

EXPLORING THE LEAN BRIEFING PROCESS FOR EFFECTIVE DESIGN MANAGEMENT

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ABSTRACT

Exposing, articulating, understanding, defining and managing client requirements play important roles in project initiation, an essential component of design management. This study explores current briefing practices in the UK via interviews with eleven experienced practitioners. Analysis of the rich interview data revealed inefficiencies in briefing, which were related to the absence of an appropriate briefing roadmap, and uncertainty in terms of the concept of a brief. There was a desire from the interviewees for a better, more efficient and structured approach to briefing. Although none of those interviewed were working with lean tools, they were open to discussing lean principles and were keen to know how they could be applied. Thus this paper concludes with a lean briefing perception and a preliminary lean briefing approach, which is proposed as an alternative novel approach for effective design management. The study provides unique insights into the briefing process and contributes to the theoretical understanding and practical implementation of lean design management in AEC.

KEYWORDS

Briefing Practices, Client Requirements, Lean Briefing Processes, Lean Design Management, Value Stream.

INTRODUCTION

Developing the project brief is one of the most important stages in the design process. It is the stage where project requirements are exposed, articulated, understood, defined and managed. According to the RIBA Plan of Work (RIBA, 2013), briefing occurs at the front end of the project and plays an important role in the initiation and design of a project, and in ensuring valuable outcomes. However, inefficiency in the current briefing practices lessens the value added to the project (Green, 1996; Barrett and Stanley, 1999; Yu et al., 2007; El Reifi and Emmitt, 2013; Mryyian and Tzortzopoulos, 2013). The role of lean management theory in enhancing the efficiency of many processes across different industries, including the construction industry (Womack et al., 1990; Womack and Jones, 1996; Ballard and Howell; 2003), makes it applicable to briefing processes. In this article the authors report on the development of on-going research into the project brief from a lean perspective. The

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focus is on the outcome of an interview survey that took place following previous work published in the IGLC21 (El Reifi et al., 2013).

LEAN BRIEFING RATIONALE

The briefing process occurs at the front end of the project delivery chain. According to the RIBA Plan of Work 2013, it is a development between Stage 1 (Preparation and Brief) and Stage 2 (Concept Design). It initiates the project and influences other project design stages. Inefficiency in the briefing process is claimed to be a fundamental factor that contributes to inefficiency in project delivery due to the creation of inappropriate design deliverables (Green, 1996; Barrett and Stanley, 1999; Yu et al., 2007; El Reifi and Emmitt, 2013; El Reifi et al., 2013; Mryyian and Tzortzopoulos, 2013). Project briefs suffer from several difficulties which have been well established in previous research. These relate mainly to its processes: e.g., no generally accepted methods and procedures in terms of practices (Barrett and Stanley, 1999; Kao, 2004; El Reifi et al., 2013). Alternative views, remedies and suggestions on how to improve the briefing process, in terms of defining and articulating requirements and consequently client satisfaction, have continually been proposed (BS7832:1995/ ISO 9699:1994; Salisbury, 1998; Barrett & Stanley, 1999; Kamara and Anumba, 1999; Bouchlaghem et al., 2000; Kamara et al., 2002; Cheong et al., 2003; Smith et al., 2003; Shen, 2004; Kao, 2004; Kelly et al., 2005; Othman et al., 2005; Kiviniemi, 2005; Ryd and Fristede, 2007; Bogers et al., 2008; Blyth & Worthington, 2010). However, issues concerning the briefing process have continued to present challenges to the construction delivery process and the effectiveness of project brief has remained problematic (El Reifi and Emmitt, 2013).

Ries (2012) stated that, "Information is the designers' raw material, what is missing is the process that controls the raw material into a real world". Unfortunately, large amounts of waste in the design process comes from inefficiencies in the briefing process; this waste contributes, directly or indirectly, to the waste accruing in both the design and construction phases, as well as post occupancy. Aspects of design management focus on managing people and design stages; mostly these are outcome driven instead of focusing on the value of the outcome. Although lean design management was proposed as a new, value-driven approach to design management, it is still debatable and under research in terms of its definition and applications (Ballard and Reiser, 2004; Brookefield et al., 2004; Lichtig, 2005; Macober et al., 2005; Tilley, 2005; Jørgensen and Emmitt, 2009; Lee et al., 2012; Zimina et al., 2012). Jørgensen and Emmitt (2009) stated that: "The strategy should be to improve the manufacturability of a product through paying attention to the coordination of information, achieving an effective flow of information at the outset of the project, and the development of "design for production" solutions for technological, functional and operational requirements". One of the areas that needs focus in the current debate regarding lean design management is the project brief as it is part of the design process (El Reifi and Emmitt, 2013; El Reifi et al., 2013). However, the iterative nature of the design process, and the usually large number of changes made during the process, increases the complexity of the problems in briefing. Design is, by nature, an iterative process and the proposed solutions often also cause the client's requirements to evolve, such as when new business opportunities are exploited. Furthermore, the project team has to make rapid decisions on how to solve a specific

issue, and it is often difficult to note all interdependencies. Thus, a solution which meets one requirement can have a significantly negative effect on another crucial aspect. Brown (2001) stated that: “expectation and goals may change throughout the project, as the knowledge base develops and additional contributors join the project”. So, to ensure valued design outcomes, more focus is needed early on in effectively defining the project’s requirements in the briefing process through better understanding and value identification.

Ries (2012) stated: “What matters is not setting quantitative goals but fixing methods by which those goals are attained”. The process must facilitate learning what is the actual requirements of the project, not what clients say they want or what designers think they should have. Restructuring and developing current briefing process practices are essential to better capture the project’s requirements at the right time and bridge the communication gap between the client and the design team. Most existing approaches and research have treated changes in client requirements as a fact, and focus on how better to manage these changes while mitigating risks associated with the results. Or, they concentrate on the requirements of a specific client through introducing and employing different tools or approaches in addressing the current briefing processes (BS7832:1995/ ISO 9699:1994; Salisbury, 1998; Barrett & Stanley, 1999; Kamara and Anumba, 1999; Bouchlaghem et al., 2000; Kamara et al., 2002; Cheong et al., 2003; Smith et al., 2003; Shen, 2004; Kelly et al., 2005; Othman et al., 2005; Kiviniemi, 2005; Ryd and Fristede, 2007; Bogers et al., 2008; Blyth & Worthington, 2010). Eliminating waste requires a deep understanding of the system of value creation and then measuring aspects against the definition of value and waste (Emmitt et al., 2005; Pasquire and Garrido, 2011; Terry and Smith, 2011; Caixeta et al., 2013). None of the previous attempts to improve the process tried to deal with the origin or source of the problem and why it occurs, which is the aim of the on-going research project; which aims to create an efficient system for identifying project requirements based on the concept of lean management theory (El Reifi et al., 2013). The ways in which the process and people interact, and how and why they must adapt and work around each other need to be explored so that a new, lean approach to the briefing process can be developed to achieve better design outcomes.

RESEARCH METHOD

Given the fact that different practices and views, in terms of brief and the briefing process, do exist in current practices in the UK; it was felt that an empirical investigation employing an interview survey would be useful to elicit an understanding of current briefing practices, gauge industry attitude towards the current briefing practice efficiency, and identify room for improvement by exploring the different practices, experiences and views in terms of project brief. This investigation included a focus on a potential lean approach to briefing. The interview survey was designed to collect qualitative data and was planned to be unstructured.

Interviews were conducted with eleven practitioners working in design companies, a consultancy company, construction organisations, and a client’s in-house consultant service team; all were based in the UK. The sample included: 6 architects, 2 design managers, 1 interior designer and 2 chartered surveyors. NVivo software was used to analyse the collected data.

FINDINGS

The majority of the interviewees (6) worked for large organisations consisting of more than 250 employees. The annual turnover for (7) of the surveyed companies was more than £100m, while the rest was between £50m and £100m. The interviewees were involved in a variety of projects in the residential/housing, commercial, industrial, retail, cultural, education, sport and leisure centre, and health sectors, and in both new builds and/or renovation/refurbishment. They also had experience of both private and public clients. Their practical experience varied from 15 to 30 years.

The main findings of the interviewees are presented under three headings: briefing practice, briefing practice evaluation, and lean briefing.

BRIEFING PRACTICE

To explore the value stream for the briefing process, it was necessary to understand how briefing is carried out in the construction industry. So, the practitioners were asked to explain their experience of briefing practice and whether or not they had a formal process in place. Most of them stated that they had no specific process to follow; this depended on different project contexts. For example, one architect stated that, “It does depend very much on whether something is a particular type of building for a user client or if you are talking about a developer brief”. However, a few respondents claimed they aligned a briefing to RIBA’s Plan of Work stages. Others claimed this is the client’s task.

In the general practice they were used to, a brief comes from the client side in the form of a general statement. One architect stated that the brief might be, “I like the building you did over there”. How detailed a brief is varies on the type of client in terms of his/her experience in carrying out projects. Some clients are very detached and give a very basic brief, leaving practitioners to fill the gaps. Others, however, are very proscriptive. In usual operational practice, the brief is set as a document and is delivered by the client at the project’s outset. From that point, it is the duty of the job captain, or what is sometimes called the project architect, to take the brief and start to interpret it through design. Sometimes, some analysis has to be carried out to investigate precisely what the brief says. However, one architect claimed that, “it is a big task for the architect to carry alone”. One organisation mentioned that it has a workplace consultancy team which is responsible for carrying out the brief for most projects within the organisation. As a result of this, they have built up a good level of experience in this field. They do not achieve this independently but work as an integrated team with the project architect. This team also act as a kind of checking mechanism when the design proposals are offered.

The overall trend drawn from the interviewees suggested that the briefing process is developed sub-consciously, depending on the project’s context or the practice within the organisation. This could vary within one organisation, depending on the project’s architect and his/her experience with the brief. For example, a few interviewees mentioned that they aligned the process to RIBA stages and sign off gates. Other practices, however, carried out a series of one-to-one meetings to pick up messages and key points and list them in a written form. They then conduct a number of further meetings to evaluate the brief and get it signed off. Two interviewees mentioned that they received a type of standard brief from repeat businesses, housing associations, local authorities and retailers. Others mentioned that the brief might just

be an email while some practices gave out a bespoke brief that they offered specifically for smaller projects. One of the interviewed organisations carries out space occupation studies for office buildings and then benchmark these against similar buildings. One architect claimed: “I have been here for over 20 years. I have seen it done in many ways and, by the time things evolve, then I think you start to learn”.

The other challenge, in terms of briefing practices, which was stressed by many interviewees, is what they called the “competition brief”. One architect claimed: “Literally, we are given the brief. We have no opportunity to develop it with the client”. The way the construction industry market operates now, and how projects are secured, is mostly through competition. It was claimed that this operational practice hinders the efficiency of the brief as, in many cases, architects bid for projects where the brief is already part of the tender. For example, some tenders specify the design development stage as the start and no allowance is made in the submitted bid to revisit the brief. One architect claimed that, “In a competitive environment, it is hard to have a dialogue with a client because it is a more distant procedure and that is why it is perhaps unlikely that you will achieve a perfect building through competition.”

BRIEFING PRACTICE EVALUATION

Secondly, the interviewees were asked to evaluate current practice regarding briefs in terms of its efficiency and whether value added was obtained in the current processes and practice. They agreed that the industry was quite inefficient with regard to developing and responding to the brief because very little advice was available in terms of how to perform a brief. One architect claimed: “I think it can be very effective in certain examples and it can be ineffective in others. But I think it is the architect’s task to try and make it as effective as possible. People may be asking for something they do not understand and they may be asking for the wrong thing and you have to go through the process of the brief. Sometimes you need to interpret the interpretation because what you have got as a brief has actually been prepared on behalf of the client.” With the competition brief, as it was called by the interviewees, the scenario is even worse, as claimed by one architect who said: “It leads to an unsatisfactory outcome because the opportunity has been missed to look at why the brief is the way it is and you cannot add value which might be explored through other options and alternatives.” Another factor which was mentioned by one interviewee as a contributor to inefficiency in producing a brief was time. Often the brief is not given sufficient time and this can be noticed from merely looking at any construction programme. This was claimed by one architect when he said: “You will notice as an example 24 months to build a building but just 4 weeks to work it out. This is where an alarm bell must ring”.

LEAN BRIEFING

Interviewees were asked whether they had knowledge of lean and their views were requested about using lean management theory to facilitate and enhance efficiency in the briefing process. Although most of the interviewees had little knowledge and experience of lean management, they were open to the idea of using lean management principles to facilitate the briefing process. A few who had a background in lean management and were at a stage where they were looking to start using lean

principles in their organisation, were very attracted and open to the idea, as expressed by one architect who said: “I would really like to see lean construction go right the way through from commencement or inception to the end result.”

ANALYSIS AND DISCUSSION

Having analysed the perceptions of the respondents, it is clear that inefficiencies in briefing practices do exist; this observation is in line with previous studies (Green, 1996; Barrett and Stanley, 1999; Yu et al., 2007; El Reifi and Emmitt, 2013; El Reifi, et al., 2013; Mryyian and Tzortzopoulos, 2013). However, the value of this study is that it has identified the source of such inefficiencies in the brief that contribute to waste in the design, construction and eventually the final project outcome. The absence of a formal procedure on how to perform briefings, and uncertainty in terms of the concept of a brief, Figure 1, were identified as being at the heart of such inefficiency. Another finding from this study is that there is clearly room for improvement in practice; this was evident from the positive views which were expressed concerning the use of lean management theory. Analysis of the survey data revealed two important elements to the value stream of the brief at a strategic level: the brief concept and the format of the process, Figure 1.

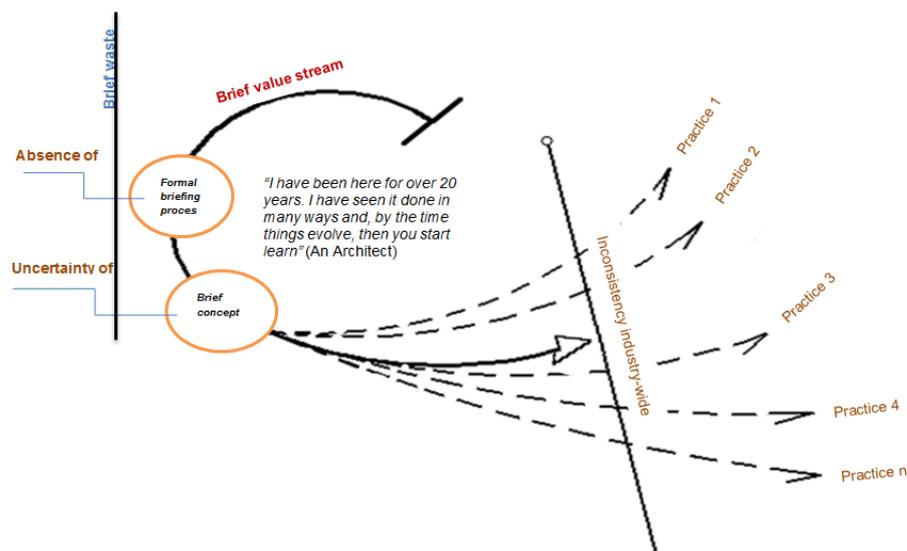


Figure 1: Main waste drivers against brief value stream

The main findings of the survey are discussed under two main headings, reflecting the main themes revealed by the respondents’ answers to the interview questions. These are: lean briefing concept and the lean briefing format.

LEAN BRIEFING CONCEPT

Several interviewees offered views of the brief concept and this, combined with their professional experiences in terms of briefing process practices, were helpful in forming a base from which a concept of lean briefing could be drawn. The following are some views expressed by respondents:

An architect stated: *“It is the start of a conversation. It is not like this: “Is this what you want? I have now drawn it whether you like it or not.”*

A design manager said: *“It is not just a process, it is an interaction. Therefore, the briefing is critical because that is where the interaction occurs, that is where the understanding occurs, that is where people are given the opportunity actually to have some input into the process.”*

An architect noted: *“There are lots of variables and people will say these are as valuable as treasure. It is exploring these because the solutions are never that easy to find.”*

Another architect said: *“What is the value? What does value mean? Is it an enjoyable space to be in? What does that mean? The briefing is about getting as far down into the detail as possible. You work out which is best together.”*

An architect stated: *“We have to work with them to understand what they may need, what the scenario could be. In this way, we can test those scenarios to work out what level of flexibility and adaptability they need in their project by having different scenarios. Then, we can find themes as we go along and put more information in.”*

A design manager said: *“The briefing process is also a learning or a research exercise; it is not just about listing things on a piece of paper. It is actually an experiment and it is crucial that we do experiment.”*

Another architect stated: *“Education is so important and the briefing is so much more than just a statement of requirements. It is an understanding of clients’ needs, how they work and who they are. It is also an explanation of those things to them; it is not just for the architect.”*

As can be seen, the views on the brief were articulated in various forms but they still offered the same basic concept. Indeed, the brief is a process and a value-added device because, at least, it offers somewhere that the project can be started. However, although firm agreement about the process was established by all the interviewees, as can be noticed from the views cited above, opinions on how long to take over the briefing were varied, as will be seen from views given by several interviewees about their experience of briefing. Further discussion on this can be found in the section in this paper on the lean briefing format.

A brief is not just a statement of a client’s needs or requirements; it is much more than that. Clients do not offer a solution to the problem. Instead, the client outlines the problem and then works collaboratively with the design team to arrive jointly at possible solutions that can be put into what is almost like an abstract diagram for the design task. A brief is more of a dialogue which involves discovering, interpreting and interacting to find an outcome by exploring several possible solutions. It is also about engaging people further down the line (the ultimate client) in a learning journey. This finding is in line with a previous study that examined user involvement in

healthcare projects (Caixeta et al., 2013). Thus, lean briefing view project brief as the outcome of an up-front education process to ensure delivery of a project's value.

LEAN BRIEFING FORMAT

In order to explore and develop a briefing value stream, it was helpful to find out about current practices, to learn by exploring the different experiences and views of different industry practitioners, and to make use of these. Overall, from the practices described by the professionals, below are the two best practice formats for the briefing process from the author's point of view.

Practice one

This format was succinctly described by an architect thus: "The briefing should be somewhere to start as there has to be a number of drivers at the beginning of the process". So, it is best to carry out the process in two stages. As an early element, a base brief is needed in order to set out the client's expectations; then a journey is necessary to explore the requirements. A final project brief is then required which outlines where the project starts and how it proceeds, as well as deciding what options will be adopted. This perception was best expressed by an architect who claimed that: "It is really important that we have that initial brief from the client so that we can always go back to make sure. Then, whatever happens, if nothing else, we can look back and ask if we are still meeting the intended goals and requirements because there is no point in having a building that is on budget, on time and that fits the environmental agenda and the climate, etc. if it is not actually fulfilling the requirements of the client. This is because it is, in fact, fundamental that we are there to provide a product for the client."

Practice two

This was perfectly explained by an architect as follows: "A brief is not like a completely tailored suit with exactly the right dimensions." The brief has to be something that has the flexibility to allow change, the flexibility to grow. Thus, it is constantly evolving in terms of what needs to be done. So, the brief constantly changes by adding layer after layer, adding more and more information to achieve a brief that consists of a number of different levels. One chartered surveyor claimed: "The more detail the brief has, the more chance you have of achieving a satisfactory project outcome. Actually, I think the brief starts at a very high level and then should be developed to a stage where there is enough information to avoid unnecessary tasks and a lot of reworking." The brief's levels could be organised according to RIBA design stages but including a time line should be avoided as this can be difficult since there are always different types of client (experienced or inexperienced, for example). It is perhaps best to keep the brief aligned to the RIBA free stages which use milestones. This would make it obvious to the client what the level of certainty is at each different stage. In addition, two check points are also required: one when the project goes to planning and the other when it goes to tender.

However, while both views have their own advantages, the advantages of practice one far outweigh those of practice two as lean management is more to do with keeping everything in a line while moving effectively through each stage. Although none of the interviewees reported that they perform briefings according to the briefing

stages approved by the RIBA, it was noticed that practice one was still the closest to the RIBA system which is another advantage although more clarification and arrangements need to be put in place. This means that the value stream of the brief process should be carried out in line with the official brief stages in the RIBA plan of work. The challenge is to confront inefficiencies, as is always the case in the design process when it is being conducted from a business point of view, which is usually so. What may be forgotten is that some aspects which are claimed to be wasteful have to be lived with because it is part of the design process. Sometimes, several options must be considered before arriving at what is actually needed. During the concept design, where the project brief needs to be finalised according to RIBA Plan of Work, there is a chance for ideas to be discussed, shown, adapted and explained; most importantly, it is at this stage that there should be a dialogue with the client. It is very difficult to include subjective information in a brief and the more objective the brief, the easier it is for the client to explore and compare options before actually embarking on the design process itself. One design manager stated that, "Effective does not mean it is done quickly or cheaply. At the end of the day, you need to have a product which everybody wants." So, some work needs to be done because it is desirable, not because of inefficiency. This is because the brief should ensure that the client knows what he/she is asking for. Design often offers several answers, not just one, and several could be equally valuable so the challenge is to find which is most appropriate in the circumstances.

A brief is a brief and a design is a design. The interaction between a brief and a design is that a brief sits as a reference for a design. However, what is most important that the brief should be a front-end process which deeply explores opportunities and understands who the client is and what he/she needs, as well as revealing how those needs will be answered. Conversely, in most projects, there will be constraints, targets, building regulations and planning conditions that effectively limit and define the brief. These can limit the options that can be considered but are also challenges to creativity. One architect stated that, "It is nice when the brief remains fairly well accepted as it is and when it has not been coloured by any other decisions so you can try and really see what they (the clients) need and what they are aiming for before you start introducing designs which may start to lead you in a direction which, in the end, is not exactly what is the best for the client."

What is more, there should be an element of consistency industry-wide in the early stages and this issue needs to be addressed through a formal system. The RIBA Plan of Work sets out the stages of the brief but it fails to address the processes. A few interviewees suggested that Continuous Professional Development could address this. A high-level format for how to carry out the briefing process would improve consistency throughout the industry. A kind of a road map is required that will legitimise the whole process. The most important aspect, however, is that it needs to be bespoke rather than a standard format as no single unadaptable briefing process can fit every type of building and every type of client, even within one sector of the construction industry. Each type of building will necessitate some adaptation in the detail of the process because different contextual factors will affect it. An example of this was mentioned by one architect who worked on two lab buildings. These were very similar in context but one took a huge amount of work and more effort and time to reach the required level while the other was easier to accomplish because the

project manager had expended more effort at the start. The architect claimed: “It just meant we had to push harder and to work harder. We had to put in more effort and more time; it was a really, really tough process.” This work took place in one sector but if a different building, an office building or a museum, is considered, the briefing process is different in each case. The same architect stated that: “It is a different language. It is as if you are speaking a completely different language with very little similarity to another.” Therefore, it is important to make sure the process is open enough to be adapted to address different needs, different types of project, different timetables, different clients and different organisations. This is expressed in Figure 2.

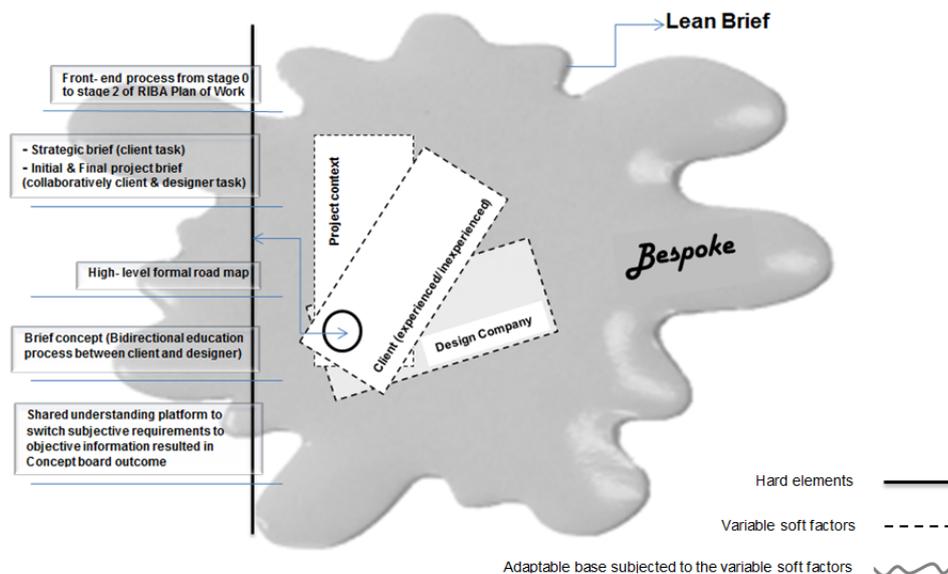


Figure 2: The basis of Lean Briefing Process Model

CONCLUSION

A project brief is planned to be the outcome of a process that occurs right at the start of a project. Officially, that process develops from Preparation and Brief (Stage 1) to the Concept Design (Stage 2) (RIBA, 2013). The main outcome of the interviews revealed that current practice is different in its approach. This is due largely to the absence of an official format on how to carry out the briefing process, and uncertainty in terms of the concept of a brief. This is the major source of inefficiency and waste in the briefing process that hinders its supposed added value. Furthermore, the research identified the brief as the place where the project’s value is defined. Using lean management theory to improve the efficiency of the brief was explored and was welcomed by industry professionals. The results suggest that the UK construction industry requires a high-level, official, bespoke format for the briefing process; a lean briefing process with lean briefing being an up-front education process which ensures project value. It is believed that this novel approach may help to provide consistency across the industry, provide a uniquely efficient briefing process which is needed to ensure a deliverable, value-added design, and contribute to the theoretical understanding and practical implementation of lean design management in AEC.

Further work to develop a lean briefing process model will be carried out in the light of insights gained from this research.

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