as both past- and future-oriented processes (Weick, 1995; Weick *et al.*, 2005). Sensemaking perspective involves construction of an understanding of activities retrospectively and prospectively: past experience and knowledge are brought forward from the past and are used in new representation in the present, making sense about the future.



## **Sustaining labels**

In the analysis of the transcripts sustaining labels plays a purpose in explaining how an innovation label is maintained over time. The majority of interviewees (27/90%) emphasised the importance of establishing and sustaining legitimacy. The argument was that an innovation label is sustained over time when everybody in a company understands what innovation is, how it work, why it is relevant and what the benefits are. This was often referred to a notion of culture where 'people are allowed to think and thinking is welcomed' (Chief Executive, Consultancy firm). Interviewees often argued that while champions believed in culture of innovation, traditionalists often felt it implausible towards innovation. The intention was frequently described as to try and persuade and convince each stakeholder in organisations that innovation is one of the corporate values:

From my perspective, it is all about business, the people we employ, the culture and it all has got to be integrated. You have got to take people on that journey. It takes time. Once people start to hear the message two or three times, four or five, six or seven, start to say: "Oh, I can understand innovation". When they start to see examples of innovations in the fields, they say: "Oh I can do that". Once you have got over those challenges I think it becomes part of people's activities. (Innovation knowledge manager, Consultancy, maintenance and construction firm)

A few interviewees (7/23%) strongly emphasised in order to sustain an innovation label there is a need to reward and recognise 'innovators'. Of particular note, rewards may not necessary be financial, but could take a form of a simple recognition (e.g. a mug and a certificate).

One possible explanation of sustenance of the innovation label is that practitioners attached more legitimacy to those narratives that make sense of their experiences reality. As described by interviewees, sustaining labels were shaped by self-legitimacy:

You look at the way you have done things, you challenge the norm, you challenge yourself. It is satisfaction in producing something that is different, something that

was created in response to a need and by success you know that everybody is happy. (Planning manager, Consultancy and construction company)

In essence, interviewees constructed plausible sense of their actions and the situations they experienced. Plausibility reflected their alignments with a broader storyline of a movement for innovation.

### **Explanatory model of innovation from a sensemaking perspective**

Based on the empirical findings, the model of innovation as a sensemaking narrative is demonstrated in Figure 1 and is explained in detail below. It should be noted that the model does not to represent a reality, but is a useful device to debate about the reality (Checkland and Scholes, 2005).

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Insert Figure 1 about here

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As most interviewees argued, sensemaking begins by an organisational actor interpreting and making sense of activities that have already occurred during organising process. In essence, sensemaking is carried out by an individual (intra-subjective level) and collective (inter-subjective level). Intra-subjectivity can be described by an individual thoughts, beliefs, feelings, assumptions and intentions that enable the individual to interpret and make sense of the environment, own and others' actions. By being involved in specific organisational processes and practices, an individual makes sense of experiences, notices some activities more than others. As an individual learns, he/she interacts with others. Two or more organisational actors start interacting (inter-subjectivity) for the first time in the context of a specific activity. Inter-subjectivity is considered as social interaction between two or more actors at which they create consensual meanings.

From the analysis of the transcripts, it is evident that shared understandings emerge through social interactions. Practitioners engaged in communications, orienting towards consensual understanding. In a collective sensemaking processes, some activities become labelled as innovation in ways that assist to find common sense. Labels are socially defined, because they have to be adapted to local circumstances. The labels followed after and named completed acts. During interactions, practitioners engaged in the process and align their individual beliefs with others' understandings, opinions and actions. The analysis of the data indicates that Intra- and inter-subjectivity are shaped and constrained by generic and extra-subjectivity. Generic subjectivity is formed and maintained by social structure. Extra-subjectivity refers to organisational culture. These distinctions should not be understood as a sequence of levels, but as different constructions of meanings and understandings. Consequently, constructed meanings may be different at each level, reflecting upon social reality.

Although models tend to assert a risk of relying and making static a dynamic process, the recursive relationships (arrows) included in the model demonstrate the dynamism and fluidity of processes. The interview data demonstrate that narratives of innovation mobilised by interviewees may be recalled at the later periods of time and propagated further. It is also acknowledged that narratives may be re-crafted and re-constructed over time, so that activities may not considered as innovations at the later periods of time. Individual and collective sensemaking processes can be described as ongoing: practitioners make sense of what they did retrospectively and they may make sense of future aspirations. It should also be noted that the model does not specifically address the potential contradictory views of actors regarding innovation.

## **Discussion and conclusion**

Innovation has been widely promoted as one of the driving forces of growth of construction firms. However, deeper insights into the processes of labelling organisational activities as innovations and sustaining labels are rare. This paper has approached innovation as a sensemaking narrative mobilised by UK construction sector practitioners. Interview data demonstrates that the positivist approaches do not provide an explanation of storylines of innovation. A sensemaking framework (Weick, 1995; Weick *et al.*, 2010) provides a more convincing explanation of the empirical data. The empirical findings reveal that organisational activities become labelled as innovations through the process of collective inter-subjectivity. Organisational activities become labelled as innovations retrospectively and make sense prospectively. In essence, the findings suggest that as narratives of innovation can be repeated and recalled, storytelling lends to the process of sustaining legitimacy. Narratives mobilised by practitioners may be recalled at the later periods of time and propagated further. As narratives can be repeated and re-constructed, storytelling lends to the process of sustaining legitimacy. Yet, sustenance depends on a connection with a listener or a target audience (Maclean *et al.*, 2011). From this perspective, enactments of innovation are multiple and unfold over time as social circumstances change. Each generation of practising managers are able to re-craft and re-construct the future, and not necessarily repeat the past. For practitioners, the paper provides insights into how they make sense of the innovation, which can affect how they enact and act in the future.

It is essential to note that the findings of this qualitative study are representative of the focus of the research. The results of this research were not based on solitary or a limited number of individuals, but were developed through an iterative and rigorous procedure that made use of the complexity of the data collected. Whilst the focus is on individual

sensemaking and storytelling, there is a reference to a broader storyline of innovation. This refers to the notion of sensegiving: how sense makers shape, and are shaped by audiences. Any future research into narratives of innovation mobilised by UK construction sector practitioners using a lens of sensemaking perspective may be supplemented with a more macro approach to expand upon issues of structure and power. For example, how certain judgements may appear to be constrained or enabled by formative organisational rules, laws and regulations. This would provide a richer understanding of how broader enterprise culture shapes the individual sensemaking process. For example, the role of the Constructing Excellence context in which the sensemaking occurs, and the institutionalisation of the sensemaking decisions. Future research may also expand a sensemaking framework in ways that are more closely aligned with sensegiving and persuasion. This may involve a reference to generic (e.g. shared understanding and organisational identity) and extra-subjectivity (e.g. organisational culture).

A sensemaking framework may also be more future-oriented. For example, greater attention could be placed on the role of prospection, and the connection between retrospection, present and future aspirations. Future research may also pay greater attention to the connections between the seven properties of sensemaking. This could lead to new discoveries of various interconnections between social theories in, perhaps, a more comprehensive framework. Greater attention could be placed on timing. For example, how the processes of labelling (and continuous re-labelling) of an organisational activity as an innovation and sustaining a label unfold over time. Understanding timing as socially constructed may lead to deeper explanations of these processes in relation to unfolding sensemaking processes.

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Table 1. Personal profile of interviewees

Interviewees	Role in the organization	Years of experience	Nature of the company	Size of the company (number of employees)	Types of projects	Professional background
1	Project manager	30	Cost and project management consultancy	2500	General consultancy in construction	Quantity Surveying
2	Chartered civil engineer	13	Consultancy: Innovation agenda in the sector, performance improvement	250	Movement for innovation (M4I) project, civil engineering	Civil engineering
3	Planning manager	49	Consultancy, maintenance and construction	4349	Engineering, planning, risk analysis, design	Quantity Surveying
4	Group innovation knowledge manager	12	Consultancy, maintenance and construction	4349	Innovation research, technology program	Business and management
5	Business improvement manager	9	Improvement agenda, innovation, water division	3000+	Innovation and improvement	Business and management
6	Property services director	26	Register provider and a registered charity	15	Asset management, building, maintenance, budget responsibility	Architecture, chartered surveying
7	Planning manager	13.5	International consultancy and construction company	2902	Aviation infrastructure, planning programmes, innovation	Planning management
8	Head of business development and marketing	25	Specialist constructor	400	Training, skills development, innovation, construction	Business and management
9	Business development manager	11	Civil engineering	50,000	Organizational change, business development, marketing research, cooperative strategy	Organizational and business profession
10	Design and geotechnical manager	15	Civil engineering	50,000	Geotechnical engineering, designers and civil engineering contractors	Civil engineering

11	Senior advisor, development director	25	Consultancy, maintenance and construction	4349	Construction projects, economic infrastructure	Civil engineering
12	Principal programme supply chain manager	30	Client public organization: commitment and development of new services	2500	Movement for innovation (M4I) project, supply chain management, procurement	Quantity Surveying, construction management
13	Business director	33	Contractor, consultancy	8132	Projects on commercial sites, project management	Chartered building
14	Strategic business manager	10	Software Engineering corporation	490	Account management and business development for the contractor segment	Film and television
15	Strategic project director	15	Client public organization: operation deeply inside the client organization	50000	Major projects in rail and transportation	Roads and transportation
16	Chief Executive	11	Innovation agenda in the sector, performance improvement	<50	Innovation and improvement	Law
17	Managing director	30	Construction management and healthcare	50	Construction and asset management of buildings, facility management	Chartered engineering
18	Managing director	23	Regional building and civil engineering contractor	320	Development of homes, crematoriums, surgeries, industrial and commercial buildings	Civil engineering
19	Procurement operation manager	30	Public sector client construction organization	1000	Managing the operations at the procurement team	Surveying
20	Procurement director	25	Public sector client construction organization	1000	Development of procurement strategy and responsible for procuring venues	Chartered Surveying

21	Commercial director	20	Largest and most innovative manufacturers of plastic piping systems for residential, commercial and infrastructure sectors	1800	Technical and marketing functions	Business and management
22	Director and proprietor	27	Providing architecture, planning and management services to the infrastructure sector	15-16	Architecture. Construction engineering, civil engineering, construction methodology, cost estimation	Architecture
23	Director Supply chain initiatives manager	44	Consultancy	1  50	Value engineering, value management, partnering, project management	Surveying Chartered Building
24	Managing director	27	Specialist contractor	400	Business, development, innovation, construction	Chartered Building
25	Commercial director	35	Council, treasury, consultancy	<50	Design offices on sites, highway maintenance, bridge design, road design, business processes and improvements	Engineering Business and management
26	Director	40	Specialist contractor	<50	Engineering, management	Civil engineering
27	Head of Building Information Modelling (BIM)	25	Developing and constructing building and infrastructure	6000	Property portfolio, developing, constructing buildings	Information technology
28	Structural manager of Building Information Modelling (BIM)	25	Firm of designers, planners, engineers, consultants and specialists	450	Broad range of professional services, building and engineering	Engineering
29	Chief Executive	28	Innovation agenda in the sector, performance improvement	<50	Innovation and improvement	Physics

30	Senior Building Information Modelling (BIM) coordinator	13	Firm of designers, planners, engineers, consultants and specialists	450	Broad range of professional services, building and engineering	Electrical engineering
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Table 2. Storytelling and sensemaking

Examples described	Number (& %) of interviewees whose story invokes sensemaking processes		
	Social labelling	Retrospective labelling	Sustaining labels
Collective procurement of building work; building from concrete as fast as possible; building Information Modelling; new ways of reducing waste; the procurement model; designing a bridge; staff engagement	19/63%	21/70%	27/90%

**Figure 1** The explanatory model of the innovation from a sensemaking perspective (developed based on Weick *et al.*, 2010)