

# The Influence of Social Context on Co-Design Practice Between Indonesia and the UK

# Lancaster University



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# **Declaration**

This thesis has not been submitted in support of an application for another degree at this or any other university. It is the result of my own work and includes nothing that is the outcome of work done in collaboration except where specifically indicated. Many of the ideas in this thesis were the product of discussion with my supervisor Professor Nick Dunn and Professor Leon Cruickshank.

Excerpts of this thesis have been published in the following conference manuscripts and academic publications.

## **Conferences**

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## **Publications**

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## Abstract

Co-design has its roots in the participatory design tradition in Scandinavia. The participatory root emphasises the active engagement of the user in the design process. The Scandinavian context and in general Western societies, especially with their democratic traditions, are deemed appropriate for the application of co-design methods. When co-design is applied outside the Western context, adjustments have to be done to respond to different contexts. Comparison between the context of Indonesia and the UK is employed as case studies in this study. Indonesia is considered to have a different context from the UK, where the value of democracy is still in the development stage, and the influence of the authoritarian regime is still strong. This study seeks to understand better how the influence of the different social contexts might inform the application of co-design. Furthermore, this study also uses those different characteristics of the co-design to develop recommendations for an alternative framework of co-design methods that are appropriate for the Indonesian context.

The case study research was conducted on co-design projects both in Indonesia and the UK. In Indonesia, field research was conducted in Jakarta, Solo and Malang. While in the UK, field research was held in Lancaster, London and Worthing. The field research involved the member of the community, designers and other stakeholders involved in the co-design process. Field studies were conducted to determine the effectiveness of co-design based on four criteria: decision-making power, collaboration, flexibility and outcome-focused. Furthermore, the study also

seeks on how the influence of contextual factors on the effectiveness of the co-design process.

This study found that the most influenced criterion by different context are decision-making power. The UK case studies have indicated the shifting of the designer's power in the decision-making process. In contrary, in Indonesia, the decision still led by the designer. Moreover, the findings of the other criteria in both contexts are equally effective. Even so, there are differences in contextual factors that influence the effectiveness of each of these criteria. Furthermore, from the comparative analysis of the two contexts, a co-design method framework for Indonesia was developed. The lesson learned process from the advantages and disadvantages of implementing co-design in both contexts resulted in an 8 point co-design framework recommendation.

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## **List of Abbreviations**

ASB	: Anti-social Behaviour
ASF	: Architecture Sans Frontieres
BTC	: Beyond the Castle
DCLG	: Department for Communities and Local Government
DVD	: Digital Video Disc
EBCD	: Experience-based Co-design
HDGC	: Human Dimensions of Global Change
IOM	: International Organization for Migration
JAD	: Joint Application Design
KCM	: Komunitas Ciliwung Merdeka (Ciliwung Freedom Community)
LICA	: Lancaster Institute for the Contemporary Arts
MHCLG	: Ministry of Housing, Communities and Local Government's
NGO	: Non-Government Organisation
NHS	: National Health Service
NNC	: National Network for Collaboration
PD	: Participatory Design
PROUD	: People Researchers Organisations Using Design
SHORE	: Sussex Homeless Outreach Re-Connections Engagement
UCD	: User-Centred Design
UNICEF	: United Nations Children's Fund
UPC	: Urban Poor Consortium
WCHP	: Worthing Churches Homeless Projects



# 1 Introduction

This chapter provides an overview of the research aims of this study. It presents the motivation behind this research, followed by clarification of the research problems that identify the existing gaps in knowledge. The research questions needed to address these gaps are then established, followed by the research objectives. The chapter then provides the research context, background and explains the significance of this study. This chapter also describes the research design and structure of the thesis.

## 1.1 Motivation

Acre (2004) has suggested that co-design is believed to have advantages over traditional design processes. Traditional design processes are here understood as those which are designer-centred models. He stated that co-design is recognised as being better in understanding user needs compared to traditional design approaches. Co-design is also considered able to accommodate the views and roles of users in determining design decisions. Therefore, compared to traditional design processes, user involvement in co-design has been proved to be more comprehensive. According to Carroll and Rosson (2007), the importance of user involvement is due to two factors. First, morally, the user must be heard, as one who is affected by design.

Second, pragmatically, user involvement is believed to result in a more effective design.

Co-design is rooted in the Scandinavian participatory design (PD) tradition (Sanders and Stappers, 2008). One of the PD principles that characterise co-design is the equal role between designers and users in their creative contributions in the design process. This equality could be traced back from the tradition of democracy in Scandinavia, especially the efforts to democratise the workplace, which started by the more intensive involvement of the trade unions in the 1970s (Ehn, 1993). Since the positive outcomes of the implementation of co-design in some Western countries, some initiatives have been tested outside of a Western context. Initially, the experience of implementing co-design outside of Western countries has mostly been carried out within public sector services. One of this project's findings confirms that there are contextual influences that must be considered when attempting to implement co-design processes in different contexts. Puri et al. (2004) in their investigation of three case studies of health systems in South Africa, India and Mozambique, concluded that different participatory approaches should be applied in each context. They emphasised the democratic principles of PD cannot be applied directly in those contexts. Husaain et al. (2012) argued that in Cambodian society, the culture of compliance with the leader makes implementing direct participatory processes difficult. While Yasuoka and Sakurai (2012) in evaluating a co-design project in Japan found that the influence of Japanese culture - a very hierarchical work culture and a tradition of being obedient to orders from seniors would be a significant challenge to apply the co-design process. That literature underlines how cultural differences need to be considered and addressed when applying the co-design method

The idea of involving citizen participation in development planning also presents significant issues in Indonesia. The pioneering participatory ideas in development planning were initiated by several individual architects such as Romo Mangunwijaya with Kampung Kali Cho-de housing arrangement which was completed in 1985 (Radi, 1992) and Hasan Poerbo with agricultural empowerment in the village of Cigaru in 1980-1989 (Poerbo et al., 1995). At that time, in a centralised political climate, a participatory approach was difficult to conduct in those contexts. It is crucial to know that Indonesia experienced a period under the rule of an authoritarian regime for 32 years from 1965-1998. In this period, development planning was carried out using the top-down approach through the technocratic model, where the government-appointed experts who designed the development plans. This condition prohibited any opportunity for citizen involvement in development planning. However, during such centralised power, attempts at a participatory approach in development planning were initiated. One example was Mangunwijaya, the informal settlements project on the riverbank of the Code, Yogyakarta, around 1985 (Sunaryo, 2007). In this project, housing and environmental planning were conducted with the engagement of the residents. This project did not involve the government because instead of addressing the housing problem, the government always tried to evict settlers from the area (Srisadono, 2015). Another project was carried out by Hasan Poerbo, in West Java, who conducted rural development pilot projects using a participatory approach focused on building water treatment and irrigation systems for farming (Salim, 2012).

After the collapse of Suharto's authoritarian regime, democracy began to flourish. Experiments in development through participatory approaches are increasingly being carried out. It was noted that several architectural NGOs, such as Arkom (Community Architecture) and ASF (Architecture San Frontieres) began to engage with citizens in

their environmental design project (Fitrianto, 2017). Conducting participatory projects in the still centralised policy atmosphere, indeed, face many obstacles, for example, a centralised bureaucratic culture, and passive rather than active community participation. Although the government has tried to involve citizens through the musrenbang (participatory planning and budgeting program), the implementation is still problematic (Sindre, 2012). Feruglio and Rifai (2017:5) expressed the positive impact of musrenbang.

The musrenbang process allows citizens, at the neighbourhood, district and city level, to express their priorities for development projects. Other than voting for their political leaders every five years, musrenbang is a rare opportunity for many citizens to express their needs and desires for the communities in which they live.

The bureaucracy is not yet detached from the past top-down approach in the development programmes. This circumstance indicates the obstacles to involving citizens in the participatory development process.

However, there is a need for implementing participatory approaches for development planning in Indonesia. One of the ways this may be addressed is through the application of co-design methods in development projects. However, there is little understanding and experience in carrying out co-design practice. Besides being conducted by NGOs, some academics also organise studies on co-design practices, mostly carried out in the form of Participatory Action Research (Widyaningsih et al., 2008; Rahim, 2015). These studies provide insights into the experience and evaluation of co-design projects in several regions in Indonesia. However, to date, there has been no attempt to formulate a comprehensive framework that could be an alternative to implementing co-design in the Indonesian context. Puri (2004) stated that different contexts affect the implementation of co-design. Thus, an effort to understand the influence of the contexts on co-design practices needs to be done. Based on this

condition, the research presented in this thesis was conducted as an effort to understand the influence of contexts on co-design practices.

This study compared the experiences of co-design in two different social contexts, to better understand how the contrasting contexts affect the application of co-design. In achieving this aim, the study considers two contexts, Indonesia and the UK for comparison. Indonesia was chosen because, in addition for being the researcher's home, the researcher has also been observing the growth of Indonesian public participation in design activities from the beginning, which encourages the desire to deeper investigate the co-design process. Meanwhile, the UK was selected because of it being considered as representative of a significantly contrasting context with Indonesia, i.e. they are respective exemplars of Western and Eastern cultures. In addition, the UK is considered mature in implementing co-design methods at various project scales. The findings and lessons from the two case studies contexts were contributed to building an alternative framework for co-design in Indonesia.

## 1.2 Research Problems

The practice of involving citizens in development projects has been growing since the decline of Suharto's regime. This activity involves NGOs, groups of architects, academics and communities, independently. In some projects, the government is also involved, but in general, the model of community involvement is not encouraged by the local government. There have even been instances where participatory projects were actively discouraged by the government, for example, by complicating funding on the grounds of the budgeting system that does not support participation models (Sigalingging and Wario, 2014). Although some participatory projects have been conducted, there have not been any attempts to shape any co-design framework that

could be employed as a guide for implementing co-design in Indonesia. Each project has been carried out with its method from trial experience with co-design. Those projects also receive references from several projects that were considered successful in the past, such as the Code River project by Romo Mangunwijaya in Yogyakarta.

As a result, often the constraints that arise on one project may also be experienced by other projects, without the opportunity to learn from each other. For example, when Mangunwijaya organised citizens to improve the environment on the Code river in 1985, the Yogyakarta city government suspected his motives. Distrust and even obstacles from the authorities continue to this day. Bureaucratic obstacles, a community's internal conflicts, and a lack of understanding of participatory methods can provide valuable lessons for the implementation of subsequent projects. These cause frustration for the actors who are trying to implement co-design practices. In addition, it also raises pessimism among other stakeholders about the implementation of a co-design approach in Indonesia.

Therefore, research to comprehensively investigate the effectiveness of co-design projects that have been conducted is increasingly essential. The results would be beneficial to establish an alternative framework of co-design in Indonesia.

### **Research question:**

To address the research problem, two main research questions are set for this study:

- What would be a context-appropriate co-design framework for Indonesia, and how is this distinct from a UK context?
- How do the distinctions affect the development of an alternative framework of co-design in the Indonesia context?

## Objectives

This study investigates the implementation of co-design in two different contexts. The objectives of this study are:

- To obtain an understanding of the impact social context has upon the co-design process
- To recommend a framework for co-design in an Indonesian context

It is intended that the methodological framework resulting from this study can be a beneficial alternative for the implementation of co-design practices in Indonesia

### **1.3 Overview of the Indonesian and UK context.**

This overview of context focusses on the explanation of socio-cultural and political conditions that are relevant to the application of co-design practices.

#### **Indonesia**

After gaining independence in 1945, Indonesia experienced political turbulence and instability. The climax was the occurrence of violence in 1965, which brought down President Sukarno and led to Suharto becoming president. The event was the starting point for changes in Indonesia's political, economic, social and cultural order. Although Suharto was said to have run a democracy - there were elections and more than one political party, in reality, it was a form of pseudo-democracy (Shiraishi, 2006), similar to an authoritarian state model. In such a context, citizens have no chance to be different.

During Suharto's reign, infrastructure development was one of the priority programmes, although in general, it was centralised on the island of Java (Rock,

2003). Development was carried out with a top-down technocratic approach, thus eliminating the participation of the local community (Rock, 2003). Rock (2003) expressed that Indonesian society was familiar with the practice of *gotong royong* (mutual assistance), that gave all elements of society a role to participate. However, during the Suharto administration, this practice was reduced to merely being a campaign of morality without any real internalisation in development policy. In addition, the state-police approach, in which the state closely monitors citizen activities, limited the public's ability to express or voice opinions which potentially criticised how the government worked.

In 1998, Suharto stepped down from power. This event provided the momentum needed to open the gate to the democratic transformation in the country's political order. In the development plan policy, decentralisation of power began to be implemented by sharing the authority of development into the regions. Community participation began to flourish, even though it was still minimal.

In addition to the political climate, the Indonesian socio-culture should be considered in the application of co-design practice. Although contemporary Indonesia is a multicultural society, traditional cultures are still visible in daily practice (e.g. *gotong-royong*, *sambatan* in Java, *subak* in Bali). Therefore, the implementation of co-design practices needs to respond to the traditional culture of the community where the practice takes place as well as account for the larger-scale government influence. In this study, all of the case studies of the Indonesian context are on the island of Java, so rooted in Javanese cultural traditions.

Another factor that needs to be considered is the designers who conduct co-design practice in Indonesia. To date, the development of participatory approaches in the

practice of designing in Indonesia is still merely jargon and used by the government to give the impression of involving the community (Fitrianto, 2017). Likewise, design education of co-design methods is rarely delivered in design schools. Therefore, the inexperience of local designers becomes part of the challenge of implementing co-design projects in Indonesia.

## **UK**

After World War II, the British government intensely carried out infrastructure development. The aim was to rehabilitate the country's conditions as quickly as possible. For this recovery, the centralistic model of the development approach was implemented — the authority to determine which areas had to be built, developed or preserved was with the central government. The Town and Country Planning Act (1947) was enacted to regulate the development plan. In general, as part of the post-war political consensus, the development would be entrusted to the 'experts' - town planners. At that time, the absence of citizen participation was not recognised as a concern because town planners were believed to be able to represent the interests of citizens and work towards realising people's aspirations (Cullingworth et al., 2015).

In 1960 the post-war political consensus began to collapse, there was dissatisfaction with the government's power in making decisions. A planning system that was believed to be objective and neutral, eventually, was considered failed. This condition encouraged the public to be more involved in the development planning process. This aspiration prompted Arthur Skeffington MP, through a committee of Public Participation in Planning, to hold a study in 1968. A year later, the report was published as Skeffington's Report - People and Planning. The report especially mentions the need for the involvement of local communities in the development plan

(Shapely, 2011). Based on the report, in subsequent years, development regulations began to accommodate the involvement of local communities. The involvement of local people was accommodated in the practice of consultation through meetings and exhibiting plans by the city or county councils. This led to the implementation of the Localism Act in 2011. This regulation emphasised the obligation to involve local people in urban development planning.

The above chronology explains the beginning of the tradition of the local community's involvement in public planning. The people experienced involvement in public consultation meetings. There is a mechanism provided by the system for locals to submit objections, complaints, or criticisms of a development plan that will be carried out. Although Townsend and Tully (2004), consider the public consultation meeting unable to provide real power to citizens, these activities have built a tradition of public involvement in urban planning.

In addition to the regulatory aspects, the practice of public participation in the UK is also supported by the well-established tradition of democracy. Unlike Indonesia, which only recently experienced democracy, British society has a much more long-time tradition of democracy. Freedom of opinion, as one of the principles of democracy, has become part of the UK culture (Weede, 1990). This democratic ecosystem no doubt influences the co-design practice.

The idea of user involvement in design has developed since the 1970s in England. It began with experiments in Tavistock Industries (Asaro, 2000). From these experiments, the involvement of users in the design process began to be developed. In the following years, the importance of involving the users has been recognised among

British designers. The readiness of designer resources to conduct co-design processes is considerably better than in Indonesia.

## **1.4 Relevance and Significance**

This thesis contributes to our knowledge of co-design in general, especially regarding developing countries, and more specifically to Indonesia. This participatory approach is essential to develop. Considering that the Indonesian government is starting to provide opportunities for participation by citizens, a methodological framework for co-design needs to be established. Besides, the research contributes to enriching studies of the application of co-design in a different context, specifically investigating the various similarities and divergences in approaches between West and East. In addition, this research also enriches references for studying the co-design method, especially in developing countries, with contexts that are similar to Indonesia. This study also provides a comprehensive understanding of the current implementation of co-design in both contexts that are influenced continuously by socio-political factors. For Indonesia, it is beneficial to understand the co-design practice within the democratic transition climate. For the UK, although the experience of co-design is already well established, investigations about the effect of the context on co-design are still needed.

It is hoped that the findings of this study will be valuable for those who need to develop co-design methods, such as governments and NGOs. The government can adopt the principles of the framework as a basis for urban area development plans that give more space for citizen involvement. For design education, the framework can be used to develop a user involvement methodology in the design curriculum that is

appropriate to the context of Indonesia. This material is essential as an effort to strengthen the aspects of social responsibility in the design curriculum.

## **1.5 Research Design**

The thesis research strategy is based on the comparison of co-design practices in two different contexts, Indonesia and the UK. This thesis progresses detailed empirical investigations of co-design practices in both countries, focusing on investigating the influence of contextual factors on the effectiveness of co-design practices.

In order to understand the context's influence on co-design, first, the theoretical framework has to be established. This framework aims to define the contextual factors and the criteria that influence and shape the characteristics of co-design.

This thesis examines three case studies in Indonesia, in the cities of Jakarta, Malang and Solo compared to three cases in the UK, in the cities of Lancaster and London, and the town of Worthing. The case studies in each context are compared to conclude the characteristic of co-design from both countries.

The comparison of similarities and differences with the very different contexts contributes to constructing a methodological framework of co-design for Indonesian context

## **1.6 Structure of the Thesis**

This thesis is divided into nine chapters. This chapter is an overview that consists of motivation, explanation of research problems, questions and objectives of research, significance, the background of the research context, and structure of the thesis.

Chapter 2 is a literature review. This chapter describes the idea of co-design, from the initial history and background of its emergence to the various terms and concepts that intersect with co-design. This chapter also explores the development and application of co-design in the context of Western countries, followed by its distribution outside the Western context.

Chapter 3 presents the theoretical framework employed in this study. This chapter sets out contextual factors and co-design criteria which shape the character of co-design. Furthermore, it is most important to explain how the framework constructed from the factors and criteria is employed as the theoretical basis for conducting the research.

Chapter 4 consists of the research methodology. This chapter explains how this research was conducted, from defining the research methodology used and the rationale for choosing the method. It also presents the selection of case studies, data collection methods, and data analysis.

Chapters 5 and 6 deliver empirical investigation reports from both contexts. Chapter 5 presents reports from the Indonesian context, while chapter 6 presents those from the UK context. This chapter begins with the exposure of the socio-cultural and political conditions, which would be the background of the contexts. Furthermore, this chapter focuses on investigating the influence of contextual factors on co-design practices based on the respective established criteria. Analysis within the context was carried out by comparing findings between each case studies, and ultimately the results led to the conclusion of the chapter.

Chapter 7 provides the comparative analysis from the result of the investigation of both contexts. The analysis was done by examining the similarities and differences in the effectiveness of co-design and what factors influence these differences. In the end,

this chapter will mainly present an overview of the characteristics of co-design in both contexts.

Chapter 8 presents efforts to establish an alternative co-design method framework that is appropriate for the Indonesian context. The framework was constructed by combining the learning from the experience of co-design in both contexts.

Finally, Chapter 9 provides conclusions based on the key findings, establishes the contributions to practice and theory, then identifies the limitations of the research and concludes with recommendations for future research.

## 2 Literature Review

This chapter reviews the relevant literature and research concerning the application of co-design from different contexts. The first section presents an overview of the evolution of co-design methods and their development over time. This is to provide the basis for understanding the concept behind the co-design approach, which will be the formal object of investigation in this thesis. The second section deals with the experiences of implementation of co-design in a Western context. This review is to explore those precedents arising in the implementation of co-design in Western society.

The third section investigates the experience of implementing co-design in non-Western cultural contexts. This is to explain the challenges, barriers and solutions offered to the adaptation of the implementation of a co-design approach in such contexts. In the final section, the conditions of the Indonesian context are presented with specific reference to the collectivist culture, the development of democracy, and the current conditions that need to be considered in the implementation of co-design. The review and analysis of the research in the field of co-design contribute to understanding the complexity of the practice of co-design in different contexts.

## 2.1 User Involvement Notions

In discussions on co-design, there are various terms that are often considered similar or misinterpreted as being co-design. These ideas include PD, user-centred design, democratising innovation, and social innovation. This section discusses these various ideas to clarify understanding, positioning, and convergence of each idea. This discussion is preceded by an explanation of the earliest ideas about community involvement in determining public issues, followed by an explanation of various ideas that emerged and were raised in the development of the principles of civic engagement and ends by defining what is meant by co-design.

The idea of citizen participation in community decision-making can be traced as far back as Plato's Republic. Plato's concepts of freedom of speech, assembly, voting, and equal representation have evolved through the years and spread to many countries where the basis of democracy applied (Sanoff, 2011). The concept of Plato's democracy emphasised the importance of unity in a state where the role of citizens had to be specified according to their skill (Habib, 1998). This concept eventually, would limit the participation of citizens, because there was a group of citizens whose role was to act as the rulers, and others were ruled. This condition was rigid, and it was difficult to exchange the roles.

On the contrary, Aristotle's concept of democracy emphasised state plurality. Aristotle emphasised the freedom of the role of citizen participation; further, there was a possibility in the rotation of roles whereby citizens could take turns to rule and be ruled. This would enable the power-sharing process, which would be the principle of participatory democracy (Winthrop, 1978).

The basic of democratic values then spread throughout the world, especially to countries that adopted democratic systems, for example, in Western Europe and North

America. Thus, the roots of the emergence of PD started in these areas. This idea of participatory democracy is an essential aspect of PD practices, and without democracy, PD will only be an applied method without any political ideals (Kanstrup, 2003).

In northern Europe, particularly in the Scandinavian countries, the idea of user involvement in designing a system stemmed from the spirit of the leftist movement that spread among the unions. It grew in the early 1970s in Norway when computer professionals, union leaders, and members of the Iron and Metalworkers Union strove to enable workers to have more influence on the introduction of computer systems in the workplace (Winograd, 1996). This practice of collective creativity in design went under the name of PD (Sanders and Stappers, 2008).

### **2.1.1 Participatory Design (PD)**

In this early day around the 1970s, PD focused on democratisation in the area of the workplace. Ehn (1993) stated that two principles characterise Scandinavian PD, politics and technology. His statement was based on his involvement in some projects of the early development of PD in Scandinavia, among others were the DEMOS and UTOPIA projects. The DEMOS project, took place in Sweden in 1975, was a project involving the union, industrial democracy, and computers. An interdisciplinary research team conducted this project and was supported by the Swedish Trade Union Confederation. The purpose was to identify possibilities for unions to influence the design and application of computer-based systems in companies. While the UTOPIA project, carried out in 1981, was a collaboration between the Nordic Graphic Worker Union along with Danish and Swedish research teams. If the DEMOS project aimed to support the democratisation of the design process, then the UTOPIA one was a

complimentary one about designing tools and environments for skilled work and good-quality products and services.

From his research based on the UTOPIA and DEMOS project, Ehn (1993) mentioned that the first principle of PD was politics. PD raised questions of democracy, power and control at the workplace. He underlined the democratic conditions in the industrial sector in Scandinavia, which was a prerequisite to the implementation of PD in industrial environments. The second principle is technical, experiences in the Scandinavian industry have proven the idea that the participation of the skilled user in the design process leads to design success and high product quality. Therefore, he suggested that the technical skills of the participants are critical issues.

In his report, Ehn (1993) stated that the results of the design process in DEMOS and UTOPIA and other work-oriented projects were not satisfactory. That decentralisation of decision-making and a participatory approach to the design process was not sufficient. He identified that the strength of modern-management systems caused the failure. The management would try to embrace the union, stressing that the conflict in the design of work systems was simply due to misunderstanding and can be solved with more quantitative analysis action (recalculating wages and facilities received by the workers). Another action is by inviting a compromise to reach an understanding as an effort to reduce workers' demands. Instead, Ehn believed that the conflict must be solved by increasing the role of workers in the design process. Here, it can be understood that the political aspect, such as the spirit of emancipation was very influential in the initial period of the development of the PD.

Other notions of the principle of the PD were given by Gregory (2003), who explained three principles that distinguish Scandinavian approaches, namely, deep commitments to democracy and democratisation; discussions of values in design and imagined

futures; and how conflict and contradictions are regarded as resources in design. Compared to the opinion of Ehn that the state of democracy in Scandinavia had been a prerequisite for conducting PD, Gregory's is slightly different. Gregory argued that PD developed along with the post-war political situation, where the movement striving for industrial democracy in the work environment encouraged the involvement of union and "shop floor" workers in improving the quality of work-life (Gregory, 2003:64). In short, the dynamic of democracy enabled the development of PD. Therefore, a situation in which democracy can prevail (not necessarily stable) is one of the principles of PD.

Although skilled participants have proven to be useful in a participatory process (Ehn, 1993), the participation of workers should not only be seen in terms of their skills and experience. Their participation should be acknowledged and encouraged because of their interest in the outcome of design results (Spinuzzi, 2005). Gregory (2003) identified how system design is not merely an engineering and commercial arena, where technical expertise is privileged above other knowledge. Instead, democratic values in the form of the right of worker involvement must be given space in the discussion of design development. She explained that methods for PD include techniques for involving future users, people who know about all parts of the development process. Thus, worker involvement should be seen as something natural in this participatory process.

Outside the Scandinavian countries, at the same time in the UK, researchers at the Tavistock Institute, London, also paid attention to the issue of democratisation in the workplace. However, unlike the Scandinavian approach to PD, which was oriented to the union empowerment through "collective resources", the British researchers focused on autonomy in workgroup organisation through "socio-technical systems

design" (Asaro, 2000: 345). The core of the socio-technical approach to the system was to give freedom to the work units to regulate the rhythm of their work, with control over the technology used. Thus, the democratisation of the workplace was achieved by the worker role to control, and interference of the technologies used in the production process (Sawyer and Jarrahi, 2008). Although this approach has been criticised by Marxist thinkers (Asaro, 2000) because it contains the spirit of pure capitalism (exploitation of workers), it provided a more significant opportunity for the PD.

In their discussion on the development of PD after the 1970s, Szebeko and Tan (2010) focused on the movement of design methods that seek to strengthen the role of the designer with codifying the design process more rigorously. This has weakened the PD movement, although not completely stopped it. In business, as competition intensified, it prompted a corporate focus on production methods and business process reengineering. This development resulted in the focus on the needs of workers, and the quality of their work-life was reduced. In the late 1990s, although it was still growing in Scandinavia, only a few corporations agree to adopt PD and socio-technical design approaches (Sawyer and Jarrahi, 2008).

In the 2000s, ideas about user involvement in the design process resurfaced (Szebeko and Tan, 2010). Unlike the situation in the 1960s, where PD appeared and developed in order to improve democracy in the workplace, the return of PD was driven by a shift in orientation towards the design of everyday life and the public sphere (Björgvinsson et al., 2010). Besides, the shift of orientation is also due to the development of social technology design, and social advancement of technology could change the way people contribute to the design process (Hagen, 2001). Before, the design process was locked in the workplace and the studio, but this shift brings

innovative design progresses to people's daily lives. It becomes increasingly pervasive and more public and personally supported by domestic technologies.

From both the European PD approaches above, it is understood that PD started with the democratisation of the workplace. This might be why political tones always appear in every effort to implement PD. There is a kind of agenda to advocate for the rights of users in dealing with producers. As Asaro (2000:277) stated:

The participatory design emerged at the convergence of two approaches: (1) a critical project which sought to rectify political imbalances caused by technologies in the workplace and to protect workers from technological change, and (2) the evolution of technological rationalism which sought to increase the success and efficiency of new systems.

European PD, with its focus on democracy, faced many obstacles in this development and grew into an ideological approach, rather than a pragmatic technical approach (Asaro, 2000). These conditions made it difficult for developing European PD elsewhere, for example, in North America, where PD was only viewed by the public in terms of the socio-political condition in Scandinavia. Therefore, North American researchers took their own path to involve the user in the production process.

### **2.1.2 User-Centred Design**

In the late 1970s, researchers from IBM in the United States developed the Joint Application Design (JAD) as an effort to increase the involvement of workers in designing a system of work organisation (Asaro, 2000). JAD focused on promoting business goals by increasing the efficiency and effectiveness of the technical design. In subsequent years, the development of user involvement in North America was more directed to the practical scope of business objectives, rather than political content as in Europe.

If JAD emerged from the realm of work organisation, then from the realm of design emerged from user-centred design (UCD), another notion of user involvement in the

development of product design. UCD developed in the research design tradition in America which from its early development was oriented to business purposes. UCD originated in Donald Norman's research laboratory at the University of California San Diego (UCSD) in the 1980s (Abras, Krichmar, and Preece, 2004). Abras et al. (2004) defined it as a broad term to describe the influence of the end-user of a product on its design process. Norman (as cited by Abras et al., 2004), said the role of the designer is to facilitate the task of the user, namely, to utilise the product as intended and learn how to use it with a minimum effort.

One interesting case study of UCD implementation is the project of developing the Microsoft TV Interactive Program Guide (IPG) (Lamont, 2003). IPG is an interactive television application that is embedded in the television set-top box. The application helps viewers to organise TV channels, select their favourite programs, give reminders of showtimes, and arrange parental guidance for specific shows.

The developer team tried to adopt a UCD approach to create this product. During the process, the developer team held three product development workshops and one evaluation workshop. Each time, participants were invited to conduct a series of commands and tasks. The research team then recorded the results as data for the next design process. From this series of processes, it appears that participants were involved as part of the research. However, they were not directly involved in the design process of IPG development.

### **2.1.3 Democratising Innovation**

The shift in the practice of participation caused by the advancement of social technology raised new design ideas in the context of user involvement. One such idea is democratising innovation. The primary literature of this idea was expressed in the

book, *Democratizing Innovation*, by Eric von Hippel (2005) who promoted the idea that democratising innovation presented a new landscape in innovative practices on creating a new product. If in the traditional practice of innovation, it was the company driving the innovation, then nowadays, the user has a powerful potential for innovation. Hippel (as cited by Burkhardt, 2007) said that:

The tools for designing high-quality innovations are getting so cheap and so ubiquitous that individuals can innovate for themselves at a steadily higher quality and a steadily decreasing cost. These sophisticated modern tools are computer-based and require relatively little training and practice. As a result, even hobbyist users find they can use them to design new products and services. To accommodate the innovations of the users, Hippel stated the importance of 'lead users'. The lead user often needs to be facilitated by the manufacturers to innovate and generate ideas in the development of new product design. The presence of a lead user made the concept of democratising innovation more appropriate to be applied in the business sector because it was identified who the lead user of the products or services was (for example, from among hobbyists). Additionally, there is a great deal of research attempting to formulate a system for determining the lead user in the business sector (Kratzer et al.; 2015, Pajo et al., 2015; Tuomela, 2013). However, when the idea of democratising innovation is applied to development in the public sector, the identification of those who deserve to be called a lead user becomes difficult because public facilities or spaces involve so many people as users.

However, the notion of a lead user is not impossible to implement in the public sector. Bason (2010) articulates some cases of lead user involvement in the practice of innovation in the public sector. He stressed that the presence of lead users in the public sector has a complex dynamic. Bason (2010) also said that the business sector is expected to continue to generate innovations. On the contrary, the public sector is different in two ways. First, it delivers a system or a product that is often not

necessarily something people demanded in the first place. Secondly, there are often no market incentives for the development of new and costly service systems.

However, although not as straightforward as in the business sector, there is always the potential for lead users in the public sector. According to Bason (2010, 167), some concepts of lead users might be involved in the public sector. Among others are the "engaged citizen" (people who engage themselves extraordinarily in public service provision become 'expert citizens', and can provide a more substantial, considered input). Another concept is 'system solutions.' This concept involves companies that develop a service system to meet government requirements. The development of the system engages the lead users. In some cases, the government could then adopt or buy the system to be implemented for their public service system. With the variety of concepts, the notion of lead users can still be applied or adapted to the particular public sector.

#### **2.1.4 Social Innovation**

While democratising innovation and UCD emerged and evolved from the business sector or the manufacturing technology, then in the field of social development appeared the participatory concept of social innovation. According to Mulgan (2007), social innovation is an innovative activity and service motivated by the goal of meeting a social need and predominantly developed and diffused through organisations whose primary purposes are social. The emergence of social innovation was a result of problems with the system since the institution merely repeated the past policy (Mulgan, 2007). She added, there was a gap between the current community needs and the programs offered by the government. This gap widened further, for example, because of the advances in technology. At this point, social innovation was needed to fill the gap. Although developed in the social sector, social innovation can

intersect with innovation in the business or technology sector. An example is the distance learning system, which was firstly a social innovation, and eventually applied for business purposes or for-profit businesses innovating new approaches to helping disabled people to work (Mulgan, 2007).

## 2.2 Co-Design

Along with the revival of the PD concept, the term co-design is becoming increasingly popular. Several scholars have formulated the co-design definition and its position among other similar concepts. The variety of practices and models for implementing co-design brings awareness that there is no single form and definition of co-design that is widely adopted across different contexts. Each variation is developed under the specific context, and the problem addressed. Sanders and Stappers (2008) used the term co-creation to refer to the whole action of collective creativity, while the term co-design is used on more narrow activity related to the design process. In a co-design process, various experts, such as researchers, designers, developers, potential customers and users - who are also experts on their experience - work together in a creative process (Steen et al., 2011).

In this sense, this study follows the opinion of Koskinen and Thomson (as cited by Cruickshank et al., 2013: 49), co-design is defined as a: “community-centred methodology that designers use to enable people who will be served by a design outcome to participate in designing solutions to their problems”. The co-design is an approach to creative activity (Cruickshank et al., 2013), which has its root in Scandinavian PD. Unlike the Scandinavian PD with its political tones, co-design places more emphasis on interpersonal, and creative participation. Although the political aspects still appear in the co-design, it is in the personal context. This means that the affected users of a particular product or service have their right to participate

in its design process (Hagen, 2013). The shifting of political tones of PD can be seen throughout the 1980s. Based on observations by Bjerknes and Bratteteig, Velden (2014: 3) stated:

Bjerknes and Bratteteig observed a shift in focus in Participatory Design in the 1980s, from a more political design project to an ethical design approach. This had also consequences for the role of the design researcher, who started as an emancipator in a collective political process but became a facilitator of his/her own individual ethical responsibility, which might or might not be supportive of a larger political programme.

This shift enables co-design to be more flexible and to be used in a variety of fields, ranging from business, social, public services, to governance. These areas are not always related to political issues, in the sense of advocating for the user-facing the provider.

This flexibility allows co-design to be used as an approach to other ideas of participatory involvement, for example, in social innovation. Co-design could encourage service users to gain access to the information, skills, capacity and support to participate in the process of social innovation effectively.

### **2.2.1 The Principles of Co-Design**

This section discusses the principles of co-design to distinguish the notion of it with many other concepts around it.

Szebesko and Tan (2014) have suggested that all forms of collaborative design (whether referred to as user-centred design, democratising innovation or experienced-based design), have been put together with the same idea. That idea, namely a new role for the user who is no longer just the final recipient of the products or services. However, in contrast to other ideas, co-design has specific differences in terms of the user's roles. The significant difference can be seen between the co-design and user-centred design. Co-design and User-Centred Design developed from two different

backgrounds of purposes. Co-design is rooted in the spirit of empowerment of PD, while the user-centred design has a background in the business innovation system.

The most noticeable difference between these two notions are in the user's role. In user-centred design, designers generate solutions, placing users mainly in a reactive role. In contrast, co-design seeks to involve users more deeply in the process as co-designers by empowering them to propose and generate design alternatives themselves (Fischer, 2003). Sanders and Stappers (2008) also provided an understanding of this difference. In user-centred design, expert researcher interviews or observes mostly passive users performing or commenting on a concept of the products that are produced by others. While in co-design, users are given a space and an ample opportunity, together with all parties to give suggestions, ideas, or concepts of a product from the beginning of the design phase. Sanders and Stappers (2008) built a co-design model in which users are involved as co-designers. They argued that in co-design, the roles of users are mixed. The people who will eventually be served by design were given the position as an 'expert' because of their experience and played a significant role in idea generation and concept development.

Another similar elaboration was given by Sanoff (2011) who gave a perspective of co-design, especially in the creation of the environment. He defined co-design as an attitude enacting a force for change in the creation and management of environments for people. Its strength lies in being a movement that cuts across traditional professional boundaries and cultures. He emphasised the active involvement of the community in creating a better environment, rather than just being treated as passive consumers. In more recent discussions, Bratteteig and Wagner (2014) stated that the difference between co-design to user-centred design lies in the emphasis on user roles. Co-design involves users as co-designers in all phases of the design process. In

contrast, the user-centred design only involves them as subjects, to be asked for information, ideas or to test prototypes of design services or products.

The literature above eventually defines the first principle of co-design, which is the users involved in all phases of the design process. Co-design sees the users as collaborators instead of just research subjects. The co-design approach allows all stakeholders to sit together, collaborate in creative ways to make improvements based on their real needs and desires.

Besides the issue of the role of the user, another dimension that emerged in the study of the co-design is the matter of political one. As mentioned before, a shift in the political dimension marks the shift of PD to co-design. According to Sanders and Stappers (2008), since the beginning of the 21st century, the use of the terms 'co-design' and 'co-creation' have gained popularity as a replacement for PD when referring to user and designer collaborative activity. Cruickshank (2014) suggests that co-design is a form of an open design that is less dogmatic than PD. Co-design provides a very flexible approach to the creative process and can provide the right atmosphere for the development of the creative potential of all those involved in the design process, even for people who have never taught design. Although the political level is reduced, co-design still carries a political dimension, especially at the micro-political level, in which every person has the right to intervene in deciding issues that affect him or her (Hagen, 2013). The shift in political nuance became the second principle of co-design. Co-design becomes more flexible in bringing political roles to the right to express for each participant than PD.

In their experience of the application of co-design in the Beyond the Castle (BTC) project, Cruickshank et al. (2013) produced a series of principles that can be used as guidelines of co-design implementation. They emphasised openness, in the sense that

the co-design process had to be able to accommodate the various types of participants, not just by visual methods, but all forms of media, in order to provide flexibility in generating the final design solution. Furthermore, designers act as facilitators and not as leaders. They had to provide an opportunity for participants to pull out all kinds of expertise to realise their creative potential.

### **2.2.2 The Challenge in Co-design Implementation**

Although it has been executed on a variety of projects, the idea of user involvement in the design process has faced many challenges. In his observations on the practice of PD, Muller et al. (1993) noted the appearance of a conflict on the application of such methods in the industrial sector. The time and resources required to train users were seen as only suitable in the research context, in which time and resources were flexible. In addition, results from this method were not directly visible in the short term, so it was not worth the investment incurred.

Co-design that is rooted in PD mainly brings the spirit of shifting power by empowering participants to become involved in shaping decisions. Therefore, like PD, co-design can also slip into what Smith (1998) described as "participation without power". Smith (1998) noted that weak participation, or even inauthentic participation, had a chance to harm participants. He explained that there were six disbenefits which could be challenges for designers who were delivering participation projects. The first, false participation may only deliver technocratic or paternalistic activities that keep participants as receiver objects. Second, consultation in the participation process can end up being a device for the indoctrination by designers who only seek participant endorsement for their plans. Third, weak participation has the opportunity to become an ideological tool to place responsibility for regional development on to citizens. Fourth, the tendency for voluntary work in participation projects can lead to

exploitative forced labour. Fifth, participation can become a mechanism to increase access to public services, without any action to decide anything from participants. Finally, service financing borne by participants will not empower as long as they are not given access to determine the form of service. Considering these disbenefits, designers have to concern with the participants' role. They must be sure that the method they deliver truly gives the participation power to shape the decision, or their co-design will become a tokenism mechanism.

Kujala (2008) acknowledged the difficulties in analysing the data obtained from the users when applying a participatory approach. Further, she addressed these obstacles by providing various examples of analytical approaches that can be applied to analyse the involvement of users in different design stages. Although there is no 'one fits all' formula, her research suggested the importance of product developers to engage directly with the user to search for required information.

Meanwhile, in their exploration of the new landscape of design, Sanders and Stappers (2008) identified some of the barriers faced by co-design development. First, there is the problem with the power relations between the actors involved in the process. Management of a company is a hierarchical system. It is difficult for those who are accustomed to determining the decision to share the power with consumers, or end-users in determining business decisions (even more so in places like health with professional hierarchies) (Sanders and Stappers, 2008).

Although co-design can take place in an unequal ecosystem, its implementation requires openness and flexibility. Second, Sanders and Stappers (2008) stated that co-design is considered as the antithesis of consumerism. They explained in the results of their study that there is an increasing consumer interest from just being passive

consumers towards involvement in the creative process of their choice. However, they added that it still took a long time to shift consumerism toward creative consumption. However, they suggested the shifting was going faster. De Vere (2014) said that the rapid development of information technology had encouraged consumers to more easily engage in the creative process of product development. Various concepts such as prosumers, adaptive customisation, open making, crowd storming, as well as co-creation have shifted the classical methods of product development. Thus, arguably consumerism might be parallel with the spirit of co-design in the current time.

Reviewing the principles and challenges of co-design application, it is evident that there is a need to focus more attention on two key aspects. First, co-design has to take serious efforts to place participants as co-designers who contribute to designing decisions. Without this power shift, co-design may be merely a consulting activity that only confirms the dominance of designers. Second, co-design methods need to ensure that participants benefit from the products and services designed, including access to manage the changes in the future. This requirement is necessary so that the co-design process does not have the potential to be a means of exploitation of participants.

### **2.3 The Experience of Co-Design Practices in Two Contrast Contexts.**

This section discusses some of the experiences of co-design research to find out the extent to which knowledge about the influence of different social contexts on co-design practices has been investigated. The findings and conclusions of existing research help provide an initial understanding of the complexity of the research topic. This analysis is mainly related to differences in the characteristics of co-design practices when applied in two different social contexts.

Before discussing the co-design experiences, it is necessary to first elaborate the term 'social context' as the aims of this study is to understand the influence of social context in co-design practice. An understanding of the social context can be obtained from the social sciences literature. Burke et al. (2009: 2) defined social context as "the sociocultural forces that shape people's day-to-day experiences and that directly and indirectly affect health and behaviour". They added that "these forces include historical, political, legal structures and processes (e.g. colonialism and migration), organisations and institutions (e.g. schools, clinics, and community), and individual and personal trajectories (e.g. family, interpersonal relationships)" (Burke et al., 2009: 2). Meanwhile, Given (2008: 829) referred to "the specific setting in which social interaction takes place" when describing the social context. Social context includes an understanding of how people in a specific group give a unique meaning or interpretation of a specific concept. Communities will collectively define the meaning and significance given to symbols, words, objects and actions differently from other societies influenced by their respective sociocultural forces.

The explanation above underlines that every social context has different understandings and responses to a particular object or concept. This is in line with the findings of co-design and participatory design studies conducted in several different contexts (Puri et al. (2004); Husaain et al. (2012); Yasuoka and Sakurai (2012)). These studies have resulted in the conclusion that each community culture influences the application of co-design according to their respective social contexts.

### **2.3.1 Co-Design Practices in the Western Context**

This section describes the current application of co-design in the Western context, especially the challenges faced by the co-design. It aims to obtain preliminary views

on the current circumstance of the implementation of co-design in the Western context.

A wide variety of innovation projects have been currently run through a co-design approach (Steen, 2013). The following experiences emphasise the challenges faced by co-design in its implementation for the public sector. A participatory approach has been applied in efforts to build public facilities and develop the public service system, for example, the NHS system in the UK. The application of the co-design principles in service design is increasingly believed to be able to provide a strategy for innovation in improving services (Mager, 2009). Stakeholders are considered a beneficial actor, because they understand the needs of users, and will improve the service experience (Steen, Manschot, and De Konig, 2011)

Implementation of co-design in the health services in the UK has been performed by the Experienced Base Co-Design (EBCD) method (Bowen, 2013). This approach has received increasing attention with the launch of an online toolkit programme in 2011 that contains the implementation guidelines of EBCD. This guidance, in the form of a video, enables every health care stakeholder to learn and apply the principles of the EBCD in their work environment. According to Donetto et al. (2015), the tool kit has received much attention, and complimentary comments have been given about the video for providing tips and guides which are easy to understand.

Donetto et al. (2015) reported the results of their research on EBCD implementation for about the last ten years in the UK, Australia, New Zealand and America. Although they acknowledge that the EBCD concept in healthcare services has had a positive impact, they also reported how complex the EBCD implementation was. The EBCD conceives the idea of co-design because it interprets the concept of 'co' as a shift in roles of patients, from just health service recipients to actively designing their health

services (Bate and Robert, 2006). Donetto et al. (2015) reported that even though their research respondents stated that they were running a co-design procedure, the implementation of EBCD faced challenges in carrying out co-design procedures effectively. The primary constraint was the hospital's hierarchical organisational culture. The findings noted that in the early phase of defining problems, the involvement of patients, staff, and other stakeholders took place effectively, and all parties felt comfortable with the atmosphere of collaboration. However, in the implementation stage, the managers or head of nurses are the ones who made the decisions. This finding revealed that the shift of power in EBCD implementation still struggled to be established.

In line with the precedent in the health services sector, the implementation of co-design projects in another public sector also faced challenges related to power relations. Berger (2014), in his study of the application of the co-design for an e-government system planning in Denmark, explained that its development for the dominant stakeholder (e.g. politicians, managers, consultants) is seen effective by nature. In other words, for dominant stakeholders, the application of information technology in the system management was considered to have improved efficiency. However, the impact of this system has not been sufficiently tested positively for the individuals and communities affected. Implementation of co-design in this system development process has not yet been able to voice and empower the users who are most affected by this system.

Another public sector project ran with the co-design method took place in Finland. In the drafting project of the Alternative Master Plan (AMP) for the area of Meri-Rastila, East Helsinki, Salgado and Galanakis (2014) found a gap between the vision and the implementation of the co-design process. The project was planned to involve the

residents in the area of Meri-Rastila, which also included a group of immigrants from Somalia. The participatory process was conducted through three sequences of workshops. The citizen participation level was considered relatively high. However, in the final stage – the production stage, the participatory process that previously ran, seems to have been neglected. The final planning document was considered as a product of an architects' team and designers who were appointed by the city government. Salgado and Galanakis (2014) reported that the residents were no longer involved in the final stage. There was only a brief description of the participatory process from the 39 pieces of the planning documents, and the final design looks did not reflect the residents' proposal from the participatory workshop. Salgado and Galanakis (2014) added that this situation occurred because of architects and designers' distrust of the participatory process.

From the review of the co-design project above, it is revealed and understood that the issue of power relations becomes the common thread of the problem that underlies the causes of ineffectiveness in implementing co-design methods. In the case of EBCD, the ineffectiveness of the co-design process was not due to the commitment of the organisers, nor to the EBCD framework design itself, but the hierarchical culture in hospital organisations. This hierarchical culture is not easily overlooked when co-design is carried out. Therefore, when the co-design get into the decision stage, the dominant parties are hard to release their power to other parties. Bowen (2013: 244) in his reflective note about the challenges of the EBCD identified the following “key challenges for health service (re-)design: ensuring of participants that have strong ownership of change processes, ensuring that key decision-makers (including both senior and middle managers) are fully engaged, and developing stronger institutional cultures of participation”.

He added that the effectiveness of co-design methods relied on the people who implement it as well as models of power which apply in the context. From his statement, it is noticed that the strengthening of participatory culture in a context is essential to make sure the co-design process works.

In two other cases, similar constraints also caused power shifting failures as well. In the case of Finland, designers who felt comfortable as being decision-maker failed to shift their power in determining the outcome. Likewise, in Denmark, the dominant actors did not try hard to ensure that the services designed were able to address the users' problems. Users were left behind in the design process. A more in-depth review of these two cases shows that there are indications that policymakers around the project still consider co-design to be just a gimmicky strategy as if the service design process merely involves users, rather than this being an integral empowerment method.

Bradwell and Marr (2008) suggest that co-design transfers power to the process and establishes a new framework that emphasises equality to empower the traditional role of the client to be more involved. This is perhaps the ideal vision that should be applied. But in fact, many aspects are absent, so that the implementation of the co-design is not genuinely empowering. Donetto et al. (2015: 243) assert:

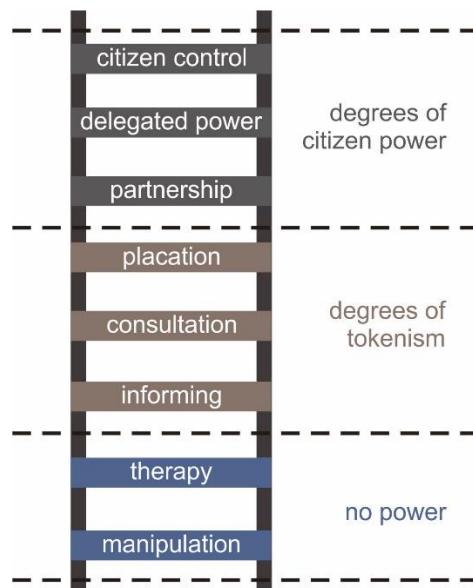
Current co-design practices for public services need – we suggest – to be examined more closely with a critical approach to power and its effects that can illuminate complex questions such as which ‘publics’ are being engaged and/or excluded by current practices, how these practices affect identities and subject positioning, what their ethical and political implications are and what role(s) they allow for design expertise

To understand the current practices of co-design in Western countries, it is useful to revisit the Arnstein ladder of participation (see figure 1), and apparently, those projects have not moved from tokenism in participation. Various claims on the

participatory process should be re-examined to determine the extent of citizen involvement in shaping the outcome. There were just a few documents, research evaluation of how well the claims were met in the results of the project. Laurian and Shaw (2009: 294) expressed:

Published evaluations of participation are scarce and tend to rely on few case studies. Planning professionals and academics lack definitions and criteria of success in participation as well as methods to assess participatory processes. It is thus difficult to compare findings over time or across agencies to determine what methods work best in specific settings and to propose ways to improve participation.

In addition, just a few organisations reported about empowerment or addressed equality and diversity in their strategies (Ocloo and Matthews, 2016)



**Figure 1: Arnstein Ladder (Arnstein, 1969)**

### 2.3.2 Co-Design in a Non-Western Context

As described above, co-design grew and developed in Scandinavian countries. Thus, its development is greatly influenced by the democratic culture of its people. Although recently, the issue of power-sharing in the practice of co-design is still prominent, its application has become commonplace in Western countries. However, the idea of and

application of co-design outside the context of Scandinavia has been a different experience. In subsequent years, this implementation has undoubtedly been problematic, since it requires democratisation of the workplace, high literacy rates and reasonable infrastructure (Puri et al. 2004).

The following sections present a discussion of a wide range of experiences of co-design application outside the Western context. Comparison of the co-design implementation in two different settings (usually developed and developing countries) resulted in some suggestions. First, that the application of participatory processes has to involve negotiating and adapting to the local settings, and at the same time attention should be paid to local knowledge (Elovvara et al., 2006; Byrne and Sahay, 2007; Lee, 2008; Yasuoka and Sakurai, 2012; Hakken, 2014).

Kujala (2003) confirmed that the success of the co-design process in developing countries lies in the ability of designers to adapt to different tools and methods in particular contexts. Other studies led to the conclusion of the importance for designers to study and find ways to facilitate the local community to be actively involved in the participatory process (Shackleton, 2010).

Hussain et al. (2012) practised adaptation methods of co-design in their project of prosthetic leg design for children with special needs in Cambodia. Their experience in Cambodia gave a clear picture of the influence of Cambodian culture while participating in the co-design process. Cambodian society, with a culture of compliance to the leader, meant that direct user participation was not effective. In addition to the unequal power relation, another challenge to the project lay in the type of participants, namely children with special needs. Although in almost all societies, children are considered unable to argue, the influence of Cambodian culture,

increasingly made the children reluctant to speak out. As a result, the role of the designer in generating decisions became dominant.

Hussain et al. (2012) suggested the solution by modifying Sanders traditional method of co-design, 'lead by user' to 'lead by the designer' to address those issues. This modification meant that the design process is guided and directed by the designer who explores the desire and will of the user. This solution, on the one hand, was very pragmatic to break the deadlock of the co-design process. On the other hand, it led to decreasing the role of the participant as co-designer. Regardless of its shortcomings, however, this modification was an example of the researchers' response when they applied a co-design method in a different context.

Another participatory experience took place in Namibia. This project indicated that the potential of local culture could strengthen co-design practices. In their project, Winschiers et al. (2012) stressed the importance of technology infrastructure because it was carried out in the development of an information systems (IS) project. However, they reported that the co-design was effectively practised even though the technology infrastructure was still limited. According to the researchers, the Ubuntu culture, which is widespread in the sub-Saharan Africa region, became a proper foundation for the implementation of co-design practices.

Meanwhile, in the research of applying PD to socio-economic development in India, Kendall and Dearden (2018) are trying to address the question of 'who participates with whom in what and why?'. The practice of PD as a social innovation in the context of the Global North is undoubtedly different when applied in the South, where PD faces the challenge of differences in a technical capacity, cultural backgrounds, individual motivations and also power. These differences significantly affect how the PD framework is applied. One interesting thing, when determining 'what' will be done

with the project, they offered an organisational building in the context of NGOs, rather than providing direct assistance to the needs of the organisation's beneficiaries.

This choice indicates that they are considering the challenge of power inequality, which will be affected if they take direct design intervention to the beneficiaries.

The similar approach has conducted by Reyes and Botero (2012). They conducted research on participatory projects in a 'popular culture' environment in Colombia. They reported that the co-design approach succeeded in not only solving community problems but also promoting healthier and stronger social relations. The co-design project was carried out, starting from designing the strategy of saving for street vendors to designing branding and a campaign to re-popularise traditional Colombian fermented drinks pushed out by beer. One of the conclusions they produced was that problem solving was no more important than the equality of power and increasing capacity of social capital. These results mean that in addition to solving problems, their co-design project has moved forward by promoting the role of empowerment and social advocacy

The project by Kendall and Dearden (2018) and Reyes and Botero (2012) illustrates the importance of considering the issue of decolonising design in the implementation of co-design practices outside the Western context. Decolonising Design in co-design practices can be interpreted as an effort to break away from the Western ontology framework and provide the most comprehensive possible space for ontology from the context in which the project is implemented (Anshari, 2019). This view has consequences that the methods, approaches, tools, and even goals of the co-design process outside the West can be very different from those developed in their original context in the West.

Decolonising co-design by trying to shift from the perspective of a Western framework, also have practised by Taylor et al. (2018). Taylor et al. (2018) in their paper, seeks to apply the new literacy theory articulated by Kathy Mills as lenses to reflect on their Digital Community Noticeboard participatory design project in an Aboriginal community in Australia. The new literacy theory emphasizes the importance of positing literacy not as an individual ability (as the Western concept) but as a part of the interconnectedness of the social landscape of society. As a consequence, this theory provides power to groups of people who have been considered backwards in literacy because they do not meet normative literacy standards. The reflections carried out resulted in four ways on how the new literacy theory would inform design strategies and choices. First, the theory has empowered local people to support their own language. Second, it helps understand how different societal cultures influence their responses to participatory mechanisms in the design process. Third, the theory reveals how to construct narratives, and how people express themselves creatively are culturally situated and contextual. Fourth, this theory illustrates that examining different types of ‘communicative practice’ can show how different literacies are applied, even when these practices are not referred to using a theoretical construct of ‘literacy.’ Taylor's project indicates that when alternative frameworks (non-Western) are tried to be applied in co-design for a particular unprivileged community, it can actually empower the creative potential of the local community. This is certainly in line with the co-design commitment to include affected people in the process equally.

Meanwhile, other studies in the application of co-design outside the Western context try to use a postcolonial perspective. Irani et al. (2010) in their study to broaden the conversation around the development of Human-Computer Interaction for

Development (HCI4D) technology across cultures by placing it in a broader context had employed postcolonial perspectives as the lens. They suggest an alternate formulation of design work – engagement, articulation, and translation to reframing the traditional design process (identification of potential user communities, the analysis of their activities, the formulation of design requirements, ideation and iteration, and so forth). As the conclusion they argue "for attentiveness to the emergence of hybrid practices in information technology design, coupled with sensitivity to how uneven power relations are enacted in design practice" (Irani et al., 2010: 1319)

A more in-depth reading to into the Hussain et al. (2012) and Winschiers et al. (2012) studies revealed that both of them tried to respond to the challenge by exploiting the cultural potential of the context. This approach has proven successful to address the problem. Meanwhile, compared to the Reyes and Bottero (2012) and Kendall and Dearden (2018) projects, they did not only try to address the problem but also try to improve the social quality of the community. Reyes and Bottero tried to put the community at the centre of activities, which actively processing to utilise all of its social potential, capacity, and capabilities to solve the problems. Such an approach was part of their attempt to shift their co-design framework to move forward, not only being a 'medicine' that cured participants' problems but also promoting the role of empowerment to the participants.

Meanwhile, Taylor et al. (2018) and Irani et al. (2010) have realised that design interventions in a particular society will bring power relations problems, where one party tends to be oppressed by the others. Their approach using decolonising and postcolonial lenses can be interpreted as an attempt to broaden the participation of all

parties in the design process, encouraging heterogeneity in design rather than controlling or eliminating it.

The experience of co-design in both Western and outside the West contexts revealed that the development of a co-design framework goes in various directions. The variety of considerations and responses to specific contexts lead to a condition where there is no single co-design model in either the Western context or outside the West. Each framework or model made specific efforts to respond to its respective circumstance. Referring to the studies' of Irani et al. (2010) and Taylor et al. (2018), simplification of dualism such as developed and developing context, or traditional and modern should be avoided. In contrast, it needs to encourage to develop forms of hybrid design processes that can be a cross between frameworks to respond to particular contexts.

Thus, the division of co-design experiences discussion into Western and outside Western contexts here does not mean to echoing its dualism. Instead, it shows that in fact, the co-design framework works vary in both traditions, which are seen as having contrasting contexts.

## **2.4 The Socio-Cultural and Political Landscape of Indonesia**

This section explains the socio-cultural and political landscape of Indonesia, especially after the collapse of the authoritarian government in 1998. This event marked the beginning of the growth of democracy in Indonesia, which helped create a freer climate condition that was more supportive of spreading co-design practices. This section then explains several public affair projects which are considered to have a participatory approach. The review of the Indonesian context is carried out to give a

more specific picture of the country, to support the second research objective to build a co-design framework for this context.

Before discussing the conditions in Indonesia, a brief description of key aspects of East Asian politics and social characteristics that are considered to contribute to shaping the social and political character of Indonesian society is provided.

#### **2.4.1 East Asian Cultural Sphere**

The discussion of East Asian culture that contributes to shaping the character of Indonesian society focuses on two aspects. The first is a democratic value in East Asian culture. As has been explained, co-design emphasises the vital role of users in the whole process, which requires a shift of power from designers. Although democracy is not always necessary, it provides a power-sharing principle that could be a consideration in co-design. The second focus deals with the type of relationship pattern of East Asian culture. How people interact with other people, groups, and the community would affect the work of co-design.

Discussion of Asian democracy must begin by distinguishing it from Western democracy where that concept comes. It is recognised that democracy is not part of the values of Asian indigenous communities. Democracy came from the West and was introduced to the East when the colonialism era ended. Eventually, any democratic practices in Asian cultures have been through several adjustments. Neher (1994) argued that none of the Asian countries had implemented democracy as understood in the West, with their emphasis on competitive elections, citizen participation, and civil liberties.

In the literature of democracy, what is taking place in most Asian countries is pseudo-democracy (Liddle, 1992) in which democracy only occurs in a formal stage, marked

by-elections. However, in the actual daily practice, the government is closer to authoritarian practices. Asian Values or the "Asian Way" is used to describe the phenomenon of socio-economic development and culture of the East, which has now grown as one of the centres of power (Thompson, 2001: 154). Asian values are found in Singapore, Malaysia, Indonesia, and other countries around the region with relatively good welfare standards. Although prosperity continues to be maintained and improved, the government in these countries have argued that the culture of Western democracy is still not appropriate for Asia. They justify control "dictatorship developmentalist" as uses the term of Asian values to violate still the Human Rights - from the Western point of view.

Liu (2002) also confirm that the representation of the historical leader in Asia tends to be through a hegemonic regime or imposed consensus. However, this produces low levels of conflict across ethnic groups and nationalities, which may also appear in Indonesia, as diversity and tolerance do not occur naturally from within the community. Full 'repression' explicitly in Malaysia and Singapore are thought to have brought tangible results. Both countries have achieved progress and prosperity on the one hand. On the other hand, they have also successfully used 'soft-authoritarianism' in the 'control' rather than open violation of civil liberties. However, in such conditions, the real 'Asian values' in the form of Malay, Chinese and various other races could grow aggressively. Asian countries have become accustomed to taking that direction in efforts to achieve prosperity.

Democracy is undoubtedly one of the essential principles in co-design, but as mentioned above, co-design does not always have to have political tendencies. It also has a dimension of communication and interpersonal relationships, which focus on provoking individual creativity in collaborative action, so that the values of

collaboration and collectivism also play an essential role. Considering co-design as a collaborative process, it is essential to draw a relationship between it and the values of Eastern culture with its strong collectivism. Basu-Zharku (2011: 2) stated that “In particular, individualism is mostly seen in the cultures of Western Europe and North America, whereas collectivism is mostly seen in the cultures of Asia, Africa, and parts of Europe and Latin America”. Skillman (as cited by Basu-Zharku, 2011), described collectivist societies’ values as family cohesion, cooperation, solidarity, and conformity. People from this type of society tend to be group-oriented, put group interests first, and follow their collective expectations. So it is necessary to pay attention to and anticipate the existence of groups when working with them (Basu-Zharku, 2011).

In a study of the link between collectivist and individualist culture and collective action, Hu and Cui (2015: 1) obtained an exciting conclusion:

Individualistic cultures are more effective at propagating collective action when one of the two following conditions is met: (1) people have a strong motivation to participate and (2) the connectivity of the social system is low. In contrast, the spread of collective action in collectivistic cultures is more effective when motivation is not strong, and the connectivity of the social system is high. These findings call for serious consideration of the role of culture in collective action.

More specifically, they added that:

Collectivism can be more successful for promoting participation in a specific group because collectivism is helpful to nurture enclaves of participation. However, our results suggest that lower interpersonal influence of weak ties increases the isolation of social groups; thus, collectivism is unfavourable to the spread of participation across the whole network (Hu and Cui, 2015: 8).

The findings of their research could be of consideration when a co-design approach want to be applied in East Asian countries because co-design is characterised by collective action. The assumption that the collectivist culture of the East which tends to favour collective action might be justifiable, but it must meet certain conditions. In

conclusion, consideration of cultural factors is an essential point to consider when co-design is applied in the Eastern context.

### **2.4.2 The Democratic Transition and Collectivist Culture of Indonesia**

In the history of authoritarian political rule during the Suharto regime, Indonesia experienced significant economic growth in the New Order regime. Development became a dominant ideology. The technocratic-top down approach was applied, so all development initiatives came from the central government in Jakarta (Shiraishi, 2006). This approach caused many social frictions among people who felt disadvantaged because of the impact of development.

The monetary crisis that hit Asia in the late 1990s was believed to contribute to subverting the authoritarian Suharto regime. After the fall of Suharto, democracy began to flourish. Decentralisation of powers in effect encouraged the creation of a new political climate, where there was a strengthening of local institutions, and the aspirations of citizens in the development process began to be heard (Shiraishi, 2014). There are around 500 local governments who worked together with their local legislative councils in development planning and budgeting plans by taking into account local specific needs and problems (Antlöv and Wetterberg, 2011). The post-New Order government consciously started to involve citizens in the development process. The regulations were drawn up as a basis for the implementation of participatory processes.

One that was already running was the introduction of the musrenbang process. However, the implementation of this was not really providing a space for citizens to contribute to the process. Contrary to participatory budgeting, such as in Porto Alegre, Brazil and Kerala, India, that have proven successful in bringing citizens to the centre

of a project, participatory action mandated through the musrenbang process, often suffered from weak and fragmented foundations, low organisational capacities on behalf of civil society, a hostile political environment, and a weak and unpredictable institutional framework (Sindre, 2012).

Although it has not yet fully succeeded in becoming a co-design method, the musrenbang process has several strengths. The strength includes its ability to deliver a high volume of desired investments to a reasonable standard of technical quality; its ability to move forward across a broad range of social and economic environments amid institutional changes that make other types of operations challenging to implement; and its popularity among end-users in local government and villages (Gugenheim et al., 2004).

Apart from the musrenbang process, the development planning that seeks to involve community participation has been increased. This can be seen from the reports of Antlöv and Wetterberg (2011), who researched the growth of democracy in post-authoritarian Indonesia. In their research report, they found that 46% of respondents stated that community involvement in development plans increased compared to during the authoritarian era, 46% said conditions were still the same, and only 8% said it was getting worse. The authors considered this number to be quite significant as the initial achievement of the participatory development process.

Their research also produced other findings, although there was an increase in citizen participation in development planning, not all of these projects were able to run effectively. Participatory planning that took place in an area led by reformist leaders tended to be more successful than the region led by conservative leaders. In addition, several projects also prioritised short-term solutions - these projects were approved for funding, rather than the long-term goal of strengthening civil society. The

consequence was that the projects tended to continue to run using an old pattern, where the connections and lobbying of politicians, patronage of local leaders, and collusion between officers determined the success of the project.

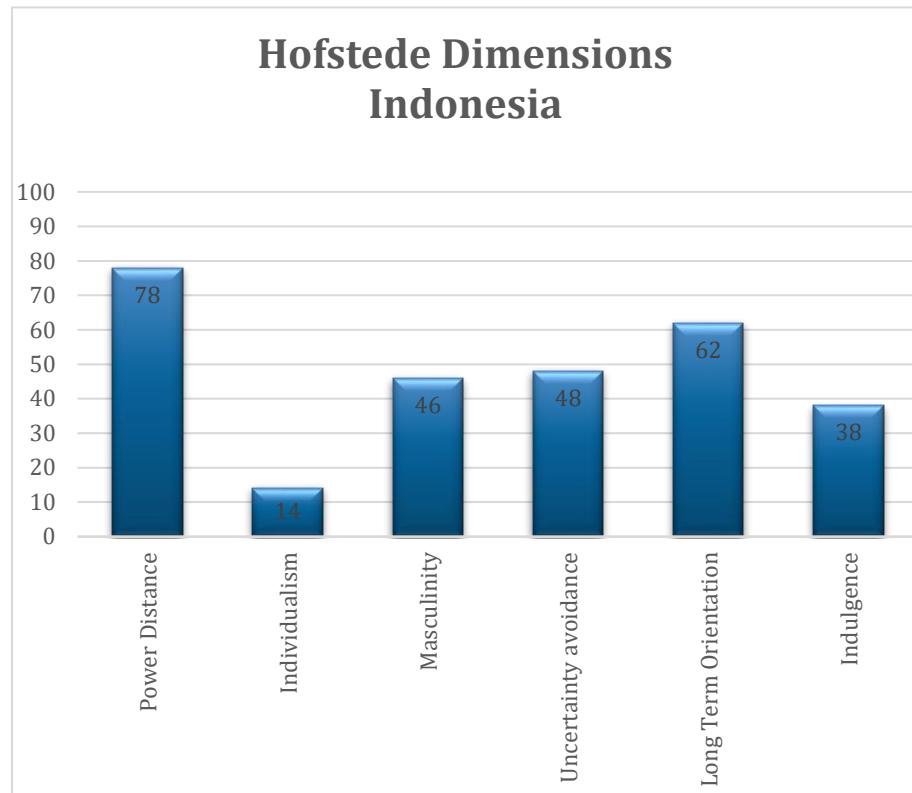
The findings of the research above indicate that the old political structure is still strong, where the initiative and implementation of projects are very dependent on the leadership. The findings also indicate the weak political awareness of citizens that they have the right to shape the development planning. One of the researchers' suggestions was the need for encouragement to strengthen the capacity of civil society:

Power structures must also be shifted away from patronage networks to ongoing engagements between citizens and the state to debate priorities and incorporate feedback, thus strengthening the capacity of civil society to engage government; in short, to re-politicise communities. (Antlöv and Wetterberg, 2011)

In short, in the realm of institutional democracy, Indonesia is still struggling to get stability.

However, in the collectivist culture, Indonesia has a substantial social capital that can be used as a catalyst for the implementation of co-design. A general picture of the character of Indonesian culture in the context of social relations can be drawn from the six dimensions of national cultural character produced by Geert Hofstede (Hofstede Insights, 2019). They are power distance, individualism, masculinity, uncertainty avoidance, long term orientation, and indulgence (see figure 2). Of the six dimensions, this study focusses on three dimensions that are considered relevant to influence the practice of co-design. 'Power distance' is considered relevant because it illustrates social relations within groups which is an essential factor in co-design. 'Individualism' concerns how individual existence influences the performance of group collaboration. The last one is 'uncertainty avoidance', which is a picture of how the group's ability to

resolve conflicts; this also plays a significant role in the co-design process. The three dimensions discuss below.



**Figure 2: Hofstede dimension of Indonesian culture** (Hofstede Insights, 2019)

The first Hofstede's dimension is power distance, which is defined as "the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally" (Hofstede Insights, 2019). In this dimension, Indonesia scored 78, which is categorised as high, meaning that social relations in Indonesia tend to take place in hierarchical relations. The relationship between the power holder and non-power holder always creates an unequal relationship. As power distance in Indonesia is scored as high, this dimension will be a challenge that needs to be considered when developing a co-design framework in Indonesia.

The second dimension is individualism. This dimension is interpreted as "the degree of interdependence a society maintains among its members" (Hofstede Insights, 2019). Hofstede gave a score of 14 for Indonesia, which is categorised as low. Communities with low individuality scores have a more collectivist orientation, which is characterised by the tendency of individuals to conform to the ideals of the community or the group in which they belong. In implementing a co-design practice, collectivist society can be a necessary form of social capital for the efforts of organising stakeholders of the process. As is explained, co-design is a collaborative work that involves all stakeholders to jointly produce the design to address the problem specified (Sander and Stappers, 2008). Also, the tendency of individuals to support the group agenda will potentially facilitate collaboration during the co-design process.

The third dimension is uncertainty avoidance. This is defined as "the extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid it" (Hofstede Insights, 2019). Indonesia scores 48 on this dimension and therefore has a low preference for avoiding uncertainty. This condition means that Indonesian people tend to compromise with the uncertainty of the future. This uncertainty, for example, can be interpreted as a situation where confrontation occurs. Such cultural characteristics, for example, are reflected in the response of individuals when facing conflict. Indonesians tend to maintain social harmony. Therefore, they tend not to resolve conflicts through direct communication between the parties involved. They prefer to use third parties as mediators. This cultural characteristic can be a potential benefit and challenge for the implementation of co-design. While the characteristic of reluctance to be truthful can

be a barrier, the tendency to maintain harmony can be the potential benefit that drives collaboration.

In addition to these cultural characteristics, discussion of Indonesian culture needs to give attention to *gotong-royong*, which means mutual assistance. This idea of collectivist culture exists throughout Indonesia, although *gotong royong* has its root in Javanese culture, and means working together to act for the benefit of the group (Madiasmo and Barnes, 2015). This concept may be equated with the concept of volunteerism, which Wu (2011: 3) describes as "rendering of service by choice of our free will for the benefit of the wider community by an individual, group, or institution without necessarily expecting a monetary gain in full knowledge and appreciation of being a volunteer". *Gotong royong* is considered to summarise the dimensions described above. In *gotong royong*, the character of Indonesian collectivist society is reflected in the attitude of prioritising the group's interest, by completing collaborative group work together. In addition, social relations models that prioritise group harmony over individual achievements are strongly recommended.

This spirit of *gotong royong* has been adopted by the government at the national level and applied in many institutional sectors. Besides being applied in official institutions, *gotong royong* has long been practised in the daily life of Indonesian people, for example, *kerja bakti*, which is a joint action of all the villagers to clear their village environment. Another one is *subak*, a system of irrigation management in Bali. These are run and organised in the spirit of *gotong royong* among all farmers in the villages to minimise conflicts among them.

In the recent Indonesian experience, an example of *gotong royong* can be seen in the post-disaster reconstruction project. In 2013, Tobing evaluated the housing project for victims of the Jogjakarta earthquake of 2006. In her report, she stated that the housing

project was implemented in a participatory process involving all the villagers. This project was facilitated by the International Organization for Migration (IOM) and UNICEF. She added that the participatory project was deemed successful. One indicator was the high satisfaction of residents for the housing. Besides, the co-design process was also felt to have increased social cohesion among the community.

However, today, Indonesia is still in the transition phase, in the fields of politics, economy, and culture. The democratic values are getting stronger, but they have not been supported by the commitment of the government to push the participatory process. So, when the government focuses on economic and infrastructure development, the role of the citizen has not shifted away from just being an object.

Fortunately, Indonesia has a strong spirit of collectivism that is able to become an adhesive for the social cohesion of Indonesia. As the Indonesian democratic climate continues to grow and becomes more mature, the potential of Indonesia's collectivist culture can be exploited as capital for developing a co-design framework. An understanding of the political landscape and the character of Indonesian culture will make it easier for identifying the difference of the context's influence on co-design performance in two contexts, the UK and Indonesia.

## **2.5 Chapter Conclusion**

Co-design, originating from the PD tradition in Scandinavia, has been implemented in many places outside Western countries. In its initial phase, PD brought a strong political dimension. Its development was greatly benefited by the culture of democracy established in the West. The principle of co-design provides an opportunity for users and other stakeholders to be actively involved in the whole design process. This principle distinguishes it from user-centred design. Co-design

also encourages openness, meaning that the designer is no longer a leader of the design process, but a facilitator. Thus, the design process can be very open; each participant should have the opportunity of their favoured media, tools, and languages to contribute.

From the experience of co-design in both contexts revealed that co-design should adjust to the settings of each local social context. In response to the different problems, co-design model development varies widely. Co-design could have a function as a mean of social empowerment and as a social cohesion catalyst. It also could have other objectives following the context's problem. There is no single model of co-design that can be applied in every context.

Comparison of co-design experiences in both contexts gives an understanding of the importance of contextual considerations in developing the co-design method. Therefore, an understanding of East Asian culture, and more specifically Indonesia, is very much needed to build a co-design framework for Indonesia. In the aspect of democracy, the character of democracy in East Asia is marked by the prominent role of leadership, which is often referred to as Asian Values. As part of the East Asian cultural sphere, Indonesia also has a similar democratic character. Although, after the authoritarian regime collapsed, the development of democracy in Indonesia has shown a more mature direction. While the cultural character of Indonesia, as portrayed by Hofstede, indicates the existence of challenges and opportunities for the success of co-design implementation in Indonesia, an understanding of the cultural character of the Indonesian people is also useful for efforts to build a co-design method in Indonesia.

# 3 Conceptual Framework

This chapter discusses the conceptual framework used in this research and refers to the epistemological paradigm used to examine the research problems identified. The conceptual framework is essential as a structure that will guide researchers (Imenda, 2014). This study employs a dialogical model (Rule and John, 2011) which views the relationship between theory and the course of research as an open-ended dialogue influencing each other during the research process. The theory chosen at the beginning of the research will continually be reviewed during research practice in context. Rule and John (2011: 7) affirm the dialogue pattern as follows:

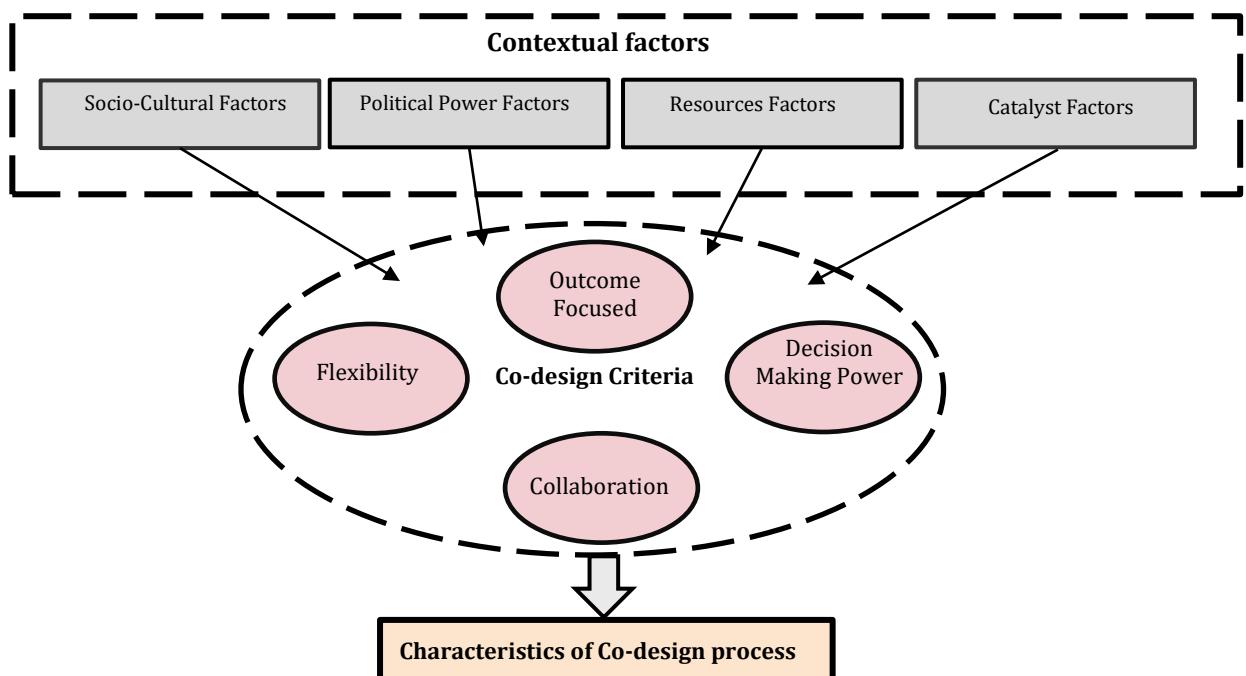
Dialogue helps us to reconceptualise “theory”, “practice” and “research” and the relations among them as distinct and situated processes involving participants: Someone theorises about/practices/researches something in a particular context for particular purposes.

As a consequence, during the research, there will be a process of going back and forth, where at one stage the researcher must always look back at the established theoretical concepts, to proceed to the next step of research.

This study seeks to answer the problems surrounding the influence of the social context on the implementation of co-design. There are four requirements to build the conceptual framework in order to solve these problems. They are as follows:

1. Determine the contextual factors which influence the co-design process.
2. Establish effective co-design criteria.
3. Investigate co-design criteria in each context by emphasising what contextual factors influence them.
4. Identify the influence of the contextual factors on the co-design criteria shape co-design characteristics in each context

The following diagram shows the conceptual diagram of the framework:



**Figure 3: Diagram of the conceptual framework**

### 3.1 Contextual Factors

The following section introduces the contextual factor framework developed by the National Network for Collaboration (NNC) and the Committee on the Human

Dimensions of Global Change (HDGC). It explains in more detail what parts of each framework were applied and why and how the framework was incorporated to be adopted in this study.

To address the objectives of this study, two research questions have been raised, "What would be a context-appropriate co-design framework for Indonesia, and how is this distinct from a UK context?" and "How do the distinctions affect the development of an alternative framework of co-design in the Indonesian context?"

Before this, a theoretical framework diagram was constructed to investigate the research questions. To understand each context, it is necessary to understand the contextual factors that affect the application of co-design. In general, contextual factors are defined as "Factors which reflect a particular context, characteristics unique to a particular group, community, society and individual" (Nahon, 2010: 644).

At this point, it is essential to emphasise that this research focuses on investigating the co-design process, which is basically a collaborative process. Therefore, the contextual factor framework that is trying to define is the one that influences the collaborative process. This research will adopt a framework that is considered the most appropriate to the objectives of this research. Referring to the research question as well as this research background, there is an emphasis that the collaborative process being investigated is a collaborative process that involves the participation of the public community to solve problems that directly impact them. So, the decision to choose contextual factors must consider these aspects.

Following are various kinds of studies that had tried to develop a framework of contextual factors that influence the collaboration process. García-Milian et al. (2013) identified contextual factors that influence the collaboration of librarian teams with

researchers across disciplines in dealing with complex problems. They proposed six contextual factors, namely: Intrapersonal factors, Interpersonal factors, Organizational Factors, Technological Factors, Societal / Political Factors, and Physical Environmental Factors. They argue that librarians can play a more optimal role and have a strategic role in cross-disciplinary collaboration if they pay attention to these contextual factors. The model developed by Garcia-Milan et al. (2013) does not fit following the research objectives because the collaboration targeted by their framework is specific to researchers' group as participants. In contrast, this research requires collaboration targeting a more heterogeneous public community.

Meanwhile, Stange and Glasgow (2013) established nine contextual factors that affect the performance of The Patient-Centered Medical Home (PCMH). They are National, State, local, and organisational policies; Community norms and resources; Health care system organisation; Payment and incentive systems; Practice culture, history, and staffing; Characteristics of patient populations and subgroups; Historical factors and recent events; The culture and motivations surrounding monitoring and evaluation; Changes in these factors change over time. Stange and Glasgow (2013) explain that PCMH is, in principle, a service system that involves stakeholders from policies, health systems, health workers, patient families and communities in a collaborative process. They underlined "The phenomena of health care and health, even more so than basic biology, are complex systems that are fundamentally context-dependent" (Stange and Glasgow, 2013: 1). This framework is close enough to be adopted in this study because the collaboration involves a diverse group of public and deals with problems that impact the participants' environment. However, this framework developed in the public health service system realm, so that the consideration is

explicitly related to the practice, culture and history of the health service system (Stange and Glasgow, 2013).

In another study, Fenton (2014) formulates five contextual factors that influence the efforts of municipal organisation implement sustainable urban development collaboratively with the stakeholders. The five factors concern the capacity of municipalities and others to act for urban sustainability; their mandate to do so; the resources available to them; the scope of their processes and intended outcomes; and their will, individually and collectively, to pursue urban sustainability. This framework is also close enough to be adopted; it is just that the lens used in building this contextual factor focuses more on the municipal management organisation, rather than the public as entire stakeholder involved in the collaboration.

The NNC is a network of universities in America that work together to build a framework for collaboration between any organisation and community. This framework contains a description of the ways, factors and methods as a guide to the implementation of collaborative activities to address the issue of social, economic and cultural pressures faced by children, adolescents and families (NNC, 1995). This framework is developed to become guidance for organisations, individuals and the general public who wish to carry out a collaborative process to achieve clear specific outcomes. In order to achieve this goal, this framework is thus structured, taking into account, among other things, aspects of the diversity of participants involved in the collaboration. The capacity to hear the various aspirations begins with the emphasis that all parties have an equal position (NCC, 1995). These points make this framework very appropriate to be adopted for this study, considering that one of the principles of co-design is a shift in the role of the designer (from designer to facilitator) which leads

to a more equal relationship between designer and user in the co-design process (Cruickshank, 2014). Also, the scope of the framework built by NNC is in line with this research background, where the co-design process, which becomes the object of this investigation involves a heterogeneous public to solve problems affecting them.

Likewise, the framework developed by the Committee on the Human Dimensions of Global Change (HDGC) is in line with the research objectives and background of this study. The HDGC Framework is formulated as a guideline for public participation efforts in environmental development. Public participation in this framework includes elected officials, government agencies, or other public or private sector organisations to engage the public (National Research Council et al., 2008). One of the essential points of developing this framework is that public participation must be fully incorporated into environmental development planning and decision-making processes. The organisers of the participation process must recognise it as a requisite for effective action, not just a formality of procedural requirements (National Research Council et al., 2008). This also underlines the importance of adopting this framework, because the co-design process which is the object of this research investigation also tries to really involve the participants in the design process systematically to avoiding the tokenism approach.

The elaboration of the frameworks above led to conclude that the framework developed by the National Network for Collaboration (NNC) and the Committee on the Human Dimensions of Global Change (HDGC) is adopted as a framework for contextual factors in this study. In short, this selection is based on the consideration that the two models are specifically developed to respond to a collaborative process

involving the general public who has the appropriate scale and the collaboration model with case studies in the two contexts investigated.

### **3.1.1 National Network for Collaboration (NNC)**

The NNC framework provides common elements of collaboration. Common elements include: The foundation, the basis of cooperation is diversity in which people, groups, organisations and communities have the same desire to collaborate; Core Foundation, common goals and destiny of collaborative efforts; Results, which are achieved by carrying out collaboration; and Process and Contextual Factors, which influence daily collaborative activities (NNC, 1995). This research adopts explicitly Contextual Factors elements.

The NNC framework seeks to foster opportunities to value the diversity of individual, organisations, and agencies. So that this framework is possible to be applied in various contexts, it provides the opportunity to recognise unique skills, capabilities and expectations within a different context (NNC, 1995). The NNC framework added, " It encourages examining underlying stereotypes that affect the capacity for change, promoting new awareness for collaboration members that promote shifts in attitudes and beliefs about what is possible" (NNC, 1995: 5).

The NNC framework identifies two factors that influence the success of the collaborative process. The first is the process factor (internal), originating from the process of implementing the collaboration process, for example, understanding of the community, the ability to build trust. The second is the (six) contextual factors: "the characteristics of the ecology/environment that are related to the effectiveness of collaboration"(NNC, 1995). Ecology, here, includes the physical and structural

settings of the community (e.g. resources available in the community), and the social context (e.g. political atmosphere). The six factors are explained below.

## **1. Connectedness**

Connectedness refers to relationships that involve individuals, organisations and community. It is about how people get to know each other or how they are connected (NNC, 1995). Socially, people will be connected through organisations and groups led by various types of the norm, rules (both formal and informal), and custom. Connectedness is reflected in three levels of relations. At the individual level, connectedness, such as the relationship between individuals caused by the sharing of social history. At the organisation level, the relationship is reflected in people who have a sense of belonging and relate to different groups. At the community level, connectedness is reflected in the feelings of people who are bound together and share an understanding of universal principles and values.

Furthermore, this connectedness can also be assessed from the communication that has been established in those relationships. Does communication allow the exchange of information between individuals, organisations, and communities? The emphasis on ‘exchange’ means that communication is a vital tool for collaboration. Thereby, the connectedness will produce communication, which is one of the essential tools in carrying out collaboration practices.

## **2. History of working together**

The history of the interaction between members of a community also shapes the success of the collaboration process. A community may tend to build cooperation

among its members, but other communities may develop a competition model.

Mattessich and Monsey (1992) suggested that collaboration will be more successful in communities which have a cooperative relationship model.

The strength of a community with a cooperative relationship is that they tend to be able to solve their problems by utilising all the resources owned to solve the issues. In addition, they also develop creative solutions in efforts to solve the problem. This condition is possible since they have a high level of trust between members, and also, they utilise diversity as capital to build creative solutions.

### **3. Political Climate**

The political climate is an environmental condition around power and decision-making processes. The political situation in which the ways of power is exercised and how decisions are made will influence the collaborative process undertaken.

Recognition of the diversity of group members, groups, or organisations to engage in the political process will ensure the collaboration process works better. Such a political climate is called a collaborative climate.

In a collaborative political climate, there is an urge to enlarge dialogue and communication space, negotiate new ideas, and desire to unravel conflicts. In addition, there is also transparency about how to influence the decision-making process. The collaborative political climate will gain more genuine and organic support from all group members. This organic support will provide more opportunities to achieve positive results compared to the support built by coercion.

### **4. Policies/law/regulation**

Policies, laws and regulations contribute to the establishment of the political climate. The collaboration will be far more effective when supportive policies,

laws and regulations are implemented. In addition, the sustainability of the collaboration process is also shaped by the supportive policies, laws and regulations.

## 5. Resources

Resource factors in collaboration can be interpreted as four types of capital that play a role in influencing the effectiveness of the process. These are environment, in-kind, financial, and human.

Environmental capital refers to environmental conditions, both ecological and social. An environment that has a collaborative political climate supported by supportive policies, law and regulations will undoubtedly benefit the collaboration process.

In-kind (non-monetary) and financial capital are undoubtedly significant to provide material needs during the collaboration process. The emphasis on in-kind capital is vital because the collaborative process that relies solely on financial capital tends to be less effective than the process which is also supported by in-kind (labour, goods, services) donations from community members. When in-kind capital is managed well, there is a high possibility that the sustainability of collaboration will be achieved.

Human capital relates to the ability of all people involved in the process. Human abilities, both as organisers, designers, and collaborative participants, also influence the effectiveness of the collaboration process. Obviously, human resources are necessary capital since they conduct the procedure. Also, their commitment to collaboration influences its sustainability.

## 6. Catalyst

Catalyst factors play a role in the initial stages of the collaboration process.

Problems faced by the community precedes every collaboration. Members of the community have a choice whether to agree or not to solve the problems together.

The problem and reason to collaborate are catalysts for the collaboration process.

Besides these two things, the catalyst could also come from the convener, the person who acts in a unifying role for the whole party involved in the collaboration. The convener could be a community leader or someone who has skills in organising activities, is enthusiastic and able to maintain fairness, and who will make collaboration more effective.

### 3.1.2 Committee on the Human Dimensions of Global Change (HDGC)

The HDGC Committee, which is part of the US National Research Council (NRC), conducted a study in 2008 on how to involve the public in assessing and formulating policies on environmental issues. The study is based on the background that environmental problems of the twenty-first century can be effectively addressed only by processes that link scientific analysis with public consideration. Also, analysis and consideration in environmental assessment and decision-making can be improved by examining concrete scientific evidence. Considering that the participatory approach was increasingly raised in the discussion of environmental issues, the HDGC Committee needed to investigate methods, practices, and mechanisms for public involvement in addressing environmental issues. The study aimed to provide an overall assessment of the benefits and failures of participation and to offer guidance on participatory practices.

One of the research reports points to the need to examine contextual factors that influence the participation process. National Research Council et al. (2008) stated that the available evidence shows that some contextual factors make a slight difference to public participation, while other factors can make essential differences.

In their report, the HDGC Committee set up five factors that influence the public participation process (National Research Council et al., 2008). The five factors are divided into two categories. The first category is related to the issue that underlies the process of participation, consisting of the state of the relevant science, the purpose of the process, and the environmental issue under consideration. The second category relates to those involved in the participation process, consisting of responsible agencies and external parties. These five contextual factors will be explained below (National Research Council et al., 2008).

### **1. The state of the relevant science**

The role of science in determining policy on environmental problems is quite significant. In the past decade, there has been a significant increase in information and environmental knowledge that needs to be considered in the policy-making process. However, it rarely happens where the use of this information can guide decision-making agreed upon by all parties. Therefore, it is necessary to work out the role of science in the formulation of policies involving public participation.

Bingham in National Research Council et al. (2008) identified five difficulties involving environmental science in the public involvement process in policymaking: (1) the adequacy of information faced issues, (2) the clarity of the decision-making process related to science, (3) the problem of how to manage data by the affected parties, (4) communication problems among scientists, and between scientists and other stakeholders, and (5) problems of trust between the

parties involved. The ability of the participation process to address the above problems will significantly affect the effectiveness of the process.

## **2. The purpose of the process**

The HDGC Committee states that the purpose of the participation process can be divided into two, namely whether to test policy or to resolve environmental issues. These differences in objectives are considered not to influence the success of the participation process. It is just that the purpose of the participation process will affect how it is carried out. A participation process, which aims to test policy, will usually experience more difficulties than one that seeks to solve the problem (create policy). This tendency is because so far, the process of policy testing involves only scientists who are deemed to have scientific authority, not those directly impacted by the policy.

## **3. The environmental issue under consideration**

From the experience of the previous participation process, the HDGC Committee noticed that the types of problems did not affect the success or failure of the participation process. However, specific issues have particular challenges that make the process of participation quite tricky. The challenges faced because of specific issues include time and space scale, complexity, and qualitative character of the issues. Those challenges affect the determination of the parties involved and the relationship between them. In the end, the most important thing is how the design of the participation process can overcome the challenges posed by this specific issue.

#### **4. The responsible agencies and external organisations**

The agency that conducts the participation process influences the success of the co-design process. The common practice is that these are government or private sector or a mixture of both. The agency implementing the participation process in some cases is also the body that will carry out the results of the process. The HDGC Committee recommends that a process involving various types of agencies will have a higher possibility to be successful because, besides shortening the time, it will also increase participatory commitment during the process.

Other factors related to the agency are legal rules, regulations, and provisions that give it the mandate to carry out the participation process. How these rules govern the participation process will also affect the success of the process. Moreover, if the participation process involves various types of agencies, overlapping regulations, differences in mandates, as well as cultural differences, the agencies will face challenges in aligning themselves when carrying out the participatory process.

#### **5. The interested and affected parties**

Interested parties and affected people are usually participants in a participatory process. Their existence influences the success of the process. Several points need to be considered in assessing the participation process related to the composition and quality of participants.

##### *Adequacy of representation*

The process should guarantee that the participants involved represent, as much as possible, all parties affected by the policy that will be produced. This is critical to

ensure that the participatory process effectively represents the interests and demand of the affected people.

#### *Disparity of participants*

Highly educated and economically well-established people are more likely to be active in public affairs than less educated people and low-income people. Not because the first has more concern for public problems or has more substantial efforts, but more because of the differences in the control of politically valuable resources (cognitive skills, money, and a sense of political efficacy), and their networks with influential people. Moreover, they are usually the target of citizen involvement by political institutions. So, it is important to pay attention to the disparity of these participants.

#### *Power Disparities*

This point concerns the difference in power that occurs between the parties involved in the participatory process. For some parties, their contributions can easily be channelled, but some groups lack the opportunity to voice their opinions (unorganised workers, the poor, minority ethnic groups). Regarding this problem, the participation process needs to seek an inclusive process to assure the balance of power between the parties involved in expressing opinions.

### **3.1.3 Adapted Contextual Factors**

Combining the two frameworks developed by the NNC and HDGC Committees above, four categories with substance in common have been extracted. These four categories then become the contextual factors employed to assess the co-design process in each case study in this study.

## 1. Socio-cultural factors

Socio-cultural factors are related to human activities when dealing with others or their communities in context. Human activity will produce various cultural products, both tangible and intangible that are used in social activities. Daily life interaction and social custom are part of the component of socio-cultural factors.

From the NNC framework, there are two socio-cultural factors, namely connectedness and history of working together/custom. Both of these factors are representations of cultural products produced by the community. Connectivity reflects the spirit of collaboration, where the urge to connect among people is one of the essential capitals of successful collaboration. Meanwhile, the history of working together (co-operative) is part of the tangible culture of a community. The collaboration process needs this co-operative model compared to the competition or even antagonistic relation.

Contextual Factor Collaborative Framework (National Network Collaboration, 1995)	Contextual factors on Public Participation in Environmental Issues (National Research Council et al., 2008)	Adapted contextual factors for inclusion in this study
• Connectedness • History of working together/Custom		<b>Socio-Cultural factors</b>
• Political climate • Policy/Regulation	The responsible agency and the laws and external organisations	<b>Political Power factors</b>
Recourses (environmental, in-kind, financial, and human)	• The state of the relevant science • The interested and affected parties	<b>Recourses factors</b>
Catalyst (The existing problem(s) or the reason(s) for the collaboration)	• The purpose of the process • The environmental issue under consideration	<b>Catalyst factors</b>

**Table 1: Contextual factors employed in this study**

Whereas the formulation of the HDGC Committee does not explicitly mention the factors related to aspects of human culture, the "interested and affected parties" factor

implies the importance of the people involved and affected by the collaboration process.

As a summary, this socio-cultural factor is a background situation of social activities and cultural products produced by people and the community involved in the collaborative process. These factors include norms, values, rituals, and customary rules, all of which are managed by traditional organisations such as village institutions or indigenous communities.

## **2. Political-power factors**

Political power must be distinguished from politics. Politics is undoubtedly one of the cultural products that are part of how people interact with the surrounding environment. Part of social life is related to strategies, attitudes, and views of a person. These are appropriate in the socio-cultural factor category. In contrast, political power refers to all aspects that are specifically related to the power within a community and how that power produces decisions. In other words, political power emphasises power and decision-making strategies within a community.

Both the framework of the NNC and the HDGC provide a significant emphasis on factors relating to power and decision-making. The NNC gives attention to aspects of the political climate and regulation, law, and policy as factors related to political power. The HDGC includes responsible agencies and external organisations. All of these factors relate to how power and decision-making are carried out. The most prominent factors are regulation, policy and law. The three become a set of rules that formally regulate the relationship between group members. Thereby their existence will significantly influence the success of the collaboration process.

This regulation includes both local rules (customary, environmental) and state law or constitutions. Both are included in the scope of political power factors. In addition, the form of government or political traditions (whether democratic or authoritarian) are also the scopes of political power factors.

### **3. Resources factors**

Resources factors are the main components that supply all resources for the collaboration process. This does mean not only financial support but also all resources ranging from human and natural resources to knowledge and techniques that support the application of the collaboration process.

Overall, from the two literature sources above for both the NNC and HDGC, resources factors can be categorised into two types: human resources and material resources. In collaborative practice, several parties will be involved, from agencies, designers, participants, volunteers, project organisers, government and management. This also includes expertise, as well as the knowledge that is employed to carry out the collaborative process. Material resources include financial and natural resources, such as labour, goods, services or money, which are significant as the primary support for fulfilling the logistic of the collaboration process. In short, the resource factor is all the potential and capabilities that the community has and provides to support the collaboration process.

### **4. Catalyst factors**

Beforehand, the community needs encouragement to agree and decide to start the collaboration process. In this stage, the community needs reasons and purposes why they have joined together in such collaboration activities. The reasons and purpose of collaborating could be an encouragement factor. Both are included in the scope of the catalyst factor.

The NNC framework explains that the problems and reasons for collaborating are the main factors driving the agreement to collaborate. Similarly, the CHDG also mentions environmental goals and issues as a driving factor for collaboration. The catalyst factor is essential to keep the collaboration process running and sustained.

### **3.2 Criteria for Effective Co-Design**

The literature review indicates that there is no single co-design model that can be applied in all contexts; on the contrary, various models can be developed according to their respective contexts (see pp. 43). Therefore, this study adopts co-design frameworks that come from a particular co-design perspective accordance with the objectives of this study.

This study aims to investigate the influence of social context in co-design applications in different contexts. This study adopts the co-design framework proposed by Bradwell and Marr (2008) and Cruickshank (2014) to establish criteria for effective co-design that can accommodate the objectives of these objectives. Both frameworks were chosen because they are compatible with the objectives of this study. The frameworks emphasise the importance of considering different contexts, as well as the openness of its structure. Bradweel and Marr (2008) used the framework they developed to survey co-design applications in 5 different contexts: UK, Europe, USA, Asia Pacific and Latin America. They realised that different contexts would influence the co-design model. One of the questions they raise is "How is that co-design best implemented within its specific context?" Bradwell and Marr (2008: 11).

Meanwhile, the framework from Cruickshank was chosen because it emphasises the flexibility and openness of its structure (Cruickshank, 2014). This means that the framework considers possible applications in a variety of different contexts. There is a

consideration that the framework must be able to accommodate the creative potentials of participants from various contexts. Cruickshank (2014: 156) stressed: "There must be space in an open process for different types of creativity, as well as facilitating the interchange between these multiple frames of creativity."

### **3.2.1 Bradwell and Marr**

Bradwell and Marr explored co-design practices in several countries and set out a working definition of co-design as "broadly referring to the effort to combine the views, input, and skills of people with many different perspectives to address a specific problem" (Bradwell and Marr, 2008: 17). This definition emphasises the collaboration of all resources to solve specific problems as elaborated below.

- *Participation*

Concerning participation, Bradwell and Marr (2008) emphasise that several primary points must exist in the co-design process as a requirement of collaboration. The points are transparency, orientation to designing with rather than for people, the sustainability of participation, and participation in more generally. Bradwell and Marr (2008: 18) emphasise this "designing with" point distinguishes co-design from previous terms such as "engagement" or "participatory".

- *Development*

Co-design is a developing process, a process of exchange of ideas and expertise among the parties involved. The subject of the co-design process is the process itself.

- *Ownership and power*

The issue of role and power equality among all participants is a central one that distinguishes co-design from traditional design methods. Bradwell and Marr (2008: 17) summarise it as follows:

Co-design shifts power to the process, creating a framework that defines and maintains the necessary balance of rights and freedoms between participants. There is equality of legitimacy and value in inputs from all those involved, whether suggestions entail large- or small-scale changes. This combination of controlled abrogation of power by those with whom it usually rests, and the concomitant empowerment of those in a traditional ‘client’ role, serves to create a sense of collective ownership.

- *Outcomes and intent*

Following the initial definition of co-design, the collaboration process ends in solving specific problems. The co-design process, in the end, is not just an exploration of endless design ideas that are experimental or just abstraction. The co-design process must have a definitive outcome.

### **3.2.2 Cruickshank**

Cruickshank (2014) set some principles to form the guidelines in his efforts to establish scaffolding for the implementation of co-design practice.

- *Agree how the success of the project will be recognised*

This principle emphasises that from the beginning, the co-design process must define what the criteria for success are. To achieve this, the co-design process can be either a long-term or a short-term project, or a combination of both. What very important to agree is the objectives or the success criteria of the process.

- *Move in and beyond your normal design practice.*

This principle is an important strategy to avoid the tendency of "design by committee". The participants must go further beyond their habit, leave behind their performed solutions, and step up to develop new ideas with other participants.

- *Involve and respect lots of people in the ideas-generating parts of the process*

Designers often find it challenging to shift power during the co-design process. However, the recognition that everyone has the potential to generate great ideas is at the core of an open design approach. Even though it does not mean that everyone has the same creative abilities, it is just that their potential needs to be accommodated in the entire design process.

- *Use the expertise of all participants in the process.*

Apart from the potential for creativity, all participants have potential expertise that must also be accommodated. It should be noted that designers often feel like "experts" in the design process. Meanwhile, in the open design approach, designers are considered the same as other participants. Open design provides an opportunity for as many people as possible to generate a positive contribution in shaping decisions.

- *Let everyone be creative in their own way*

Designers are often well established with the ways they express their creativity. In the open design process, designers must break away from this establishment and allow participants to explore other possibilities in conveying their creative ideas. There must be a flexible space to convey ideas.

- *Explore and challenge assumptions*

The assumptions attached to the participants can be valuable assets that are worth listening to during the design process. What Von Hippel calls Sticky Information

needs to be accommodated. Unrecognised assumptions will only hamper the exploration process for no apparent reason.

- *Expect to go beyond the average*

People are often doubtful that the co-design process can result in solving problems compared to the traditional design approach. This means that co-design should be able to surpass what the traditional design process can do, both in terms of the process and its output. Cruickshank et.al (2013, 55) said:

If the co-design process wants to develop in the mainstream design the idea that the results of this process are lacking stronger than conventional designs must be handled. There are two aspects to this; first, the process of co-design itself must be designed to be extraordinary, fun, dynamic that will maximise the potential of people to contribute. Second, the results of this process, whether the product, service, knowledge and understanding, must persist in terms of quality and effectiveness for a given context.

- *Bring the process to the best possible conclusion with the best possible outcome.*

The conclusion of the process should be able to document the participants' contributions. Participants should not be left wondering about ideas or suggestions they have lost to conclusions. For a broader scale, there needs to be an exact comparison between the final result and the criteria for success that was agreed upon at the outset, as well as what possible next steps.

### **3.2.3 Adapted Criteria for Effective Co-Design**

#### **1. Decision-making power**

Co-design is distinguished from traditional design methods, mainly in the way the process leads to decision-making. Co-design shifts control of power from the hands of designers to the process, creating a framework that is able to maintain a balance of rights and freedoms among all participants. This principle is in line with the result of Bradwell and Marr's study, which is summarised in the principle of "ownership and

power" (2008: 17). Meanwhile, Cruickshank (2014) suggests it in the principle of "Use the expertise of all participants in the process ", where designers no longer hold control in the whole of the creative process but shift their power to the participants. He also emphasised "Explore and challenge assumptions", where the co-design process should listen to the "sticky information" from the participants in shaping the decision (Cruickshank, 2014). Both principles led to the centring the power from the designer to the participants.

## **2. Collaboration**

The collaboration principle means that co-design requires collaboration between designers and all stakeholders. In this process, the user or clients can then be activated as partners in the design process, rather than just a passive recipient. This is in line with the principle of "participation" of Bradwell and Marr (2008: 18), where the heart of co-design lies in the cooperation of many parties. They stated:

Co-design places the involvement of users at the very heart of the design of public service. Whereas engagement can directly involve getting people thinking and talking about a service or policy, something that is more fundamental: it requires involvement in the design and delivery of the service itself.

This collaboration is considered beneficial because it combines a variety of different outlooks and perspectives, allowing participants to make creative contributions in various creative ways (Cruickshank, 2014). His principle "Involve and respect lots of people in the ideas-generating parts of the process" and "Move in and beyond your normal design practice" stressed that co-design is a collaborative process that brings participants' potential and ideas to the table to achieve agreed final objectives. Co-design is a process of designing with people, rather than just for people.

### 3. Flexibility

Co-design allows users to be involved and participate in the creative process. Although users are considered experts because of their experience, not all are trained as designers who are familiar with visual expression in expressing ideas. The principle of "Let everyone be creative in their own way" suggests that the co-design process should accommodate the diversity of the way the participants express their creative potential (Cruickshank, 2014). Therefore, the co-design process must be flexible so that various methods can deliver input from the user, not only in the traditional way, such as drawing or sketching (Cruickshank, 2014). In comparison, Bradwell and Marr (2008: 17) proposed the principle of "development", which sees co-design as a developing process, which openly accepts input from participants in a flexible framework.

A working definition of Co-design (Bradwell and Marr, 2008)	The features of the open design (Cruickshank, 2014)	Adapted criteria for effective co-design
Ownership and Power	<ul style="list-style-type: none"> <li>• Use the expertise of all participants in the process.</li> <li>• Explore and challenge assumptions</li> </ul>	<b>Decision-making power</b>
Participation	<ul style="list-style-type: none"> <li>• Involve and respect lots of people in the ideas-generating parts of the process</li> <li>• Move in and beyond your normal design practice</li> </ul>	<b>Collaboration</b>
Development	<ul style="list-style-type: none"> <li>• Let everyone be creative in their own way</li> </ul>	<b>Flexibility</b>
Outcomes and intent	<ul style="list-style-type: none"> <li>• Agree how the success of the project will be recognised</li> <li>• Expect to go beyond average</li> <li>• Bring the process to the best possible conclusion with the best possible outcome</li> </ul>	<b>Outcomes focused</b>

**Table 2: Criteria of the effectiveness of co-design**

#### **4. Outcomes-focused**

Co-design is a developmental process that allows the exchange of information and expertise related to the design process between participants. Indeed, the process should lead to the final output. Methodology and implementation seek to make shared creative intentions between all participants. Co-design is expected to produce definite outcomes (Bradwell and Marr, 2008). Cruickshank (2014) argued that the co-design process, with its various advantages, would be in vain if it did not end up producing quality outcomes. Three principles from his framework stressed the importance to give attention to the outcome of the co-design process. The principles are: “Agree how the success of the project will be recognised”, “Expect to go beyond average”, and “Bring the process to the best possible conclusion with the best possible outcome” (Cruickshank, 2014).

### **3.3 Chapter Conclusion**

This study examines co-design phenomena in two different contexts. A conceptual framework needs to be developed to achieve the research objectives. The conceptual framework in this study was built following a dialogical relation model by adopting several theories that are considered appropriate to deal with the research problems. This study seeks to understand the influence of the social context on the practice of co-design. To get a picture of the context, first, contextual factors should be determined, which can be considered as representing of the context.

This study seeks to adapt the two literature sources on contextual factors framework that accordance with the research's objective, they are from the NNC, (1995) and the Committee on the HDGC (2008). The adopted framework from both theories has

formed the following contextual factors: socio-cultural factor, political power factor, resources factor, and catalyst factor.

The criteria of effective co-design need to be established to conceive the characteristic of co-design in both contexts. This study deliberately choosing a particular perspective of co-design to establish the effectiveness criteria of co-design, since the understanding that there are no single co-design model that appropriate for all context. The framework developed by Bradwell and Marr (2008), and Cruickshank (2014) were used as both suitable with the objectives of this study. This study has identified and employed decision-making power, collaboration, flexibility, and outcome-focused principles for effective co-design.

# 4 Research Design

This chapter discusses how these research methods were chosen and applied. The research design started from the research paradigm as the umbrella of the whole research. Next, the strategy and steps to conduct this research are explained. The method of data collection and analysis is as an integral part of the research design process.

## 4.1 Research Paradigm

The research paradigm plays a vital role in underpinning the overall approach taken for this study. Viewed in this way, it guides the implementation of research. This research has followed the interpretative paradigm, which does not seek a universal understanding of a case but instead attempts to understand a specific case in a particular context. Willis (2007: 98) stated, "Whereas post-positivism looks for universals and critical theory looks for local instances of universals, interpretivism looks for an understanding of a particular context". Therefore, this paradigm is appropriate for understanding co-design practices from two contexts both in the UK

and Indonesia, as well as to build co-design recommendations in Indonesia. Referring to Willis (cited in Maruatona, 2013) has suggested that interpretivists believe that reality is humane and socially constructed; research is influenced by existing theories and the worldview of researchers, and the making of meaning is a social process built by individuals who participate in it. Therefore, this paradigm links the views of research participants and researchers to achieve research goals.

This research aim is to investigate contextual factors that influence co-design practices in the UK and Indonesia. To address the research aims, insights have been drawn from people who are closely involved with co-design practices in both contexts. The interpretive perspective allows one to better understand phenomena through the explanations, thoughts, perceptions, and words of the research participants and, thus, it is possible to identify the factors that influence co-design practices. The interpretive approach has helped to explore and understand the context of research problems and the complex nature of the environment both in Indonesia and in the UK.

## 4.2 Research Method

Research methods need to be established to support a robust procedure with which to meet the research objectives. The purposes of this research are to obtain a deeper understanding of the effect of social context on the co-design process and how it can be used to recommend an alternative framework for co-design in an Indonesian context. These purposes are operated by compiling the following research questions “What would be a context-appropriate co-design framework for Indonesia and how is this distinct from a UK context? “and “How do the distinctions affect the development of an alternative framework of co-design in the Indonesian context?”. These questions require a research approach that considers the perspectives of the

participants attached to the context. Thus, to address the objectives of this research, a case study method has been implemented to address a problem which has deep connectivity with its context. Therefore, using a case study method will increase the opportunity to obtain a deep understanding of the case in its natural setting. Yin (2009) suggests that there are two advantages to using a case study as a qualitative research approach. First, the case study gives the possibility of more significant details about particular phenomena. For example, it perhaps includes narrative and specific description of activities, personal relationships or group interpretation. The second is that the case study provides a holistic interpretation and always refers to the social context. Besides, it does not involve any treatment, experimental or manipulated social settings. As a result, the data will be considered as a natural phenomenon in real-life society.

However, the case study also has its disadvantages. They often rely on subjective data, such as reports, interviews, or observation, since most case studies focus on the human experience. Consequently, the data is varied based on the description, perspectives, and the feelings of participants. As suggested by Stake (2006), to avoid subjectivity and to increase the objectivity of the data, the researcher should do replicative, falsification, and triangulation methods. Literature studies have revealed several studies conducted using the case studies method, conducted by Byrne and Sahay (2007), Kocan (2013) and Puri et al. (2004).

The case study method seeks to reveal something previously unknown. It tries to look at the fact based on the overall events that have been examined. The truth of reality is apparent not only from one point of view (the actors) but from many different sides. In addition, the complexity of co-design practice requires sociological work

understanding, the interaction between stakeholders and social changes in differing contexts, policy/political analysis, and physical analysis of the result. These practical demands and exploratory nature of the investigation underpinned the decision to employ this method.

More specifically, although the case study methods allow for data collecting with both qualitative and quantitative methods (Yin, 2009), this study employs a qualitative rather than quantitative method because they are considered capable of providing in-depth and holistic understanding to the topic of co-design. The selection of qualitative methods is based on two considerations: contextualism and flexibility. First, to obtain a complete understanding of a co-design issue, a researcher should collect data directly from the actors involved in the co-design process in each context. One of the characteristics of qualitative research is that it requires contextualism for its commitment to the understanding of the events and behaviour in context (Bryman, 2004). Thus, researchers will have close relationships with participants within the context. This is different from quantitative models that often keep a distance from the sample to maintain the objectivity of the researcher (MacDonald and Headlam, 2008). Second, a flexible structure allows researchers to be freer to collect data from participants. Qualitative methods, such as interviews with open-ended questions, are deemed able to obtain broader information on the cases studied (Creswell, 2014) and provide flexibility to do observations of the co-design activities, in this research study.

In conclusion, the research methods chosen are in-depth case studies using qualitative techniques. Furthermore, this research framework will be developed to produce research strategies to achieve research objectives.

### 4.3 Research Strategy

A research design is the result of a series of decisions by a researcher in finding how the research will be conducted (Burns and Grove, 1997). It provides a framework that serves as a guide in doing a series of research stages. These guidelines will control the research to keep it focused on the research goal and maintain the validity of data findings. According to De Vaus (2001), every research design could, in principle, use any data collection method, using quantitative or qualitative approaches. De Vaus (2001) stated that research design refers to the structure of investigation; this is a logical rather than a logistical matter. Polit and Hungler (1995) noted that research designs vary depending on the objective of the research and how far the researchers need to enforce structure in the research action. Quantitative research tends to have a strict structure, and the qualitative approach is less structured.

This study seeks to investigate a social phenomenon, the co-design practice, which was applied in two different contexts. As a consequence of its objectives, it focused on investigating the relation of contexts to the practice of co-design. Investigations involved various parties who have different roles in implementing co-design practices. Therefore, the development of the research strategy gave attention to determining the case studies, the participants, including the data collection techniques, so they convincingly represent the context.

The research strategy for this research was conducted in stages as follows:

1. Conceptualising the relevant theory of co-design
2. Selection of cases
3. Conducting the empirical investigation
4. Analysing cross-case study evidence in both contexts
5. Bringing cross-case conclusions to develop a recommendation.

## 4.4 Conceptualising The Relevant Theory of Co-Design

The focus of this stage was to achieve an understanding of the issue of co-design as the theoretical basis for answering the research questions. In addition to obtaining an overview of research experience in co-design that has been carried out, as well as understanding knowledge gaps that need to be considered in this study. The literature review specifically highlighted several important themes related to the research topic:

- Co-design: The discussion on co-design included its early history, principle and characteristic, the shift in terms of concept, other terms that relate to it, and the new theory which has influenced the development of practice.
- Co-design experiences: The various experience of co-design application in different social contexts. The study highlighted the recent challenge and the solution to problems which have been delivered, and adaptations made when dealing with different social contexts.
- The Indonesian background: The review consisted of the development of the political climate, especially the growth of democracy and a description of Indonesia's socio-cultural context, specifically the collectivist society influence.

Based on the literature and considering the research question, in chapter three, a conceptual framework for understanding the characteristics of co-design practices both in the UK and Indonesia was established. There are two key themes to deal with the framework:

- Contextual factors that influence co-design practices in a specific context
- Criteria for the effectiveness of co-design practices.

The conceptual framework has been constructed by adopting relevant theories in the area of co-design that had been developed.

## 4.5 Selection of Cases

This study needs to involve more than one case study to get an understanding of the intervention of co-design in different contexts. Therefore, multiple case studies were employed (Goodrick, 2014). However, the selection of cases in case study research should not be a haphazard activity (Yin, 2009) because a case is a key to get the depth of research results. In contrast to quantitative methods based on a statistical count of many samples, case study research needs a careful selection of representative cases to be investigated.

In conducting a multiple-case study design, it is essential to consider a way to increase the quality of the research design. In terms of the selection of the cases, there are two key issues: appropriateness and adequacy. Appropriateness is defined as the ability to meet the objectives of the research and the phenomenon of inquiry, whereas the adequacy related to how much the number of cases to be investigated (Shakir, 2002). To obtain this, it is necessary to answer the question of how to sample the cases. This study followed purposeful sampling strategies, precisely the theoretical strategy to meet the appropriateness requirement (Patton, 1990). The theoretical strategy means "the cases are a manifestation of a theoretical construct and are used to examine and elaborate on it" (Patton, 1990).

To facilitate the implementation of the theoretical strategy (chapter three), indicators to formulate the theory as a guide for the selection of cases needed to be established. These indicators were determined so that the selected co-design case could present the problem of the influence of social context on the application of co-design. The following indicators have been adopted:

1. Selected cases of co-design should mainly involve a significant number of group or community members so that considerations of the impact on and participation of existing communities or end-users of the shaped outcomes can be included in the analysis.
2. The volume of the collaboration should be large enough to ensure the influence of contextual factors has a substantive impact on the final outcomes of the project. The volume of collaboration can be identified from the consistency of the participants' involvement in the series of project implementation phases.
3. The selected cases may be at the different scale in terms of their political dimensions. However, they should have enough of a power-relation issue to ensure adequate analysis of the aspect of shifting of power during the co-design process.
4. The selected cases may be at different stages of development, but the actual stage of planning and design should be advanced enough to ensure adequate analysis of the influence of social context in co-design.

This study followed Yin's (2009) replication logic strategy to address the adequacy aspect. This strategy is analogous to the method of multiple experiments, wherein determining the number of cases should be associated with the prediction of research results. Yin stated there are two replication logic strategies, literal replication for predicting similar cases, and theoretical replication for predicting contrast cases. For this research, theoretical replication has been chosen as the strategy to determine the number of the cases, since the study was conducted in two different contexts which have contrasting values. Yin (2009) stated that four to six cases are an ideal number for theoretical replication.

UK	Beyond the Castle, Lancaster	Rough Sleepers, Worthing	Ambulatory care unit, Whittington Hospital, London
	<ul style="list-style-type: none"> <li>• A large-scale planning project of Lancaster Castle green area, involving the residents around the castle and the general population of Lancaster.</li> <li>• Participants involved in all design stages.</li> <li>• Low political dimension: the tension emerges as the city councils hesitant with the method applied by the designer.</li> <li>• The project was finished in 2014</li> </ul>	<ul style="list-style-type: none"> <li>• A large-scale service design project to address the homeless issue in the high street of Adur and Worthing involving the communities that worked in this issue.</li> <li>• Participants involved in all design stage</li> <li>• Low political dimension: tensions between the councils and participants at the beginning of the project due to the poor result of the past projects.</li> <li>• The project was finished in 2015</li> </ul>	<ul style="list-style-type: none"> <li>• A mid-scale redesign project of the interior of the ambulatory care unit involving the staff, management and the patients.</li> <li>• Participants involved in all design stage, even in the used time phase.</li> <li>• Medium political dimension: dominant hospital management intervention during the process and hierarchical corporate culture</li> <li>• Completion of 2014</li> </ul>
Indonesia	“Sample House” Kampung Tongkol Co-Housing, Jakarta	Bamboo Church building, Malang	Public facilities building, Solo
	<ul style="list-style-type: none"> <li>• A mid-scale project to build a co-housing in a riverside neighbourhood area in Jakarta, involving the prospective residents.</li> <li>• Participants involved in all design stages from design to construction phase.</li> <li>• High political dimension: a response against the city government’s plan to displace and move the residents into hi-rise housing</li> </ul>	<ul style="list-style-type: none"> <li>• A large-scale co-design and construction of a bamboo church in Malang involving the member of the congregation.</li> <li>• Participants involved in all design stages from design to construction phase.</li> <li>• Medium political dimension: Internal conflicts between congregation members and between the congregation and</li> </ul>	<ul style="list-style-type: none"> <li>• Large-scale public facilities (public toilet and playground) building project involving the community surrounding.</li> <li>• Participants involved in all design stages from design to construction phase</li> <li>• Low political dimension: tensions between the designers and participants at the beginning of the</li> </ul>

	<ul style="list-style-type: none"> <li>• Completion of 2015</li> <li>• Implemented in 2017-2019</li> </ul>	<ul style="list-style-type: none"> <li>church administrators.</li> <li>• Implemented in 2014</li> </ul>	project due to the poor result of similar past projects.
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**Table 3: Indicator to select the case studies**

This study established six cases for the whole of the study as a representation of co-design projects from both contexts. They represented a broad spectrum of problems of co-design as specified in the indicators in Table 4, to address the appropriateness aspect. Those six cases, three from both Indonesia and the UK, are considered sufficient to represent the contrast of contexts.

## 4.6 Conducting the Empirical Investigation

The advantage of case study research is the ability to collect different types of data resources, which would increase its credibility (Baxter and Jack, 2008). The researcher tries to establish the meaning of a phenomenon from the perspective of participants. This strategy means identifying a culture-sharing group and studying how it develops shared patterns of behaviour over time. One of the critical elements of collecting data in this way is to observe participants' behaviours during their engagement in activities (Creswell, 2014). Data collection was conducted during the empirical investigation, as reported in chapters 5 and 6. The data collection methods of this study are documentation and archival studies, interviews, physical artefacts, and direct observations. They are described as follows:

### 4.6.1 Documentation and Archival Studies

Data from documentation and archives primarily is needed to improve and strengthen the evidence from other sources (Yin, 2009). These documents may include clippings from mass media related to the case; and official documents such as proposals,

progress reports, final project reports, visual documentation, meeting notes, and other internal data.

Data from these documents are primarily needed to examine the cases that have been completed because such observation or shadowing is not possible. In addition, they might not always be accurate and valid. Therefore, they will be validated with other data resources, for example, participants' interviews.

The finished cases generate a lot of records, documentation activities, either textual or visual. All files and documentation are essential to test the validity of findings from other sources. Documents also function to trace the performance of the system being studied. (e.g. how the roles and communication between the actors involved). These findings help to shape the interview questions.

#### **4.6.2 Interview**

The interview has particular importance because of its ability to get the data from the first-hand actor, although it is in a subjective manner (Yin, 2009). In this research, interviews were carried out for the following reasons:

- Participant interviewing helps the researchers to understand the characteristics of co-design from the point of view of co-design actors.
- Interviews are interactive methods that allow the researchers to dig deeper into the information required. Moreover, socio-cultural factors are one of the essential factors which are more appropriate to explore through interviews.
- Interviews do not require complicated equipment, only interview techniques and simple recording equipment.

## Technical Method

There are three technical ways of interviews conducted in this study, namely, face-to-face interviews, email correspondence, and telephone interviews. The first method is the primary choice made, whereas the second and third ways were options when there were geographical or time synchronisation constraints due to difficulties in arranging meeting schedules. Face-to-face interviews have advantages where interviewers can interactively dig deeper into a question. This technique also allows the interviewer to pursue new themes that appear during the interview, which were not previously prepared. Participants who cannot be interviewed face-to-face are offered telephone or e-mail interviews, according to their preference.

Although previously, it was still considered inferior compared to the face-to-face interview (Gillham, 2005), telephone interviews have been increasingly accepted as data collection techniques in qualitative research (Irvine, 2012). The benefits of interviewing by telephone include reaching broader geographies, making it easier and cheaper to arrange schedules (Drabble et al., 2017).

The main advantage of an email interview is that it allows practical interviews as a solution to geographical constraints and costs that prevent direct face-to-face interviews (Hawkins, 2018). Qualitative researchers using email interviews for data collection found that the benefits of scheduling increased access to participants and encouraged greater participation of working adults (Fritz and Vandermause, 2017). Email interviews can be conducted with participants around the world without additional fees for travel costs and travel time. Although telephone and video interviews offer the same benefits, a different feature of email interviews is the ability to conduct them asynchronously.

Before conducting an interview, an informal approach is adopted through persons who are already known and trusted by the participants. Especially for the case in Jakarta, with the character of an urban society in which people are very busy with their personal agendas, the role of informal approaches is vital to building closer relationships, as well as mutual trust. By getting acquainted and knowing in advance the conditions of participants, a better understanding of their culture and habits will be obtained, which may help put them at ease during the face to face interview. Whereas for other participants, approaches and introductions were carried out through email correspondence, followed by e-mail and telephone interviews

### **Semi-structured interview**

A semi-structured interview method was used, with the draft questions prepared. One of the advantages is this method provides reciprocal possibilities between interviewers and participants (Galletta, 2012) and allows researchers to dig deeper into the information needed. The framework of this interview was designed so that participants could freely provide information without having to go too far from the theme of the interview. Before the interview was conducted, the interview protocol needed to be established.

Individual interviews were chosen because they are considered to give freedom for participants to respond to interview questions. Moreover, the individual interview gives freedom to researchers to pursue a discussion without being influenced by the views of other participants. However, some participants wanted interviews to be conducted in groups (2 people), arguing that both participants would be able to elaborate and add information, because of concerns about incorrect answers. Thus,

interviews were conducted through two methods, individual interviews and group interviews.

Before conducting the interview, as part of the interview protocol, it is important to prepare a ‘loose’ list of investigation themes as a framework for guiding the discussion. This was built according to the research question. The literature review and the development of theoretical frameworks were the basis for the formulation of the themes of this investigation.

There were essentially two questions about how the co-design would be conducted, and what was the influence of the context on the implementation of co-design. To answer these questions, the investigation is divided into two main themes, namely how the co-design method is carried out, and how effective the method is. In more detail, the themes of the investigation are explained in Table 5.

Research Question	Sub-research questions	Investigation themes
What would be a context-appropriate co-design framework for Indonesia, and how is this distinct from a UK context?	What is the co-design method?	<ul style="list-style-type: none"> <li>• co-design method stages</li> <li>• collaboration activities (workshop)</li> <li>• the tools of engagement</li> </ul>
	How effective is the co-design?	<ul style="list-style-type: none"> <li>• decision-making process</li> <li>• collaboration between all members</li> <li>• method flexibility</li> <li>• the priority of the process</li> </ul>
How do the distinctions affect the development of an alternative framework of co-design in the Indonesia context?	What is the influence of contextual factors?	<ul style="list-style-type: none"> <li>• socio-culture factor</li> <li>• political power factors</li> <li>• resources factor</li> <li>• catalyst factor</li> </ul>

**Table 4: Investigation themes**

Each interview is conducted with varying duration. Face-to-face interviews were carried out with a duration of 45-70 minutes. While for telephone interviews, the duration was around 30 minutes. The tools for the interview were quite simple: recording devices and notes. The key interview questions can be found in appendixes 1 and 2.

### **Selection of participants**

The interview participants were selected based on consideration of conformity with the research objectives in order to produce information, which is rich, solid, and focused on the research questions to provide a convincing explanation of the phenomenon. In other words, the selection of participants must be in accordance with the conceptual framework (Curtis et al. 2000, Walsh and Downe 2006). Therefore, this study uses purposive sampling techniques as participants are selected or searched based on previously selected criteria based on the research questions. The selected participants are those who are considered to understand information and problems profoundly and can be believed to be a reliable data source. Furthermore, the sampling of informants can develop according to the needs and assurance of researchers in obtaining data.

A varied group of participants was identified to obtain abundant data from various perspectives of actors involved in the phenomenon under investigation. Therefore, as a type of purposive-sampling technique, this study applied heterogeneous sampling as a method of determining the participants. The first step to determine the interview participants is to arrange a map of the stakeholders involved in the co-design process. The map is to review the distribution of potential parties as participants, according to the research objectives. Mapping of stakeholders produced several actors involved in

co-design projects: villagers and community members who served as co-design participants; designers/architects who delivered the co-design process; project managers and project leaders who organised the entire process; a community facilitator (companion) and local leaders; and government representatives who assisted participants but did not participate directly in co-design workshops. Those actors were categorised into three groups: workshop participants, workshop facilitator, and influential group.

The next step involved the study of the documentation of each case to examine key actors considered able to provide essential information. The assessment was based on consideration of the roles they perform in the co-design process. The actors considered as active contributors to the co-design process were chosen as research participants. In addition, a consultation with the main actor of the case study was done to determine participant selection; there were not sufficient written reports.

Overall, 21 people were interviewed in this study. The participants' distribution is divided into three categories, as explained in Table 6.

Case Study	Workshop Participant (WP)	Workshop facilitator (WF)	Influential group (IG)	Total
Jakarta	2	2	1	5
Malang	1	1	1	3
Solo	1	2	1	4
Lancaster	2	3	-	5
Adur and Worthing	-	1	1	2
London	-	2	-	2
<b>Total per category</b>	<b>6</b>	<b>11</b>	<b>4</b>	<b>21</b>

*Note:*

*Workshop participant: Community member, Kampung resident*

*Workshop facilitator: Designer, Architect, Lecturer, Project Manager, Project Leader*

*Influential Group: Government Officer, Community Leader, Community facilitator*

**Table 5: Participants distribution**

Furthermore, to facilitate identification while maintaining the confidentiality of participants, in this study, participants were given an identification code. Table 7 explains the identification code.

Case study	Workshop Participant	Workshop Facilitator	Influential group
Jakarta	JKT-WP	JKT-WF	JKT-IG
Malang	MLG-WP	MLG_WF	MLG-IG
Solo	SLO-WP	SLO-WF	SLO-IG
Lancaster	LAN-WP	LAN-WF	LAN-IG
Adur and Worthing	AW-WP	AW-WF	AW-IG
London	LON-WP	LON-WF	LON-IG

**Table 6: Participants' identification code**

#### 4.6.3 Observations/Shadowing

Observation methods are essential because of the case study approach situated in natural contexts (Yin, 2009). Shadowing or observation means conducting a special investigation on the individual's role in an organisation related to the situation and context which produced it. The organisation is seen from the perspective of the person being observed. Observation provides valuable perspectives for researchers (McDonald, 2005). The observations were carried out on ongoing cases, especially those taking place in Indonesia. The observations focused on the participatory process to get a picture of actual interaction. This observation was expected to record the enthusiasm, emotion, and dynamics that take place during the participatory process.

The dynamics between the designer and the participants can be observed directly. It is important to note that the observation should be as small as possible so as not to affect the nature of the co-design process that is underway. However, there are challenges in conducting observation without interrupting the process. The constraints are the

culture of guest revering in Indonesia. This culture made the co-design process less natural because of the presence of the researcher. To overcome this, establishing a good relationship with the people need to be done quickly, especially with key actors of the community while carrying out the field research. Thereby they defined the researchers as friends and part of their community.

In this study, observations of two case studies in Jakarta and Malang were conducted. In Jakarta, observations were carried out on community meeting activities when discussing the continuity of the example house projects. The dynamics of the meetings became useful data as a comparison with data obtained from interviews. Another observation conducted in Malang was focused around a project evaluation meeting about progress achieved. In the meeting, researchers were introduced by community leaders to all participants and asked to do a presentation about bamboo as a building material. Therefore, in the beginning, the researchers could not entirely act as observers but were positioned as experts. Even so, after the short effort to establish kinship, the observations could be conducted naturally. Our presence as researchers did not appear to disrupt the dynamics of the meeting, and sufficient data from observations was obtained.

## 4.7 Data Analysis

The analysis phase of case study research can be challenging to do because of the large amount of data gathered from the field. This study follows Yin's (2009) approach for analysis strategy by "relying on theoretical propositions". The initial proposition of this study conforms with the study goals obtained from the theory development phase through the literature study. Furthermore, this initial proposition guides the way of data collection and analysis of data findings. With this strategy, the

analysis had already begun from the data collection stage by selecting only the data needed and making the initial interpretation of it. Thus, the data coding process becomes more manageable because the data is likely to have followed the prescribed proposition.

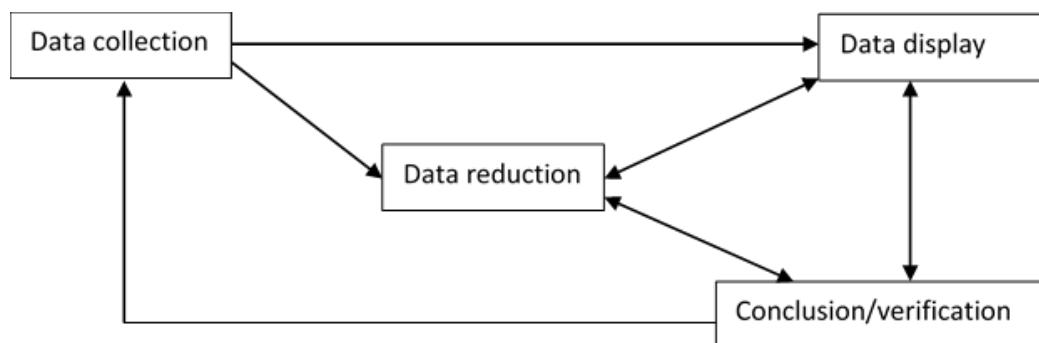
Creswell (1998) provides guidance on multiple case study analysis as follows:

1. A detailed description of each case is obtained after collecting data from fieldwork based on investigation issues.
2. The within-case analysis involves the analysis of findings of each case
3. In the cross-case analysis, each case is compared for similarities and differences in response to the sub-research questions.
4. Generalisations are drawn from each conclusion in the previous analysis stage.

Analysis of the findings from both contexts was reported in chapters five and six.

#### 4.7.1 Within Case Analysis

The within-case analysis was conducted to get a more in-depth picture of every case and applied the suggestion of Miles and Huberman (1994). The analysis was carried out in four steps as a cycle starting from data collection to data reduction, data display, and conclusion.



**Figure 4: Data analysis cycle (Miles and Huberman, 1994)**

### **Data collection - transcribing the interview**

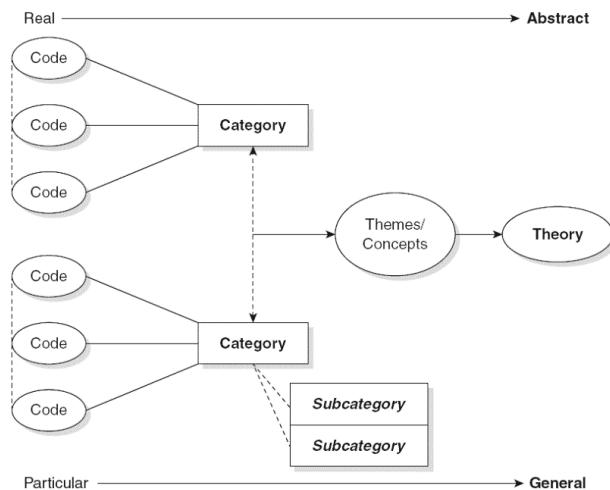
Yin (2009), has suggested that analysis begins at the data collection stage by selecting which data is quite relevant to follow up. All data from primary sources (interviews and observations) and secondary sources (documentation) are then compiled and grouped.

In this study, especially for the data obtained from interviews, it was essential for it to be transcribed before analysis because transcribing makes the data easier to analyse. There were several challenges: (1) Interviewees did not always speak in proper sentences, and it was essential to reconstruct sentences so that the reader can easily understand them; (2) The speaking was sometimes not easily heard, especially when the interview took place in a crowded environment. In such instances, a note was made that could then be compared to the audio version; (3) The results were presented in English, although several interviews were conducted in Indonesian. In some cases, it was necessary to compare transcripts with notes taken when conducting interviews to verify the meaning of the words spoken by the interviewee. Following this step, transcripts and documents were used for the next step: data reduction.

### **Data reduction**

Data reduction is one of the important stages in the overall process of analysis. This was conducted by operating the data coding strategy. The data coding aims to help in arranging, grouping, selecting and finally choosing the data. In this study, the data coding strategies were carried out following Saldana (2009).

Data coding was conducted on raw data from the field research. Coding was also applied to observation notes and documentary study. There are two steps in conducting coding as follows:



**Figure 5: Coding strategy diagram following Saldana (2009)**

Step 1: initial coding: In this step, transcripts were carefully read to understand the entire contents. Next, the key ideas from the text were highlighted and labelled with keywords. Each label was followed by the relevant text extracted from the transcript.

Step 2: Focused coding: In this step, the labels from the previous step were compared and grouped into several categories. Subcategories also were developed for each category. These categories served as guidelines for drawing the overall conclusions of the analysis.

Below is an example of two steps of coding that were done. This example is extracted from one participant's interview for the Jakarta case study.

Transcript	Code
Q: How about the Sample House project, in terms of space programming, layout, or circulation inside the house, how far the role of the architect or designer on its design?	
A: In Kampung Tongkol, besides UPC, we also have collaboration with the Architecture Department of the University of Indonesia. Thus, the framework of the project mainly came from the architecture planning. In addition, (29) <i>the society tried to get involved in the design process by introducing the value of living in the riverbank area</i> , for instance, how to respect the environment, how far should be the distance from the building to the edge of the river, as well as the need for sanitation and waste management. (30) <i>So, they have a lot of roles in the decisions of the design process</i> and prove that they can live in the riverbank area as a healthy community. In general, (31) <i>the community has more understanding about how they live compared with the architect or the expert</i> because this relates to how they live in their everyday life.	29. THE INVOLVEMENT OF THE SOCIETY 30. PARTICIPANTS ROLE IN DECISION-MAKING 31. THE SOCIETY/USER S ARE THE EXPERT
Q: How about the tools?	
A: The main (32) <i>concern about tools was they must be familiar both with the designer and the society</i> . There are differences between the campus and the kampung society in the tools they use. Thus, if one community is used to using drawing as a medium for expression, we just let them draw. Otherwise, if they familiar with an oral story, we let them tell their idea. (33) <i>What we did is give them the freedom to choose their way to express their idea</i> . After the process became a technical solution, (34), <i>then we made the 3D model</i> . Here we introduced the notion of scale and size of the actual building.	32. FAMILIAR TOOLS 33. FREEDOM TO CHOOSE THE TOOLS 34. INTRODUCING MODELS

**Table 7: Example of 1<sup>st</sup> step: Initial coding. Extracted from Jakarta case study interview.**

**Category: Decision-Making Process**

<p>(24) we mostly had obstacles from the political situation of the city, which had implications for the rhythm of our work.</p> <p>(28) the decision was decided together between the designer and the people.</p> <p>(29) the society tried to get involved in the design process by introducing the value of living in the riverbank.</p> <p>In general, (30) the society had more understanding about how they live compared with the architect or the expert.</p>	<p>24. OBSTACLE FROM THE POLITICAL SITUATION</p> <p>28. DECIDED TOGETHER BETWEEN DESIGNER AND USER</p> <p>29. THE INVOLVEMENT IN DESIGN PROCESS</p> <p>30. THE SOCIETY/USERS ARE THE EXPERT</p>
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**Table 8: Example of 2<sup>nd</sup> step: Focused coding. Extracted from Jakarta case study.**

**Data display**

After the data is reduced, the next important path in data analysis is data display, presenting a set of structured information that gives the possibility of drawing conclusions and taking action (Miles and Huberman, 1994). The result of the data reduction is organised and arranged in a data display for facilitating the understanding of the case.

In this study, the primary data presentation was carried out by compiling narrative texts which are elaborations from the categories' results of the data reduction. The narrative texts on several themes are arranged in tables and charts to make it easier to make conclusions in the next stage.

### Within-case conclusion

These conclusions emerged after reading and interpreting the data display. This conclusion is the initial conclusion, which in turn must be re-verified again the evidence of findings from the field. The analysis process was carried out on all case studies. The output from the within-case analysis of each case study was compared at the next analysis stage.

### 4.7.2 Cross-Case Analysis

The within-case analysis gives a clearer picture of the findings of each case. The results were then compared in the cross-case analysis stage. Comparisons between these cases lead to conclusions about the character of each co-design process in both contexts. Cross-case analysis conducted in this study follows the 'most different design' strategy carried out by Przeworski and Teune's (1982). This strategy means that as many different cases were analysed and compared to find similar processes or results.

All cases from the same context were then compared. The comparison focused on the two main themes, namely the practice of co-design methods and the influence of contextual factors on the practice of co-design. Comparison of the two main themes refers to the co-design effectiveness criteria, which had been established before. The results of these comparisons produced a series of values of similarity and differences. The two values were then interpreted to generate general conclusions about how the characteristic of co-design practices in a particular context.

## 4.8 Using Cross-Case Analysis to Develop Recommendations

The next step is to compare conclusions from both contexts. The comparative analysis was again carried out to describe the similarities and differences in the influence of contextual factors from both contexts. Comparisons were carried out consistently using the same parameters as those from the previous analysis phase. Once the analysis was completed, the next step was to formulate the conclusion regarding the main points from the findings and discussion. This stage is the interpretive process, where attempts were made to draw meaning from the data displayed. The findings of this study were subsequently compared with knowledge and gaps identified in the literature review and theoretical framework.

Comparison of the two case study contexts was then utilised as the basis for the development of a co-design framework for the Indonesian context. The framework consists of a set of recommendations to answer the second research objective. Before the recommendations are established, a lessons-learned process was carried out by investigating each of the co-design practices in both contexts.

The effective of co-design practices, from both contexts, and the factors which shape that effectiveness was investigated. Some points were compiled as a lesson learned which conforms with the criteria for effective co-design. Furthermore, recommendations for the co-design framework were established and aimed primarily at overcoming the ineffectiveness of co-design practices caused by the influence of contextual factors in Indonesia.

## 4.9 Ethics

In this study, an ethical procedure was carried out by submitting ethics proposals to the FASS/LUMS Ethics Committee at Lancaster University. The main concerns were

about protocols before conducting interviews and observations in the field. Following the protocol, before the interview was conducted, where possible, an information sheet was sent first via email so that participants could learn and understand it. If email delivery was not possible, then before the interview, participants were given time beforehand to read the information sheet. They were also notified and asked for permission so that the interviews could be recorded.

Besides, participants were also informed that the data collected would be kept confidential, and only the supervisor and researchers would access it. They were advised that any information obtained from the interview would only be used for theses, articles published in academic journals or conference presentations. The dates for participants to withdraw from the research were also provided if they changed their mind. Furthermore, as a standard ethics procedure, each participant was asked to sign the consent letter before the interview began. Consent forms and participation information sheets can be found in Appendix three and four.

## 4.10 Chapter Conclusion

This chapter has discussed the research design that was built to answer the research questions. This research was carried out under the umbrella of an interpretative paradigm since it aims to investigate the phenomenon of co-design practices in two different contexts. This paradigm is deemed suitable because it does not try to seek universal understanding, but rather a specific understanding of the phenomenon according to each context. The study was carried out by conducting qualitative research through multiple case study methods. Overall, this study took six case studies, with three case studies in both contexts: the cities of Jakarta, Malang, and Solo in Indonesia, and Lancaster, Worthing, and London in the UK.

This qualitative research allows the use of various types of data sources. Data collection methods are varied according to the type of data, starting from the documentation and archive study, interviews, to observations. The data analysis followed multiple case study analysis techniques, which were carried out in stages, starting from the analysis of the cases, then cross-case analysis, which led to conclusions. Research conclusions established the characteristics of co-design in each context. These conclusions then became the basis for formulating recommendations for a co-design framework for the Indonesian context.

# 5 The Co-design Practice in the Indonesian Context

This chapter reports the field research from co-design practices in the Indonesian context. There are three case studies located in three cities in Indonesia: Jakarta, Malang and Solo. The report begins with an introduction to Indonesia's political and socio-cultural background. Then continue with an exploration of the findings from each case study — the focus of the report is based on two themes. The first is the implementation of the co-design method, and the second is the influence of contextual factors on the co-design practice. Furthermore, the findings from the three case studies are compared and analysed to obtain a picture of co-design practice in Indonesia. The chapter concludes with the characteristic of co-design in the Indonesian context.

## 5.1 Introduction

After living under an authoritarian regime for 32 years, Indonesia experienced a political earthquake in 1998 that drastically changed the national political landscape. The Suharto regime was successfully overthrown by people power, on 21 May 1998. This event marked the end of Suharto's rule

After the fall of Suharto's regime, the reform-oriented government adopted a more decentralised state management policy. The national government began to introduce regional autonomy. They delegated several authorities to the local government. One of



**Figure 6: Map of case studies in Indonesia context**

these were for developing local planning. Although the focus and national development plan remains centralised by the central government, the local government started to get some authority to regulate development following the local needs (Bennet, 2010).

Experiments on regional planning forums were introduced in 2004, under the name musrenbang - Musyawarah Perencanaan Pembangunan (Development Planning Consultation) (Aswad, 2013). Through the musrenbang mechanism, development planning is carried out gradually from the local neighbourhood to the city level (Sidre, 2012). Although it is said that citizen participation would be accommodated with this new mechanism, it does not work appropriately in practice. Despite its limitations, musrenbang has eventually been able to generate discourse about public involvement in development planning. NGOs work independently to assist people in development planning in their neighbourhoods. With funding from non-government sources, they

conduct a self-regulated development project, especially public space facilities. Some ongoing projects involve architects or designers who state that they employ a participatory approach on their projects. As mentioned, among the many projects, three were selected from three different cities on Java island as the case studies of this research. Java was chosen because it is an island with many cities with a high population density. The development problem is considered to represent the complexity of development policy in the context of Indonesia. As previously mentioned, the location of the three projects selected as case studies are in the cities of Jakarta, Malang and Solo, respectively.

The case study in Jakarta was chosen because of the strong influence of political interests. This project could be categorised as a citizens' movement against the city government's policy. Because of its location in the nation's capital and the nature of its resistance, the project gained significant attention and even got coverage from the national media. Moreover, this project took place at a time when Jakarta was conducting the gubernatorial election. Thus, its existence tends to be associated with the particular national political constellation. From the beginning, this project was assisted by some NGOs, while the participatory approach was conducted by the citizens accompanied by a team of architects.

The second case is in Malang. Unlike the Jakarta case, which was influenced by political interests, the Malang case does not appear to be related to political interests. However, the potential for internal conflict among participants was very high. It means the politics, in term of micro-politics, were obviously affected during the process. Malang's case is also a project with participants who have a relatively strong

traditional Javanese cultural character. The project was conducted by the Church, involving all church congregations and assisted by a team of architects.

The last case study was conducted in Solo. This location was chosen due to its University initiation and organisation, unlike the two other projects. The academic background resulted in a higher theoretical approach compared with the two others. Another thing is the mixed cultural character of the participants, between traditional Javanese culture and urban city culture.

## **5.2 Jakarta Case Study**

The case study in Jakarta is a co-design project for building a sample house on the banks of the River Ciliwung. The project location is in Kampung Tongkol, North Jakarta. Kampung Tongkol is one of the informal settlement areas along the banks of the Ciliwung. Their existence is often blamed as the cause of flooding. Therefore, the city government has tried to relocate them. To understand the complexity of the eviction issue, reading on the long history of the city of Jakarta is needed.

### **5.2.1 Background**

The case study in Jakarta is located in Kampung Tongkol, North Jakarta. Kampung Tongkol is one of the many informal settlements in Jakarta that are scattered in many locations. One of the distribution points is along the banks of the Ciliwung river (the largest river that passes through Jakarta), including Kampung Tongkol. Jakarta is a reasonably old city, which has evolved since the days of the ancient kingdom of Tarumanegara in the 5th century to the present. These developments were not always planned so these processes have led to the irregularities of Jakarta's current spatial structure, one of which is the formation of informal settlements.



**Figure 7: Kampung Tongkol location (Openstreetmap, 2019)**

Kampung Tongkol belongs to the buffer zone of Sunda Kelapa harbour. This port is known as a traditional port for the traditional ships, especially fishing boats and traders from Eastern Indonesia. The Ciliwung naturally flows down to this port, so it is believed that this area has been inhabited for a long time. Interviews with residents revealed the history of settlement in Kampung Tongkol:

I came here from West Java and began to settle in this area around the 80s. I got married here; my wife is native from here. Formerly all the houses here jutted into the river, faced back to the river. So, when we see along the bank from the river, many toilets are hanging behind the house. All of them stand above the river stream. (JKT-WP 1, 2017)

Structuring programs began in the era of the Dutch colonial government in the 1940s and continue because urbanisation in Jakarta is increasing. Various programs were launched, for example, the KIP (Kampung Improvement Programme) in the 1970s, Program Peningkatan Kampung in 1980, ‘Mempercantik Jakarta’ (Beautify Jakarta) in the 2000s and Program Kampung Deret in 2012.

However, Jakarta's kampung redevelopment was not always conducted persuasively. From 1980-90, evictions were carried out forcibly over the slum area, mainly located on the riverbanks. One of the inhabitants of Kampung Tongkol retold his experience:

Then in the 90s there began the eviction. It was starting with such data collecting of the civil administration. Then they (the city government) considered that there were too many people here, so some of us have to be moved out to somewhere outside this area. They also expanded the unit administration. Formerly, this area was under the Village of Mangga Dua, after the expansion, it is currently under the Village of Ancol.

In addition to the riverbank's clearance program, this area was also once cleared during the toll roads construction. The place that is now under the toll road was cleared. Some moved here, including the residents of the housing for pensioners and civil servants. They have all been evicted.

At that time after the evictions, the government made retaining walls of the river. After being tidied up, the city government looked like they did not maintain the bank area. Then there were new people, especially from the TNI (Indonesian Army) and Fire Department dormitory, came and settled here. They stay here until their descendants today. Some have moved, then the house was transferred to others. Change occupants. (JKT-WP 1, 2017)

### **5.2.2 Co-Design Process**

The design process conducted by the architect's team with the residents was very flexible. The traditional design process usually consists of the following sequence: ideation, prototyping, delivering the design, and design evaluation (Giaccardi and Fischer, 2008). However, in this case, the process did not run linearly. It was affected by the current situation and spontaneity at that time. The co-design process is described as follows:

#### **Initiation of the project**

The Kampung Tongkol area, as well as other informal riverside settlements, is always considered a cause of flooding. Therefore, the city government tried to displace the

settlement. By mid-2014 there was a notice from the city government that there would be total evictions of the area. That moment was the beginning of the self-arrangement project of Kampung Tongkol, which became the forerunner of the sample house project. This project involved all of the community members, as one participant disclosed:

As an option, we also had been offered to move to a flat in Muara Angke. However, the distance is very far, so it is hard if you want to work. The majority here did not want to move. We then gathered, discussed, and united. Also, with consciousness, we decided to try to organise our environment. The aim was to show that there was no need for eviction. (JKT-WP 2, 2017)

The project was initiated by the residents, who then, with assistance from the Urban Poor Consortium (UPC), an NGO engaged in the advocacy of the urban poor, began to draft an initial plan of arrangement. As a first step, the residents agreed to cut back the buildings five metres along the entire riverbank. This action was voluntarily done by themselves (*gotong royong*). After the cutting process, the next step was the arrangement of residential areas in the kampung. UPC and the resident representatives were aware they needed the help of experts who know how to design. Therefore, they contacted and asked ASF (Architecture Sans Frontieres) Indonesia as a design team to facilitate their arrangement plan.

### **Kampung arrangement**

When ASF started to get involved, the physical conditions on the surroundings were very disordered. Residents already had an agreement to arrange their environment but did not have a concept of what actually to do. Architects involved in the design team said the conditions on the ground were still very messy:

When we got there, there was still much debris leftover on the site, especially in the area along the riverbank. At the first meeting in Kampung Kerapu, I

remembered that from the front side to the backside was a full pile of debris. (JKT-WF 1, 2017)

After some consultations and discussions with the residents, they finally agreed to build an example of a decent dwelling on the riverbanks which later could be modelled for the arrangement of other dwellings there. The uncertainty of the political situation, as well as the lack of clarity on the city government plan, made the residents and the design team aware that there was time pressure in realising the sample house project. They were worried that evictions would occur at any time, so this project had to be realised immediately.

### **The simultaneous planning process (design) and construction process**

The sample house design process began in mid-2015 and finished in the same year (see figure 8). Residents, together with the ASF, agreed to do the design and construction of the house. Although, residents were still not entirely convinced that building the house would provide benefits for their struggle to defend their land, those who agreed to participate revealed that the project was a strategic action in the effort to resist the evictions. One resident revealed that he felt he had nothing to lose in trying every way to defend his land.

At that time, we got an explanation like this, "Once calculated then the total cost for one house is 20 million. From that cost, we can pay it by instalment, amounting to 300 thousand rupiahs per month". However, what if later we were evicted? They said, "if evicted then the debt is paid off, so there would be no need to pay anything at all". With such an explanation, I agreed to participate in this program. Finally, it was built, and now it has been standing for more than a year. (JKT-WP 1, 2017)

Because of the pressure of time, they had to begin the design process. The design team conducted an initial analysis of the structure and space programming. The designers gave a proposal to build a two-storey building considering the style of the surrounding

buildings. The building structure uses concrete material and bricks. As revealed by the architect of the design team: “Firstly, we planned to build a two-storey house, because the style of the neighbourhood is two-storey buildings. Furthermore, after we discussed with the residents, they agreed to two-storey design” (DKI-WF 1, 2017).

The process of determining space requirements and the interior layout was carried out in a workshop with prospective residents as participants. The design team and residents agreed that design details were developed during the construction process. So, in this case, the design process went hand in hand with the construction process.



**Figure 8: The sample house when finished (Left by ASF-ID (2016), right by Setiawan (2017))**

When the second-floor construction process was almost complete, the design team and the residents conducted an evaluation and found that the quality of the building structure was not satisfactory. One of the funders' representatives conveyed the intention to modify the building into three floors, to take into account the needs of the occupants. Participants who were prospective residents quickly agreed to the proposal. One participant even said the number of floors was actually in line with their proposal “that is from the input of the residents as well because they need more space. They count the number of families; if built with just two floors, it would not be enough. Finally, they added one more floor” (JKT-WP 1, 2017).

After the evaluation, it was agreed to design changes to create three floors. The design process was carried out again, this time to discuss how the third-floor structure would be built, considering the structure that had been built was only designed for two floors. In the workshop, a proposal was proposed to use bamboo material. The idea was approved.

The ASF, as the facilitator, believed it would be difficult for the residents, so did not completely offer the design process to them. The architects who were involved in the design process said that ASF teams always prepare many design scenarios before holding workshops.

The first thing we discuss is the need for space. What the resident wants anything, they can say it. But, we, as the architects, can direct the flow of the discussion, filter it. Since we have prepared many scenarios, we can challenge the people to think, choose priorities, and finally, they decide what they want to build. (JKT-WF 1, 2017)

With such methods, people got used to thinking about a problem-solving. In the early stages, they were accustomed to seeing many alternative options. This alternative was prepared first by the design team. The people learned about the consequences of each option, then assessed which choices were the most optimal for them. In the next stage of the discussion, people who were used to seeing many choices tried to discover those choices themselves, and eventually, they agreed on one option. The residents who attended workshops or discussions were also encouraged to present the design results to other residents. The primary aim was that all residents would feel involved in the design process. One of the architects called this process of active engagement by users in the design process.

We have tried to conduct a meeting only with a discussion. They just listen and then forget. Therefore, we must invite them further, to think, to argue, to take action. We also say that they must be able to transfer these results to

others. They have to learn how to explain to the other. Once the time the meeting was completed at 6.30 pm, and it was already dark. After a break for praying, the residents gathered again. They had finished a mock-up before. Surprisingly, some residents explained the mock-up concept to the other residents. There, I see that the design ideas have seeped into their minds, they understand. They do not just accept it, but actively produce it. (JKT-WF 1, 2017)

The construction of the sample house was conducted jointly by the homeowners by involving two paid builders (See figure 9). Residents agreed that the builders might be local residents, as long they were not homeowners. The construction process began in November 2015 and was finished within three months.



**Figure 9: Construction phase, resident and designer joined together to build the house (ASF-ID, 2014)**

### Post-construction

When the house was completed, and the owner-occupied the house, the design changes did not stop. The occupants continued to make some additions and changes to the physical building to adjust to their current needs and the environmental response. One change made, among others, was the shift of the third-floor function, which was initially planned as a communal space, into warehouse storage. There was also a modification of the canopy above the window because the original canopy design was considered not enough to protect from the rain. Residents also changed the wall colours according to their tastes. In addition, residents were also unable to obey the design decisions that had been agreed upon in the construction process. They made

changes that the design team deemed quite disturbing (See figure 10), like the addition of a service area outside the back of the house, which was revealed by the architect:

For instance, they needed more space for the service area, but the depth of the house is only 4.5 m. As long before, the service area was placed behind the house, facing the river. But, when we turned the house to face the river, they still put the service area behind, because this was their habit although the initial design of the rear façade should be clean as there will be a small alley behind the house. Unfortunately, because the rear access is not functioning yet, the service area was set up behind, so the impression of a slum finally appeared. (JKT-WF 1, 2017)

Residents continued to make the changes and adjustments to the design, even in the post-construction phase.

### **5.2.3 The Effectiveness of Co-Design**

The co-design process in Jakarta involved designers and all kampung residents, especially prospective residents of the sample house. From this process, designers and residents had a role in determining the effectiveness of the co-design process. Analysis of all co-design effectiveness criteria needs to be done to assess the effectiveness of the co-design process.

#### **Decision-making process**

Since the beginning, the project in Jakarta has had relatively high time pressure. This project had to be completed immediately because at any time eviction by the city government could have occurred. Such conditions made the design team take the initiative to develop a general design concept of the sample house.



**Figure 10: Several changes in the post-construction phase (Setiawan, 2017)**

However, the design team consciously looked at the residents (prospective occupants of the house) as those who knew better how to live in that environment. Therefore, their contribution in deciding the design was also highly valued. A statement from one of the architects emphasised that they still admired users as those who understand better how they live in that location.

Thus, the framework of the design was mainly in architecture planning. In addition, the participants tried to get involved in the design process by introducing the value of living in the riverbank area, for instance, how to respect the environment, how far the distance of the building should be to the edge of the river, as well as the need for sanitation and waste management. So, they have a lot of roles in the decision of the design process and prove that they can live in the riverbank area as a healthy community. In general, the residents have more understanding about how they live compared to the architect or the expert because this relates to how they live in everyday life (JKT-WF 2, 2017)

However, in the implementation, time pressure made the co-design process often run spontaneously. Decisions took place quickly following the project dynamics. In the general overview, the role of the design team was quite significant in determining design change decisions. Although they did not directly decide on a choice, they still held control throughout the discussion in the workshop. As the architect of the design team said:

The first thing we discuss is the need for space. What they want, anything, they can say it. But, we, as the architects, can direct the flow of the discussion, filter it. Since we have prepared many scenarios, we can challenge the people

to think, choose priorities, and finally, they decide what they want to build (JKT-WP 1, 2017)

Eventually, many of the significant design decisions were more influenced by the views of the designer team. As an example of the initial decision to build a two-storey building, it was the design team's decision after analysing the building style of the surrounding environment. Another example is the use of bamboo material for the structure of the third floor. It was also the decision of the designer after measuring the strength of the structure.

Even so, because of the openness of the co-design process, participants could directly influence some design decisions when they felt their needs were not accommodated. For example, the design changes from two-storey buildings to three-storey were the result of discussions between architects, residents and community facilitators. In addition, many residents also proposed changes in design details during the construction process. For example, one resident suggested a change in toilet design.

Yes, we give suggestions, for instance, the position of the door and the way it swings—also, the toilet issue. The initial plan was every two houses would have one toilet, so a kind of sharing WC. Then I suggested to the architect, if such, it will be difficult. We recommend one WC for each house. After hearing the opinions of the other residents, finally, they approved my suggestion. (JKT-WP 1, 2017)

Looking at the process above, it can be reasonably assumed that the decision-making process only involved designers and residents. Although the common practice in Indonesia, every environmental arrangement always involves the government. Nevertheless, as explained earlier, the Jakarta project did not involve the government in the process of implementation, even though this project was an effort to resist the eviction policy by the government. However, during the construction process, government officials visited the construction site several times and tried to thwart the project.

While the architect of this project emphasised that the government, through regulation, often determines decisions in the participatory processes that are attempted, he added that the lack of clarity in regulations often hampered the participation process that had been built with residents.

We have undertaken such participatory works in public spaces, in villages etc. Then when dealing with the government, all such concepts ultimately failed, it was useless. All those were colliding with various regulations, rules, or guidelines from the government. The rules are all very detailed, but unclear. Strangely, not many people understand the regulation, except those who often have contract work for the government. Compared to Australia, the structure of the rules is straightforward, and the steps are exact. In contrast, here it seems detailed but unclear, it can have multiple interpretations. There are chances for the bureaucrats to play with the rules, often just to complicate the design proposals of the citizens. (JKT-WF 1, 2017)

Regulations also play a role in inhibiting the potential and voice of citizens in determining the design of public spaces of their environment. In the case of eviction threat, formally, the Government of Jakarta refers to Act No.1, 2014, about the Spatial Plans and Land of Jakarta. In this Act, it is said that alongside the river must be free from buildings up to 15 metres. Implementation of this rule could lead to dozens of long-established urban kampung being threatened with demolition. One architect has criticised the regulation of the riverside 15-metre free zone.

I think it just needs to be five metres for the green belt of the riverbank; it is enough as access for bin trucks or fire engines. If it made 15 m, it would change the mobility habits of the people from walking to driving a car. Furthermore, the habits of gathering and chatting with the neighbour will be lost because of the high flow of traffic in the surrounding. This condition by itself will eliminate the style of the kampung, and then change it into the more commercial urban environment with new shophouses and rows of shops. (JKT-WF 2, 2017)

Macro political dynamics, in this case, the regional political conditions also greatly determine the course of the project in Jakarta. The process of co-design in Jakarta was

taking place during the governor's election in progress. So, the competition of candidates also affected this project. As stated by one resident:

Finally, the issue subsided because the 2014 gubernatorial election campaign began. At that time, Mr Jokowi became a candidate for governor. We supported him, joined his campaign. Then Mr Jokowi was elected, but he was just three years in his position, and it changed to Mr Ahok. When Mr Ahok started to take office, he began the clearance of riverside area, from Bukit Duri and Kampung Aquarium. We heard that this area would also be cleared soon (JKT-WP 1, 2017)

### **Collaboration**

The findings show that community facilitators and community leaders have an essential role in encouraging the collaboration process. It was the community leaders and community facilitators who initially tried to build awareness to carry out a collaborative process with the designer team against eviction. At first, the process was challenging; this was influenced by the character of the very busy people, as well as a history of the uncertainty of the eviction issue. One community facilitator said the initial challenge was to build awareness. He said:

The hardest part is how to build awareness of the people to fight together, as well as to join this project. We started to map the problem and tried to transfer the idea about arrangement our neighbourhood, a better environment, and ecology to the people, and tried to give them an understanding why we need to build this sample house. (JKT-IG 1, 2017)

The process to raise awareness, cannot be carried out only through counselling, but through a long process of intense dialogue. The design team and community facilitators ran informal training sessions with residents. The community facilitator said that it needed repeated discussions until the residents began to awaken their awareness; the discussion took the central theme of "the threat of eviction" as a trigger for consciousness.

However, this mediation process was not easy to conduct. Conversely, at the beginning of the process, there were many conflicts between residents. These conflicts stemmed from a lack of awareness of how to improve their environment. Residents generally agreed to refuse eviction and struggle to keep staying on their land. However, they were unable to unite as a group to do collective action. To overcome this issue, the community facilitators sought to build residents' awareness of environmental preservation.

I said to the people, "if you don't want to get evicted, you should make your environment better". This meant that this issue (to preserve the environment) was not their concern, but it was just fine. For the beginning, this had a good effect and let see what happened next.

And then it was true. Since the pathway was built, there are more open spaces, and people have started to do the planting. For me, this is an indication that consciousness starts growing. (JKT-IG 1, 2017)

In addition to informal approaches by the community facilitators and design team, the effort to strengthen the collective resistance has become more comfortable because of the communal spirit among the residents. They believed the kampung culture, a collective culture in the form of kinship and mutual ownership has a role in encouraging their actions. As an example, one of the homeowners expressed the spirit of community that made him willing to participate in the sample house project.

We were trying not to be evicted. After the community gathered together, exchanged ideas, continued to agree to survive. Then we all consciously participated—all for the common good, *gotong royong* (mutual assistance). Moreover, until today, it has been four years, with a change of governor several times, and we still survive. (JKT-WP 1, 2017)

Collaborative criteria can also be observed during the workshop process. Effective collaboration demands the active involvement of participants during the process. The co-design process in Jakarta showed these interactions. Although their role was insignificant at the beginning, as the process progressed, participants confidently

began to express their opinion. Eventually, in the days leading up to the end of construction, some residents dared to do a presentation of the sample house design to other kampung residents. The architect who accompanied the residents said:

Initially, their activity was mainly helping to clean up the surrounding site. At least they had something to do, just for strategic reasons. However, after the house was finished, they started to speak up, dare to perform to give presentations to other kampung residents. They also began to give a tutorial for environmental workshop programs. (JKT-WF1, 2017)

During the process of design and construction, participants who were also prospective occupants of the house played a role in forming the detail of the final design. Until the post-construction phase, they were still adjusting the design of the house.

### **Flexibility**

The flexibility in the Jakarta project was run effectively because the design process was carried out together with the construction process. This method results in a very dynamic design. Design changes were carried out in the middle of the construction process, and then they were executed soon after. The design development, as in the traditional design stages, was not carried out in this project. The design team realised that they did not have the time if they had to finish the design details first. Therefore, two phases were carried out simultaneously. The architect who facilitated this process said: “While continuing the construction, in the evening, we evaluated the progress together with the resident and workers. We made design adjustment if necessary” (JKT-WF 1, 2017).

The back and forth process of design-construction-evaluation-design revision-construction took place during this co-design process. The design changes were possible because participants, as the prospective residents, could immediately feel the

experience of the space. Thereby, as a prospective user, they were the most appropriate ones to conduct the evaluation.

A participant who was experiencing the design changes during the design and construction process said “the design is always changing. It never fixes, from the beginning until the finish. If there any different views, then it changes. Initially, the material was not bamboo, and two floors were only planned to be built” (JKT-WP 2, 2017).

In addition to the simultaneous stages, flexibility was also found in their effort in creating workshop tools during the co-design process. The design team and residents spontaneously used the objects or materials around the site to explain their ideas to each other. After the discussion was over, the design team would draw the agreed design proposals as guidelines for the next construction process. The architect said his experience in other projects of using spontaneous tools was more effective in reaching participants’ ideas.

Usually, we bring a box containing standard tools like sticky paper, card, colour pen, etc. But if it is not ready yet, we can use any medium from the surroundings. For example, we even used a branch of a tree and leaves as a tool for designing a mosque in Tasik. They used the branch for the structure and leaves for the roof. This spontaneity is more effective than if we have to wait to buy the tools from the shop. (JKT-WF 2, 2017)

Flexibility in utilising surrounding objects for these tools is beneficial in the context of the Jakarta project, where the project had to be completed as quickly as possible, and with a limited budget.

### **Outcome focused**

The initial idea of this project was an effort to resist evictions. The design team focused on that objective. Preventing eviction is considered a crucial issue that

concerns the fate of the resident's lives in the region. In the early stages of the project, residents were invited to discuss ways to prevent evictions. They learnt about environmental improvement as a medium of resistance. The designers and community facilitators tried to convince the people to build the sample house as a representation of their ability on self-environmental management.

In its practice, during the co-design process, the aim of resisting evictions kept the participants involved to finish the project. However, other impacts arose during and after the project. Community awareness to maintain environmental quality is increasing. This awareness can be seen from the various behaviours of the people who began to care about the ecological aspect of their environment. As an indication, the people started planting and caring for trees.

The community facilitator said that the co-design process was able to strengthen people's collective awareness of environmental problems. Since construction, environmental awareness has continued, even though it is no longer related to the eviction issue.

People keep planting. What is the relation between planting chilli or ginger in front of their house with the fight against eviction? Maybe if the planting is massive action, we can see the connection. But this is just individual action. Therefore, I define this as an increase in the level of consciousness, from doing that thing because of fear of eviction to the self-consciousness to improve their environment. (JKT-IG 1, 2017)

The co-design project also plays a role in changing people's visions about their future. People who initially tended to be individualist began to turn into collectivists. As expressed by the community facilitator:

We try to encourage our self with dreams. When we have a guarantee for our land, we can create a better environment. That is our dream, our future. I can see their vision has changed. If in the past, they dream about how they can

have a car or bigger house, now they dream about how to create a space for playing ping pong or badminton. This is a turn from an individual dream into a collective dream. That is what unites us. For me, this shifting is impressive. (JKT-IG 1, 2017)

In addition to awareness of improving the environment, it turns out that the co-design process also makes people more confident in communicating with parties outside their community, for example, other villagers, government officials, or anyone visiting their neighbourhood. One of the residents revealed this.

Now the residents are also more confident to speak in front of guests. So if any guests come, we as ordinary residents are told to talk to them. Finally, we dare to tell the story of our struggle. In the past, we lacked courage, and if on the contrary, it was an unstructured speech. (JKT-WP 1, 2017)

The architect also confirmed the change, that the people are more courageous in expressing their ideas, even making presentations about the journey of the sample house building process to other villagers (See figure 11).



**Figure 11: Resident gives a presentation to other neighbour or other villagers (Setiawan, 2017)**

Considering the results and impacts of this co-design process, it can be concluded that it produced outcomes that are relevant and important to the interests of participants. The primary outcome of this project, the sample houses, at least until now, has been able to withstand the threat of the eviction of the city government. While other

outcomes, the environmental awareness and the rise of self-confidence, although not the primary goal, is also beneficial to the community.

#### **5.2.4 Contextual Factors Influence**

This sub-section aims to report the effect of contextual factors on the co-design process. In the previous section, the discussion on how the effectiveness of the co-design process has conducted. Further investigation needs to be done, especially to find out how the contextual factors influence the effectiveness of the co-design process. The following discussion will still follow the established co-design effectiveness criteria.

##### **Funding and regulation as influences in the decision-making process**

The co-design report's findings show that the designer team was quite dominant in decision-making processes during the co-design process. This finding was seen from the beginning when the design team created the sample house proposal to get funding. The position of the design team and the NGO community facilitator became very dominant because they were the ones who brought funding to carry out the collaborative process of building the sample house. This kind of relationship tends to influence decision-making during the process, where the design team holds control. It can be said that the funding factor, which is an element of the resources factor, was one of the causes of the design team's dominance over the participants.

Another factor that causes a lack of democratic decision-making is the history of regulation development in Indonesia. City development regulations, especially the development of residential environments, have not provided space for local participation by citizens to play a role. Therefore, people still consider the government

as the most decisive part of the development process. One participant said that the legitimacy of the government is a determining factor for a program to be successfully carried out.

Because we do not have a stamp, on the other hand, RT/RW is powerful because they have a stamp. For example, we compose a proposal for a program, but with no stamp, we cannot submit it. That is the weakness of the community, whereas, in reality, we are more active than the government bureaucrats in working together with the people. (JKT-WP 2, 2017)

### **Urban culture as a socio-cultural factor in collaborative action**

In the beginning, there was low solidarity among the participants in this project. Residents mostly agreed to resist the evictions, as evidenced by their willingness to cut back their own houses as far as five metres. However, they disagreed on the next strategy to fight against evictions. The construction of the sample house was one of the proposed strategies with which, apparently, not all the people agreed.

Tracing from their cultural character, their reluctance shows the influence of the urban culture. Jakarta, as a metropolitan city, does not provide a broader space for its residents to have free time. Moreover, the low class, who live in informal settlements, spend daily life on making a living. Hence, the offer of a program that required them to provide their private time would be less welcome. The design team, with the help of the local leader, set a strategy to increase solidarity by promoting eviction as the 'keyword'. This strategy was believed could unite them by touching their sense of collective emotions. This strategy was claimed as successful by one of the resident facilitators, who is also a local leader.

Thus, even though the character of urban communities was quite influential in the people's reluctance at the beginning of the process, the threat of eviction changed their stance towards the sample house project. In a threatened state, their collectivist

attitude grew back and made them agree to participate in the co-design project. The spirit of a collectivist society, reflected in mutual co-operation activities, grew back and strengthened collaboration at the next stage of the co-design process. This spirit also succeeded in increasing collaboration in an environmental improvement issue. The actions to improve the environmental quality increased along with the construction process of the sample house.

### **Designers' role and participants' habits behind the spontaneous flexibility**

The co-design method is not a rigid or fixed method that can predict exactly the process and the result (Simon, 2017). Also, as Cruickshank et al. (2013) suggest, co-design method should be flexible as well as providing substantial support. However, the Jakarta project had a high degree of urgency, as it faced an eviction threat from the city government, which could occur at any time. This circumstance resulted in time pressure, becoming one of the main challenges of this project. To overcome this challenge, the design team conducted simultaneously co-design method. This method, on the one hand, addressed the time constraint, while on the other hand, made it possible to deliver a flexible co-design process. This finding indicated that the designers had a role in presenting a flexible co-design process.

During the construction phase, design changes occurred several times in response to the user input as well as the designer. The real-time co-design was conducted by directly modifying the design during the construction stage. Even though not directly expressed by the participants, their spontaneity during the construction process can be traced back to their habit of *gotong-royong* (mutual co-operation). In the daily life of the community, the practice of *gotong-royong* to build something no longer exists, but the practice of mutual co-operation to hold communal events is still being carried out.

This habit means the ‘making’ tradition among the community is preserved. Therefore, it can be concluded that the main factors that influence flexibility are the factors of the community’s mutual co-operation practice.

### **Resistance to the eviction as a catalyst for action.**

Resisting eviction was key to the eventual success of uniting residents in solidarity to play an active role in the co-design process. The similarity of the objective, which is resisting eviction, is a catalyst that made the co-design process in Jakarta focused on obtaining the outcome. The sample house was the primary representation of the people's efforts in proving that they could manage their environment. The house also revealed the serious intention and goal of the people in preserving the environment. They hoped that with a more organised environment, the city government would be discouraged from destroying their settlements. The presence of the house was clearly vitally crucial for them. When the co-design process was carried out to fight eviction, building the house was in line with the co-design principle to address the real problems of everyday participants.

## **5.3 Malang Case Study**

Unlike the Jakarta case study involving urban society, the case study in Malang was located in a traditional rural area. The co-design practice in Malang was a construction project of a bamboo church conducted by the church’s congregation. The project was situated in Purwosari Village, southern Malang. The Christian community in the village is quite large, although most of the villagers are Muslim. In general, the life of the village community is still strongly influenced by Javanese culture. This socio-cultural background coloured the process of co-design practice.

### 5.3.1 Background

Malang is one of the main cities in East Java province and located on a plateau and flanked by several mountains. It is one of the centres of coffee plantations from the days of the Dutch colonial administration. Various changes in political and social landscapes during the Indonesian revolution and the events of the 1965 tragedy have shaped the current social and cultural context of Malang citizens.

With the impact of the September 1965 incident<sup>1</sup>, which was followed by the massacre of people accused of being Communist Party members, the area of southern Malang became the target of cleansing. People who were considered communists, including those who were regarded as having no religion were targeted. Therefore, the people who still adhered to the traditional religion felt worried and eventually had to embrace one of the official religions recognised by the state.

In that chaotic situation, people tended to prioritise their safety by converting. The choice of embracing Christianity for the inhabitants around Christian villages was inevitable because it was the easiest choice for them. Therefore, the population of Christians after the tragedy increased. This is why some villages in southern Malang became centres of the Christian community in the middle of the Muslim majority. This is the social and historical background of the community of Dampit sub-district the location of the bamboo church project in Malang.

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<sup>1</sup> See Zurbuchen (2002) *History, Memory, and the “1965 Incident” in Indonesia* for more information about September 1965 incident

The majority of Purwosari village is Muslim, but the Christian community is quite significant. The village church has existed since the Dutch colonial age. However, the permanent (brick-built) church building was built in the 1950s and had never been refurbished until recently. In general, the harmony between Muslims and Christians is considered very good. The existing collectivist culture strongly supports this condition.



**Figure 12: Malang case study location (Google map)**

### 5.3.2 Co-Design Process

The church project started when the priest received a grant offer from a foreign sponsor through the higher parish in Malang. The funds were allocated for renovating the existing church buildings, assisted by experts/architects. The initial idea of the sponsor was to build a modern monumental church building, and they were ready to deliver all the material and hardware equipment for the construction. The priest disagreed with the massive equipment because of the road access challenge to the village. However, he agreed to the monumental building idea.

The architect came and together with the priest observed the site. They realised that the village had plenty of bamboo trees, which so far had not been exploited. The

discussion among the church's leaders and the architect resulted in an agreement to exploited bamboo as the primary material for the new church building. The sponsor also agreed with the proposal. After more meetings, the architect suggested a community or participatory approach to the construction process. He argued the construction would need a massive volume of bamboo material, and also would take a long time to finish. This situation requires involvement from the whole church congregation to support this project. The priest agreed and added that the cultural practice of the people would be a beneficial support to the project.



**Figure 13: The left picture is the existing church building that was renovated with concrete and brick material, while the right one is the site location of the new bamboo church building**

(Setiawan, 2017)

### **Initial phase**

When the architect and Church leaders presented their proposal to the congregation, there was a sense of disagreement about the idea of using bamboo as a material, and this led to a conflict between the congregation and the church authority. The congregation felt they were not involved in project planning. However, this conflict became increasingly difficult to resolve because rejection did not occur openly. Due to the culture of *mbendhol mburi* (pretence), those who disagreed did not do so openly and in the formal forum.

Since the congregation could not be convinced, as a compromise, they decided to build two church buildings. The old church was renovated using modern techniques and materials (iron, brick, concrete) by a contractor with funds from the church's finances. Meanwhile, the bamboo church would be built on another site, slightly above the position of the old church (on the hill), with funding from the sponsorship. This project would be carried out with a participatory approach by a team of architects from ASF Indonesia, which immediately started a bamboo church design workshop. The church was trusted to organise the congregation to attend the workshop. However, because the conflict has not been resolved, the participation of the congregation in the workshop is not optimal. Eventually, ASF organised the workshop participants directly, believing there was a chance for design to be used as a medium of conflict resolution.

The priest realised that his top-down approach in the initial step had been a mistake, and this had triggered the conflict. He said:

We had not involved all the church congregation when we decided to use bamboo as the material. We realised that our approach was too top-down. Thus, some of the congregation refused bamboo. They think that bamboo is not strong enough as the main material for the church building. Finally, we had to reconsolidate; we involved ASF to convince the congregation of the use of bamboo as an alternative material choice. (MLG-IG 1)

In the later process, except for the regular meeting, ASF also actively came to the people's houses to explore and share their ideas. These informal visits succeeded in building good relationships between the congregation and the design team. Furthermore, by this approach, their ideas and voices could be revealed clearly.

## Design Phase

ASF held a two-stage design workshop, the first stage was an exploration of church design, and the second stage involved making a three-dimensional (3D) model. In the first stage, the architect presented information about bamboo material and also some visual references for bamboo architecture building. This activity aimed to contextualise the design which they would produce in the following workshop.



**Figure 14: Activities and tools used during the design development phase (ASF-ID, 2016)**

In the next activity, participants were asked to explore all kinds of ideas about the church on blank paper. ASF then selected some design ideas and discussed them with the participants to select which proposals would be entered into the next stages.

In the 3D mock-up making workshop, conducted by participants but guided by designers, they learned about scale, proportion, and some aspects of design. The primary material was bamboo, cut into small pieces to adjust to the scale of the model. The material was previously taken from bamboo trees in the surrounding area and prepared by participants (see figure 14).

In this stage, participants had space to give their input. One idea was for the possibility of the church to provide an ecumenical social space to hold village social

events. A member of the congregation explained the contribution he made in the design workshop.

Our contribution to design is quite enormous. Besides being given the freedom to design bamboo buildings, we are also involved in arranging the space programming of the church, for example, we propose a room to prepare consumption and the meeting room for the whole village. So, our role is quite significant in the design process. (MLG-WP 1)

### Prototyping phase

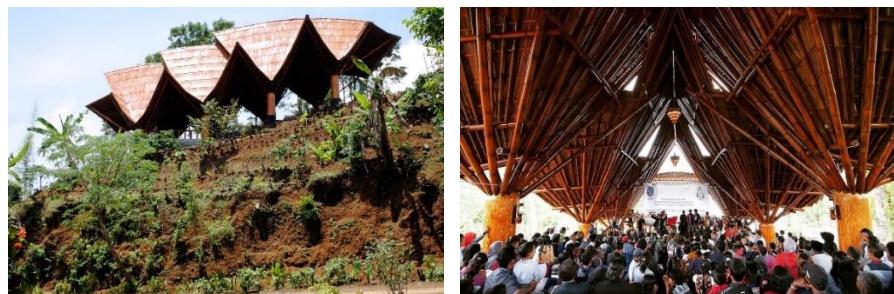
In this stage, the designers and the people created a 1:1 scale design prototype. But they did not make the prototype of the building design. They erected a bamboo tower as the prototype of some bamboo joint constructions. They erected the tower as close as possible to the actual site of the church to give a similar impression. (See figure 15).



**Figure 15: Prototyping phase. People erected the bamboo tower on the future site of the church (ASF-AD, 2016)**

Beside erecting a tower for prototyping the bamboo construction, ASF also held the workshop of bamboo preservation technic. This workshop once became a medium of knowledge exchanged between the architect and the participant. ASF taught the

modern bamboo preservation technique using several chemical materials. On the other hand, the people explained their traditional knowledge



**Figure 16: The completed bamboo church building in 2019 (ASF-ID, 2019)**

When the field research was finished, the church construction process had not yet begun. Eventually, they finished the construction of the church in mid-2019 (See figure 16). The timing of the construction was very dependent on bamboo harvesting because large quantities of bamboo are not available in the market. They had to wait for the right harvest time since harvesting conducted outside the schedule would produce bamboo with low quality and reduce its durability.

### **5.3.3 The Effectiveness of Co-Design Process**

#### **Decision-making process**

At the beginning of the process, the church leaders appeared dominant in determining project decisions since they implemented a top-down approach. The design team also relied on communication with church leaders so that there were almost no participants' voices (congregation) in determining the project's initial decision. This unequal relationship did not only occur between church leaders facing the congregation, but also between the design team and the congregation. The congregation initially considered the architects as educated and experts. Therefore, they tended to follow what the design team proposed.

The impact of the top-down model at the beginning of the process led to the emergence of conflicts in subsequent phases of the project. The church leaders admitted that this harmed the continuation of the project, so they tried to take a more participatory approach in the following stage. The priest said:

I feel that the top-down approach which we did at the beginning of the process was a mistake that affected the psychology of the people. Therefore, we are continuing to build a culture of *rembugan* (*discussion*), that everything should be discussed and decided together. I think that is what keeps the stamina and the spirit of the people until the project is over (MLG-IG 1, 2017).

The designers fully realised such a situation. Therefore, they no longer depended on the church leader's information but also actively encouraged community members to speak out. One of the architects revealed how they responded to the unbalanced power relations.

We took it as a challenge. For example, even though we have discussions with the leaders, we are still trying to find opportunities to talk directly with the people. Often leaders use the language: "on behalf of the residents" but, is it true that what is said represents all people? Maybe not. Therefore, we always make sure that in every meeting so that all the people dare to speak. (MLG-WF1, 2017)

Looking at the whole process of co-design in Malang, it indicated that the design team and church leaders tend to dominate the decision-making process. Although efforts to activate participants to speak out have been made using the *rembugan* (*discussion*) culture and informal visits to the participants' houses. This unbalanced hierarchical relationship made the principle of shifting power from the design team to participants not entirely effective.

## **Collaboration**

The participation of the congregation members in the whole co-design process was significant. Their participation can be grouped into three phases, first, participation in

the initial phase of planning the future development of the church. In this phase, they were initially only involved as audiences. This position caused conflict between the congregation facing the church leaders. This conflict encouraged the design team to intervene in resolving the conflict. In the second phase, they were involved in the design development workshop, where the people got more space to express their creativity. Moreover, in the third phase, the people participated in the construction of a bamboo structure prototype. Participation in this phase was not only a construction activity but also involved in providing bamboo materials.

Among the three types of collaborative activities, the people felt more interested in the second and third. They felt more involved in the process of developing the bamboo church design and learning about the construction process, compared to the initial phase, which was full of internal conflicts. The people thought that their contribution through making activities was more beneficial to the overall project. The church leaders said the culture of *sayang* or *sambatan* (asking for help) had a role to encourage the people to participate. Although among the teenagers, this culture had been diminishing, the church project was able to strengthen the collective spirit among teenagers and made them practise it again.

For the younger generation, the spirit to do *sayang* has begun to decrease. Only on special occasions they still want to participate, such as Independence Day celebrations. But for this bamboo church project, I think their spirit is high enough, even ones who have been less active in church, are seen to be active if asked to come and be involved (MLG-IG 1, 2017)

The findings above mentioned the collaboration in the prototyping stage that happened during the bamboo preservation workshops. The design team considered that bamboo preservation was necessary to improve the durability of bamboo as a material for church construction. This led to collaboration through the exchange of knowledge between participants and the designer team. An architect said:

The people also have local knowledge about the importance of maintaining the sustainability of bamboo trees. There is a taboo to cut the whole bamboo grove because it will make the surrounding springs dry up. So, you have to leave some. It is also new for us, and we definitely will take this kind of knowledge as a norm or guidance in the next process. (MLG-WP 1, 2017).

Based on these findings, collaboration took place gradually more effectively. At the beginning of the collaboration process, it had not been running well because of the top-down approach causing conflict. But the more the collaboration continued, it turned to be more effective, especially in the construction phase of the bamboo structure prototype.

### **Flexibility**

The co-design process in Malang involved participants who were still very strong in practising various collective culture, which was rooted in Javanese culture. One of which was *sayang*, the other form of *gotong royong*. Those cultures have coloured the process of co-design, especially in the design development and the prototyping phases.

In the design development phase, participants were actively involved, both in the design phase and in making 3D mock-ups. In both activities, participants were given the freedom to utilise the potential of the surrounding objects to develop their design ideas. This was possible because participants understand the situation around the site. They could then spontaneously use these objects intuitively to shape the 3D mock-up designs. Eventually, participants used bamboo pieces, twigs, and other objects as material. The participants' spontaneity is evidence of the flexibility of the co-design process.

In addition to spontaneous material utilisation, the flexibility could also be seen from the participants' role in providing technical input, especially during the prototyping

process. At this stage, participants had more freedom of expression because they could take advantage of their craftsmanship skills to contribute to the process of building a prototype. A participant revealed that he had a carpentry skill that he could provide while he was involved in the prototype process.

My expertise in bamboo craftsmanship is just standard. So, I learned a lot from ASF about bamboo. My expertise is actually as a carpenter; some others are masons. But this expertise is useful when we erected the bamboo tower (prototyping). (MLG-WP 1, 2017)

From these statements, it is possible to comment upon the effectiveness of the co-design process in Malang concerning two aspects. First, flexibility in the use of materials to support workshop activities, and second, in the freedom of participants to give input to the design by being directly involved in making a prototype. Both were possible because of the spontaneity of participants.

### **Outcome Focused**

In terms of priority, the project in Malang cannot entirely focus on outcomes in the form of building a bamboo church. The focus at the beginning of the process was to resolve conflicts caused by inappropriate top-down approaches. The design team could not be directly involved in the design process because ongoing conflicts hampered it. They had to focus first on resolving the conflict. The architects revealed that they used aspects of culture and history as a tool to unravel conflict. One of the causes of conflict was the reluctance to use bamboo material. The design team investigated the local histories of bamboo utilisation in the past.

Yes, firstly, we tried to resolve the conflicts. We asked many of the elders, the first generation of the residents. So, we agreed that the historical values, the traditions, the spirit would be raised as social capital during the process of the church building. Formerly they built the first church from bamboo material as well. Therefore, we have tried to dig up their memories of the old church. There is one older man, who still remembers, he told us about the shape, size,

the position of the columns, and wall material. That's all we have tried to trace, as historical value (MLG-WF 1, 2017).

Utilising historical narratives of community is one of the methods to seek consensus for resolving conflicts. The historical narrative was then applied to the current contemporary context of the construction of the church project. From there, the design team used the keywords, 'church construction' to keep the focus of participants in carrying out the co-design process. After that, the co-design process focused on the outcome. However, the focus had to be maintained given the long duration of the project — the church leaders recognised the challenge of keeping the participants' focus.

This is our homework; what we should do is to build and strengthen the cultural basis. So, the people are willing and able to be involved in the construction of the bamboo church. It takes a long time to build the bamboo church, because the process of collecting materials, and preservation may take a year before church construction begins. Therefore, it is necessary to ensure the people are able to survive in this development process (MLG-IG 1, 2017).

Looking at the co-design process that has already taken place, the focus on the outcome (building the new church) was only established after internal conflicts could be managed. Even so, in the following phases, there was no guarantee the process will be free from conflict. The Javanese cultural character (*mbendol mburi*) still brought opportunities for future conflict.

### **5.3.4 Contextual Factor Influence**

#### **Javanese culture as a constraint of the decision-making process**

The Malang project was the case study with a high potential for conflicts. These conflicts were not facing external entities but were internal conflicts among members of the community. However, that potential rarely exploded into open conflict. One reason is the existence of *mbendol mburi* (pretence) culture, the Javanese culture of

conflict avoidance. Open disagreements would be quickly muted (stopped) to keep the harmony. However, the conflict was not resolved. Such matters hampered the design process. The ASF team eventually has to use informal approaches, by visiting conflict-affected members, to find out the real issues, and to mediate conflicting parties. As one church leader said:

I feel there is a problem in the body of the organisation itself, that is consistency in obeying the results of the meeting consensus. Although not many, certain people like to [discreetly] oppose the results in the following days. This is what we call *mbendhol mburi* in Javanese culture (MLG-IG1, 2017)

The culture of ‘pretending’ to avoid conflict is rooted in the attitude of Javanese people who tend to “maintain harmony and avoid conflict” (Magnis-Suseno, 1997).

In addition, hierarchical relations also led to decision-making dominated by the design team. The view of architects as experts is still very firmly embedded in people’s mindset. Therefore, the designer team tried to erode the hierarchy, by intensifying the informal approach, encouraging a new pattern of relations as friends. The attempt to build closeness produced results, with the emergence of people-led initiatives in the design and prototyping phase. But still, the design team was unable to release control of design decisions to the workshop forum. One indication is that the design team felt the need to 'train' the participants in each workshop as conveyed by one of the participants who felt very fortunate to learn about architectural concepts while involved in co-design workshops.

They, the architects who studied the design, had to spend years to learn design. While we only had 2-3 days to learn and get much knowledge, so we feel we had got a gift, because of the increase in our knowledge and bamboo construction techniques (MLG-WP 1, 2017).

## **Collaborative Culture**

The congregation was enthusiastic about being involved in the process of collaborating during the workshops. Conducting collective work is a practice that is still carried out in daily activities as villagers. The practice of cleaning the environment, repairing village roads, or helping to repair neighbours' houses is done jointly, involving all villagers voluntarily. Such collective work activities help maintain the social cohesiveness of the community. Harmony among villagers of different religions is maintained.

The potential of the village community culture has proven to be beneficial for the effectiveness of co-design practices. The congregation, as part of the village, cannot be separated from the culture that has long developed. One of the cultures is *guyup*, meaning the spirit of kinship. Every meeting or workshop always began with an informal chat to greet each other. This cultural derivative appeared in several practice forms: *sayang* or *sambatan*.

The latter term comes from the word *sambat* (ask for help) (Koentjaraningrat, 2000). In particular, it can be interpreted as a helping activity involving help from the community in terms of voluntary, unpaid time and workforce. There are several kinds of *sambatan* activity, such as *sambatan* to build a house, organise a wedding party or funeral ceremony, and plant/harvest rice.

In this church project, automatically, church leaders used the cultural approach to encourage and enhance the spirit of collaboration. This was reasonable and supported by all the members of the congregation involved. The tradition of *sayang* or *sambatan* is still practised and applied in this project. The priest said that the villagers still obey the *sayang* culture.

The parishioners generally accepted the idea of involvement in the church building process. At the time of harvesting bamboo, they were all involved in harvesting. There is a culture called *sayang*; this culture is the habit of helping residents who are building a house. So, if one is asked to do *sayang*, he will be willing to leave his job, e.g. farming, or factory work, to help his neighbours. *Sayang* is also conducted for the construction of public facilities of the neighbourhood, such as village roads, patrol posts, and others. (MLG-IG 1, 2017)

This drive to engage in collective work practices is an obligation for community members. There is a social responsibility that they must undertake. Conversely, there are social sanctions if they are not involved in this collective action. Therefore, it was easy to get people involved in this co-design process.

This attitude of obedience and carrying out social obligations actually contributed to the perpetuation of hierarchical relations between the congregation and the design team. Therefore, the design team tried to break this hierarchy by making informal visits so that their relationships changed from expert-participants to more equal friendships. The informal meetings were beneficial for strengthening mutual trust between participants and the designer team and building familiarity and strengthening social cohesion. But the disadvantage was the time it took. Consequently, both designers and participants needed strong endurance. Hence the resilience of all those involved was also a concern in this project.

This project is not just a physical construction that can be quickly completed, but rather a process of building togetherness and cohesiveness. Therefore, it requires power and endurance for those involved. Another problem is how to maintain the resilience of the people to be continuously engaged in this project. After all, we are continuing to build a culture of *rembugan*, that everything should be discussed and decided together. I think that's what keeps the stamina and the spirit of the people until the project over (MLG-IG 1, 2017).

The influence of the cultural factor has shaped the effectiveness of the collaboration during the project. The strong Javanese culture is reflected in the existence of social

obligation, which encourages people to participate. Furthermore, the collaboration process is easier to achieve.

### Craftsmanship potential in shaping flexibility

In all of the stages, the design team tried to involve and encourage people to contribute to the workshops actively. Meanwhile, people who have a tradition of mutual co-operation looked at the workshops as a communal activity, when they do *sayang* or *gotong-royong*. The long tradition of mutual co-operation has enabled people to have reliable craftsmanship skills. This potential emerged during the workshops. Although the designers were aware of the craftsmanship potential, they did not intentionally design the workshop activities to optimise it. The design of the activities still placed the participants as the ones being trained.

However, when the workshops ran, some of the participants' spontaneity appeared (e.g. the idea of bamboo construction and preservation) and made the process more flexible. Furthermore, they were given the freedom to carry out activities according to mutual co-operation habits, allowing local wisdom to be applied. The result was that participants had more confidence to express their ideas.



**Figure 17: Spontaneous activity during the prototyping phase, people preferred to make rather than draw (ASF-ID, 2016)**

The culture of making highlighted the spontaneity of participants in conducting workshops; this led to shaping a workshop model in which things were created directly. The architect said participants were more easily expressing their ideas by making models of production, rather than designing by drawing (See figure 17). The architect said:

We also think that these people seem to be happier when processing with a direct-making approach. Conversely, when we started the process from a text, conceptual form, images, and then prototype, the output was not optimal. They tend to be more passionate when doing direct-making on-site: short discussion, agreement, then execution (MLG-WF 1, 2017).

The spontaneity, as the characteristic of the flexibility of this case study, was also proven during the implementation of the prototyping workshop. For example, to provide an understanding of the bamboo structure, the design team practised with participants to make bamboo structures on the actual site, on a scale of 1:1. This activity was considered more appropriate because participants were used to working with such models.

Once, we built a tower using a bamboo structure. This was actually to give them practical learning about bamboo construction. What we did was, I made a simple sketch idea, then there was a short discussion, and we built it with a few improvisations. It worked. So, I think, the proper model of our communication might be a 'direct action' approach. They even said: "If we did too many meetings, it's easy to agree, but soon we will forget what we agreed". (MLG-WF1, 2017)

This workshop model required a lot of bamboo material. Since it was provided by the parishioners on a self-help basis (in the form of donations, brought each time the church services), then more time was needed to collect it until there was a sufficient amount. Hence, in this project, the schedule was designed to be very flexible and tended to be tentative, following the rhythm of the participant. This was possible because there was no urgent time pressure on this project

### **Output focused**

The Malang project was the one most substantially influenced by Javanese culture, especially *mbendhol mburi*. This influence led the project to have many conflicts from the beginning. These conflicts arose because of two causes; the first was the priest's leadership model that was considered less able to embrace the people as equal partners. The second was the existence of latent conflict among the people; this re-emerged during the church building process. The design team could not immediately focus on the design issues because the process was interrupted by these conflicts. They realised that without conflict resolution, the next co-design process would hard to conduct. Therefore, the design team shifted the focus first to resolving conflicts. They worked with church leaders by utilising various cultural practices. When the conflict was decreasing the collaboration, process focused back on design.

However, conflict does not always harm the design process; disagreements are needed to address the problem. Brown (2013:57) said:

Conflict is the way design teams come to a shared understanding of each decision made in the design process. Conflict in design is not always accompanied by negative emotions, hostility, or drama. It is not always about disagreement. Conflict is about two (or more) people trying to understand each other, paving the way for future decisions and ultimately, the project conclusion.

Therefore, conflict is sometimes needed if it is well managed. In Malang project, the design process undertaken by the ASF team, to a degree, was considered able to tackle and mediate the conflict that occurred. The consequence of this circumstance was the length of time required and also the endurance of the involved parties. The purpose of building the church proved to be able to maintain the focus and stamina of the congregation in carrying out a long series of collaborative processes. Mentoring by the church by incorporating spiritual aspects also increased the endurance of the

congregation. Thereby, the main factor that influenced the focus of this project was the commitment to achieve the objective of the project, namely building the bamboo church.

## 5.4 Solo Case Study

### 5.4.1 Background

Solo is one of the ancient cities in Java which was founded in 1775 as the new capital of the Kingdom of Java. The existence of this Javanese kingdom greatly affects the social and cultural life of its people today. The Javanese culture still exists in the daily life of the people. However, the modernisation of the city has resulted in the mix of cultural character. The culture can be said to be characterised by urban culture but deeply coloured by traditional collective culture. During the Dutch colonial period, they managed the Modern intervention on the city development.



**Figure 18: Map of two kampungs in the Solo case study (Google map, 2018)**

After Indonesia's independence, the new republic took over the administration. The new government began to conduct arrangements for all citizens. These arrangements included the kampung development program, ranging from street, drainage, sanitation, and wastewater treatment improvement. However, the pattern of spatial arrangement

remains unchanged. The kampung structure already has its own style. The residents also still have a strong communal culture that tends to regulate itself, primarily related to their public spaces. The daily life of Solo residents is still slightly influenced by Javanese culture; for example, the *kraton* (palace) still exists as the Javanese cultural centre. Although the kingdom is no longer the centre of political power, it still holds the role in the cultural orientation of Javanese people.

In the subsequent development, the city encountered modernisation marked by many modern facilities. Some kampungs have been destroyed and the space transformed into modern city building complexes, especially those located in the city centre. The social and cultural life of the residents changed, and the character of urban society began to appear. However, in the kampungs that survived, life is still strongly influenced by the traditional communal culture. This condition resulted in a diversely cultural society between urban culture and the traditional communal culture of the kampung.

Concerning the cultural character of the city (Fox, 2017), Solo experienced several important shifts. Starting from the ‘ritual city’, where the ritual played a significant cultural role of such cities, and through the enactment of rituals in the urban locale, rural regions were bound together by the ties of common belief and cultural performance. Subsequently, Solo experienced a significant transformation, becoming a colonial city during the occupation of the Dutch government. The colonial city and its society were characterised by segregation into several groups. Moreover, today, Solo relies on industry and trade, marked by the emergence of industrial and trade centres, as well as the development of transportation systems. Urbanisation has resulted in its expansion to the suburban areas.

The character changes in the city are occurring on an ongoing basis, which means that the past character is not entirely replaced by the new one but is overlapping and producing cultural layers that create a unique cultural character, emerging according to the situation faced by its society.

This culture layer influenced the case study project in Solo, which was initiated by the Architecture and Sociology departments of a university in Solo. The Architecture department wanted to conduct a public space design project to answer spatial problems in society, and the Department of Sociology had an agenda to investigate the pattern of communal activities of a kampung community. Finally, the two departments agreed to conduct a joint project engaging the kampung residents' community.

### **5.4.2 Co-Design Process**

#### **Initial Phase**

The co-design project in Solo was part of the lecture process. Therefore, the team which were involved were students, under the supervision of their lecturers. By conducting this project, the students were expected to obtain an experience of a design process which engaged the public. The initiator of this project said:

This project is part of a citizen urbanism program. Students are expected to learn the knowledge from society and in return, deliver it to society. So, we can learn methods and practices on the ground from the NGO and residents. It is beneficial in widening insights into the details of the participatory process, because it is not only theory but also works experience. (SLO-WF 1, 2017)

The project began with determining which kampung would be used as the context. Once identified, there were two kampungs selected, namely kampung Sangkrah and Butuh. Both kampungs were selected solely because the Sociology department already had a network with its residents from their previous activities.

The next step was to set up a partner to work together with them. The initial team came to the residents in both kampungs. After meeting with the community representatives, in kampung Sangkrah the team agreed to involve the Rumah Baca Sangkrah community, an NGO that provides training and mentoring for youth. While in Butuh, the partner was Arkom. In the initial meeting, the team also explained the participatory project, primarily related to the project goals and public space as the specific object that would be designed.

In this initial stage, the Architecture and Sociology teams also tried to identify the essential problems.

The initial stage is the justification of the problems. Because it deals with public space, then we look for the justification of public space. We use maps as the tool. We held FGDs, discussions with residents and also Sociology friends. (SLO-WF 1, 2017)

In general, both teams would work together at the beginning of the process, i.e. identification of citizens' problems related to the public space issues. Furthermore, the two teams would explore the problem separately, but each still involved the citizens. The Sociologists explored stories and norm of the kampung's social life, and the final output was a video. While the Architecture team would further develop the design, and the final output was the construction of the facilities.

### **Design phase**

In particular, there was three stages process conducted by the Architecture team. The first stage involved spatial mapping of the kampung area together with the residents' representatives. This spatial mapping aimed to make inventories of the current public space location, which functioned as the people's gathering spot. After observing several alternative locations, they decided which location to select.

The next stage was the Focus Group Discussion (FGD) which was done by inviting more residents (see figure 19). This stage aimed to develop the idea of public space design. The FGD took place in three workshops. In the first workshop, they discussed the most urgent problem to overcome and the solution to be taken, then decided what facilities they should develop. In kampung Sangkrah they agreed to build a play spot/area for children and youth. While in kampung Butuh, they agreed to build communal toilets.

After the decision about facilities was determined, the design team (students) undertook the design development. Residents, as participants were involved in this design development process. As a starting point, they used the site photographs. First, the residents and teams discussed the priorities and needs. Furthermore, the residents were given time to propose the design in the form of sketches on paper. The design team assisted and provided input to the proposed designs. From some design drawings, the design team (students) made the 3D model. This model later became a tool in discussion with the people who had made the proposed design.



**Figure 19: FGD involving the residents during the design development phase (ARS-UNS, 2014)**

The series of workshop processes were expressed by one of the members of the Architecture team:

After discussing the problem, the participants started to design. First, they drew their idea. The tool was photos that have been determined together, paper, and sticky notes. Furthermore, we developed their designs. We made 3D models of their ideas. After that, they then criticised the design they had produced. In this process, the study of the mock-ups, because three-dimensional objects are easy to understand, and they can provide easier input (SLO-WF 1, 2017).

### **Construction Phase**

In the third stage, they carried out the construction of the facilities. The construction was conducted jointly by residents and student teams. However, they also hired some paid workers. In this construction phase, the design team suggested that design changes were still possible. This was to accommodate any strong reasons or technical constraints during the construction phase.

#### **5.4.3 The Effectiveness of Co-Design**

##### **The decision-making process**

The role of the designer in this project was quite dominant, especially in the design development phase. Although in the initial phase, kampung residents had more influence. For example, in the initial mapping to decide which space and what facilities might be developed. The design team, consisting of students, listened to the input of the people. The needs of the residents influenced the decision that a public toilet would be built in kampung Butuh and a playground in Sangkrah.

However, in the design development phase, the Architecture team played more active roles. The design team's decision to make a 3D model of the residents' proposal was a design intervention that indicated the design team's domination. The design team who felt they had the design capacity acted as the curator of the residents' designs. Although the models were later re-presented, and residents could give input, the 3D model was essentially a design intervention by the architect team.

Co-design requires a shift of role from the designer to the user (Sanders and Stappers, 2008), although, in this project, a partial shift occurred. The role of participants was evident in exploring the problems during the initial stage. However, at the design development stage, although the design team said that participants were also involved in proposing the design, the designers had a more dominant role. Participants proposed their ideas in the form of drawings, and then the design team would give their input. After that, the design team made the 3D mock-up as a way to facilitate discussion and evaluation in the next workshop.



**Figure 20: Poster for the projects report. The playground project and public toilet project (Setiawan, 2017)**

During the workshop, the participants were given the power to propose their ideas, but the power was eliminated when the design team thoroughly handled the role of creating 3D models. At this point, there were many design changes according to the subjectivity of the designer. Although in the next workshop, there was a chance to discuss the models, the result would not significantly change. Thus, it was evident that

the designers were still more dominant in the process. As disclosed by a team member, “after the design discussion with the participant, we decided the finalisation of the design, because we as the architects have the capacity of knowledge about material building” (SLO-WF 1, 2017).

In general, residents had the enthusiasm and courage to proceed with the design team. However, there was a kind of reluctance to be involved in this design process because in their experience, ultimately, the government will determine the regional development decisions. The Architecture team saw that the dominance of the government was still strongly felt and affected the course of the co-design process. The people felt apathetic and thought that they did not have a role in determining the design of development in their environment.

How the regulation of city development is still very centralised was revealed by members of the Sociology team

Our interest in taking a kampung domain is to raise a new discourse. Today's Indonesian cities' problem is that urban development plans are conducted in a top-down approach. Cities are arranged with a 5-year RPJMD (Development Plan) scheme. Then it is broken down into a city planning document, which is subsequently conducted by the SKPD (Implementation Unit). Every year the SKPD decide what is in this document. Then what is the reference of this document? None other than the interpretation of the vision of the chosen mayor. The mayor, along with his/her team, create the planning documents as well as the budget documents. (SLO-WF 2, 2017)

He added a comment about the lack of roles of citizens in influencing development planning policies, even though the city has implemented the musrenbang mechanism.

The question is: what is the role of the residents? People said the residents are involved in musrenbang. As a formal mechanism, it is good, but unfortunately, musrenbang just synchronises the budget in the legislative body that was tiered from *kelurahan* (lowest level of city bureaucracy unit) to city level. But, is it true that the residents are present and involved? That's the problem. Because the kampung as a real subject does not get involved in this mechanism. Therefore, the musrenbang results in many ways do not reflect the kampung's

problems but relate more to the administrative and bureaucratic issues; even many reductions occur when it is brought to the higher level. We do need an evaluation of the implementation of musrenbang, it is almost 16 years since 2001, and there has been no critical evaluation. (SLO-WF 2, 2017)

This condition triggered people's reluctance to be involved in the further design process. They preferred to wait to see whether this process would really benefit and answer their needs or would be just a top-down project as before. So, the design team tried to convince people and gain their trust so that they were more active by conducting personal visits to the residents.

## **Collaboration**

There was a reluctance by the people to be involved in the initial phase of the co-design process, as already mentioned, this was due to scepticism about the top-down planning of the government. This condition certainly also influenced the effectiveness of collaboration during the co-design process. This challenge was addressed by an informal approach of the design team, with visits to people's homes, or just taking part in informal meetings of residents in the neighbourhood. This proved to be successful, in convincing them to get involved and in gaining their trust.

In addition, the design team also involved the community and local leaders as the key actors, in order to be accepted by residents:

When there are difficulties, we try to use local leaders. Our experiences vary, in 2014 at Jagalan, the local leader is Mr Dwi. While for the project in Sangkrah in 2016, there was a friend from the Sangkrah youth club, Mr Dani. In Gandekan, we utilised the relationship that has been built by Arkom. In Sangkrah, cooperation was also conducted through the PKM (Student Creativity Program) scheme, so that the relationship was familiar. So, the main strategy is how, for the initial approach: as much as possible, we get the trust of the people. (SLO-WF1, 2017)

In more detail, the members of the Architecture team explained how informal approach techniques were used with residents:

Usually, at the beginning of a meeting, we do not talk much but listen more. So, when we are able to listen, we can finally ask them back. Such techniques are what we share with friends who want to visit residents - how to build sympathetic interaction and communication. (SLO-WF1, 2017)

In general, the collaboration between the community and the design team improved in the next phase. Once the trust was increasing, the people's enthusiasm increased. Here, the layers of the traditional characteristics emerged. The culture of *guyup* and *gotong royong* made the people actively involved in this project. In Javanese tradition, there is also a habit of donating for the benefit of the kampung. This tradition also appeared in the construction phase of the development of the communal toilet project. Funds provided by the campus were insufficient for the completion of the toilets. Finally, residents collected funds and managed to cover the shortage for the construction.

What is interesting happened in the toilet construction project in 2016. The communal toilet construction project was not a cheap project with a cost of about two million. But it took up to tens of millions. Knowing that it turned out they wanted to share funds, so their sense of communal concern was still very high. Then they said: how much money do you have, we will get the rest. (SLO-WF1, 2017)

However, one participant mentioned the obstacle when they were involved in this project was the workshop schedule. Because many of the residents are workers, so the schedule should have been adjusted because of their working hours.

### **Flexibility**

As a project carried out by students, the method applied was derived from the theories they got from the class. Therefore, they were still quite strict in enforcing the sequence of design stages, starting from the formulation of the problem, the design development, prototyping, and construction. All stages are carried out sequentially and were quite strict, with the result that flexibility in the design stage was less viable.

The tools and activities designed were less able to give freedom for participants to develop their potential. The workshop activities were designed to provide opportunities for participants to provide input with traditional methods, including drawing and writing. Such equipment and activities gave less co-design flexibility. People who have difficulty expressing ideas in visual or textual form relied on the ability of the design team to visualise their ideas.

However, during the construction phase, flexibility increased, especially in terms of evaluation and design revisions. Residents increasingly had a space to give input on the design that was being worked. The real-time co-design model, as well as the one carried out in the Jakarta project, also took place in Solo. During the construction phase, the residents and the design team usually held periodic evaluations, to see how far the construction had progressed. In the review time, the residents could give input on design revisions. The flexibility of co-design in the Solo project only occurred in the construction phase. The Architecture team member explained that the revision was a spontaneous action, she said:

However, the design changes still occurred in the construction phase. The revisions were done spontaneously on the ground, as a response to the resident input, or the design team itself. The changes were also conducted in response to technical constraints. This action was also a form of collaboration conducted between the designer and the user. Both parties could suggest a change. (SLO-WF1, 2017)

### **Outcome focused**

As an academic assignment, for the design team (Architecture students) the purpose of this project was learning and experimentation of PD theory that they had acquired. However, for the Sociology students, this project was a semi-ethnographic practice, where they learned to gather knowledge from the village community. These academic goals were realised in the form of artefacts which were useful for the community.

Armed with the offer of real benefits, the design team hoped that the residents would be willing to be involved in the collaboration process.

A member of the design team said:

We feel that there is something less if we only discuss theory in class. We think the complete information is in the field, especially about the process. We design not only for one client but for a community. Moreover, community participation is quite significant in the project. The point is that knowledge is in the field, so we have to go there. (SLO-WF1, 2017)

The residents seemed less agreed about the purpose of the project as a learning process. Residents were mostly apathetic about collaborative offers because previous experiences have become less beneficial. Although the process eventually worked; however, from both sides, there was less agreement on the focus that had to be reached. This resulted in the failure of one project in Sangkrah. As expressed by the design team members:

In Sangkrah, we failed, because, in the selection of partners, we were not careful, it turned out that our partner (Rumah Baca) had a problem. We handed over the management of the playground to Rumah Baca, but they cannot take care of the space. The playground cannot be accessed, so we consider it a failure because the public cannot access it, and the participation of citizens was lost. The playground space turned into a private corner, so we thought it was a failure. (SLO-WF1, 2017)

The project in Solo illustrated the importance of agreement between all parties involved in the results of the co-design process. The outcome of this project was public facilities which are beneficial to the community, but in reality, this was not enough to make this project ultimately successful in benefiting participants. This circumstance related to the cultural characteristics of the people involved in the project.

When the public space development project was offered to the community, cultural layers appeared alternately in response to this project. In the beginning, people responded with less enthusiasm. Residents doubted the benefits of this project. They felt that it would give little material benefit to them. Here, the character of urban industrial society, which values everything in terms of money, was seen. As Simmel (2004) points out, one of the norms in the industrial society that economic exchange is a form of social interaction and the money in a modern world is the standard of value and means of exchange. The attitude of the people as expressed by a member of the Architecture team:

With the initial introduction of the project, the people were generally less enthusiastic. Due to their previous experience when outside actors are offering the project, in the end, they do not get the benefits that are worth it, either for their environment or for themselves. (SLO-WF1, 2017)

Then in the next phase, they were enthusiastically involved in the planning and construction of the facilities, because it was encouraged by a culture of mutual co-operation as a collectivist society. But at the end of the process, the character of urban society re-emerged and undermined the concept of ownership of communal space.

#### **5.4.4 Contextual Factors Influence**

##### **Decision Power**

Designers dominated the design decisions in this project. The design team's awareness to share authority with participants did not work effectively. This finding can be seen from the intervention carried out by the design team in the design development phase. However, the participatory role in influencing decisions appeared in the construction phase. In the initial stages of the project, there was a reluctance to be involved, caused by the trauma of experience with top-down government projects. The government, as

the determinant of development, is defined in the regulation of urban development. Thus, these regulatory factors influenced the reluctance of the community to be involved in the co-design process. This reluctance contributed to the dominant position of the design team.

In addition to regulatory factors, the resources factor, namely the inability of the design team to manage a democratic co-design process, made the decision-making process still stirred by themselves. The failure to design activities and tools that maximised the potential of participants meant the shifting of power did not work effectively.

### **Collaboration**

Collaboration in the co-design practice on this project was unstable. At the beginning of the project, there were problems due to people's reluctance to join the project, triggered by a bad experience of city regulation. Furthermore, in the design development phase, the collaboration seemed stronger. The design team managed to solve the problem of the beginning of the project by utilising the community's culture of mutual co-operation. The success of the collaboration was marked by the enthusiasm of the people participating in the workshop. A high level of collaboration could also be found in the construction phase. In this phase, collaboration was stronger with the participation of participants in exchanging ideas and design interventions during the construction process, whereas at the end of the project, post-construction, collaboration in terms of utilisation of these facilities fell again.

At the beginning of the project, it can be observed that the influence of regulation resulted in collaboration failing. Regulation is one of the dominant factors of political power that inhibit co-design processes in Indonesia, for example, in Jakarta, and this

was also an inhibiting factor in Solo. Specifically, in Solo, the top-down development regulation has resulted in people's distrust of the offers of development projects by outsiders. Those experiences made residents reluctant to accept the project offer from this university team.

Fortunately, with a personal approach from the design team, residents began to have trust in the projects offered. The design team managed to maximise the power of the community's collective culture as a driving factor for collaboration. As a result, in the development design phase, the level of residents' participation was high. The design team also succeeded in utilising relations with local leaders to get the people's trust. Furthermore, in the construction phase, collaboration grew stronger. The intensity of the ideas exchange between the design team and participants was quite high. This collaboration reminds of the real-time co-design practices that took place in Jakarta. Unfortunately, in the post-construction phase, specifically for the playground project, the effectiveness of this collaboration went back down. The reason was due to a dispute in facility access arrangements. In this case, collectivism characterised by the willingness to share the use of communal space disappeared and was replaced by urban characteristics which prioritised private ownership.

To summarise, the contextual factors that influenced the collaborative criteria in the Solo project were quite diverse. The first was the political power factor, in this case, regulation. The second was the socio-cultural factor, in the form of the mixed collectivist and urban culture of the participants.

## **Flexibility**

The team that delivered the co-design process in Solo were students. They practised PD theory in the project for building public toilets and children's playgrounds.

Observing the course of the co-design process, the flexibility that should be applied in a co-design project was not fully achieved.

From the beginning to the end, flexibility only appeared in the construction phase. In the entire series of workshops held, freedom of choice of activities and tools was not enabled by the design team. Although collaboration was quite high, the freedom of participants to choose the media or tools they wanted, to convey ideas was not fulfilled. FGD activities and workshops were designed without providing various alternative tools and media. The only media was drawing. Even when the design team used 3D model media, participants were not involved in the production. Overall, participants could only express their ideas by drawing and talking. While in the construction phase, because people were directly involved as volunteers who participated in the construction process, they had more freedom to convey their ideas. Participants could immediately execute their ideas when they were working on the product. The resource factor, in this case, the ability of the designers, was the most powerful factor that influenced the lack of flexibility in the Solo project. More specifically, the designers failed to deliver flexible co-design frameworks.

### **Common goal as the catalyst factor**

The project in Solo resulted in real outcomes. It produced public facilities in the form of toilets and playgrounds that are very clearly useful for participants. As participants determined the decision to choose the type of facility built, it can be concluded that the toilets and playgrounds were the solutions to the problems faced by residents.

From these findings, it can be suggested that the co-design process in Solo successfully applied the outcome focused criteria. However, it was noted that at the end of the project, the parties involved were not successful in managing this outcome

well. The benefits were far reduced, it can even be said to have failed. But regardless of these challenges, this project consistently proceeded to realise its intended outcome. Although there was a change in the level of collaboration during the process, these changes can be interpreted as the dynamics of the co-design process, which did not affect the project objectives.

If the reasons for the involvement of each party in this collaboration process are reviewed, it is possible to identify significant differences in motivations. Designers, as students, had reasons to collaborate to test the theories of participation they had learned. Meanwhile, residents wanted to have public facilities they needed. However, if these motivations are examined further, it is also possible to detect similarities between the reasons for involvement. The two parties, both wanted to experiment with citizen involvement in planning public facilities in the city of Solo. Designers and residents alike wanted to prove that citizen participation in urban development would produce more useful and targeted facilities than the top-down model that had been carried out by the city government. This similarity of goal can be concluded to be a factor that encourages the outcome-focused principle to be implemented in the Solo project. This common goal of collaboration was a catalyst in the overall project.

## 5.5 Chapter Discussion

The three case studies above have a distinctive character. The sample house project in Kampung Tongkol, Jakarta was strongly influenced by the spirit of resistance to authority. Residents resisted the city government policy. Both sides had different interests. This conflict has a long history and evolved throughout the history of modern Jakarta with residents' historical refusal of eviction. The spirit of resistance against evictions would inevitably create political interests which influenced the

project. Some accused the project of being politically nuanced. Moreover, the project was conducted when Jakarta was facing both presidential and governor elections. Although the residents and design teams tried to keep the project in the spirit of self-determination, the influence of political interests was inevitable. From the social context, the Jakarta project was the most representative of the urban society. The metropolitan society, where political, cultural and economic contestations are strong determinants, has led to the individualistic personality of its citizens, that tends to be less sensitive to the problems of others.

Criteria	Jakarta	Malang	Solo
Decision Power	<ul style="list-style-type: none"> <li>• Less effective</li> <li>• Designer domination</li> <li>• Participants were unfamiliar</li> <li>• Regulation factor</li> </ul>	<ul style="list-style-type: none"> <li>• Less effective</li> <li>• Designer domination</li> <li>• A culture of respect for expert</li> <li>• Javanese culture factor</li> </ul>	<ul style="list-style-type: none"> <li>• Less effective</li> <li>• Designer domination</li> <li>• Participants' apathy</li> <li>• Regulation factor</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>• Initially less effective</li> <li>• Growing awareness</li> <li>• The collectivist society factor</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Social obligations</li> <li>• Javanese culture factor (<i>sambatan</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Initially less effective</li> <li>• Growing awareness</li> <li>• The collectivist society factor</li> </ul>
Flexibility	<ul style="list-style-type: none"> <li>• Effective</li> <li>• High spontaneity</li> <li>• The craftsmanship factor</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• High spontaneity</li> <li>• The craftsmanship factor</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• High spontaneity</li> <li>• The craftsmanship factor</li> </ul>
Outcome Focused	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Against the eviction</li> <li>• Catalyst Factor</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Building a church</li> <li>• Catalyst Factor</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Create public facilities</li> <li>• Catalyst Factor</li> </ul>

**Table 9: Indonesia context case studies comparison**

While political interests with a capital P strongly influenced the Jakarta project', the project in Malang was vice versa. The Malang project was an example of a case in which micro-political interests within the community influenced the project. During the process, several conflicts between groups arose within the church community. These groups were not fixed and continued to shift the map of conflict. The Malang

case was a project where Javanese collective culture still has a strong influence. Compared to Jakarta, in terms of social context, the Malang project was one with the weakest urban character., and the common interests of the whole community were the priorities in everyday life. The people tended to prioritise collective interests above their individual interests.

The Solo project was a project fully initiated by a university campus. Hence the theoretical approach dominantly influenced this project. Since the students dominated the design team, the methods applied were the result of their academic learning on participation theories. What was interesting about this project is how the attempts to apply the theory of participation in a real context in society. The character of the Solo community was a blend of various cultural layers, one of which was the long history of the city's development, which often appears when responding to an event or activity, for example, during the co-design process. The urban society layers appeared in the early and the post-construction phase, while during the design development and prototyping phase, the collectivist layer emerged. The urban society layer was characterised by a calculative attitude and prioritisation of private ownership. Instead, the collectivist characteristics put the group's interests above individual interests.

Comparing the co-design process in all three contexts, the stages can be divided into three main stages. First, is the exploration and problem determination phase, the second phase is in the design development and prototyping phase, while the last phase is the construction and post-construction. However, not all cases went through these same stages. The Jakarta case was unique, where after the problem determination phase, they simultaneously ran three phases: design development, prototyping and

construction. The effect was that the process dynamics in Jakarta produced many examples of real-time co-design practices.

While the processes in Malang and Solo relatively followed the steps above, especially for Malang, the stage only reached the prototyping stage, so the construction process cannot be observed yet. In general, designers in all three cases did not offer design activities or tools that specifically responded to participants. They used media commonly used in traditional design development processes, such as drawing and 3D modelling. However, the spontaneity of the participants during the workshops apparently encouraged the flexibility and dynamics of the design process.

The findings of the three cases above also present the influence of contextual factors on the effectiveness of co-design performance. This effectiveness can be measured by following co-design criteria according to the theoretical framework that has established. Table 10 presented a comparison of the influence of the contextual factors on the effectiveness of co-design. A discussion of this is presented below

A comparison of the decision-making process noted that shifting power in determining decisions from designers to users is one of the main principles that mark the difference in co-design to traditional design processes. Empowering the users is quite challenging, especially in the context of Indonesia, where design is still taught and practised traditionally. Communities lived under an authoritarian government for a long time. In that circumstance, the power of the designer is dominant. The analysis of the decision-making process in the three case studies above shows that the dominance of designers still colours the design decision-making process to different degrees, as well as the factors that influence it.

In the case of Jakarta, the dominance of designers was influenced by the factor of political power, in the form of regulation on city development, which emphasised the role of government in development planning. This factor has hampered the role of citizens to be actively involved in collaborative projects and means that residents have never had the role, experience, and opportunities to be involved in the process of building their neighbourhoods. In addition, the fact that the residents of Kampung Tongkol, Jakarta were residents of the informal settlement, made them reluctant and apathetic about the offer of building the sample house. The influence of the same factor was also found in the case in Solo. Participants there also experienced distrust of the co-design process offered by the design team. They have had unpleasant experiences with projects offered by the government, where they were only positioned as objects.

From that evidence, it can be deduced that when people who have previously not been involved in a public process but then join a co-design process, would experience a sense of inferiority. Thereby, in both cases, the regulation factor was the reason for inequality during the decision-making process.

However, in Malang, the socio-cultural background of the people, in the form of Javanese culture, was the contextual factor that influences the dominance of designers and church leaders over the participants. Those cultures are *mbendhol mburi* and show obedience or respect to the leader. Both cultures made the workshop processes run less openly, especially in the phase of problem formulation and design development. The Malang case also reveals that in the relationship between the designer and the participant, the compliance factor and respect for the expert made the position of the designer quite dominant. In contrast, in the relationship between participants and the

church leaders, in addition to reasons for compliance, the culture of pretence plays a significant role in the imbalance. Participants have less confidence in expressing their opinions because of the dominance of church leaders, but the culture of pretence and maintaining harmony made them reluctant to be open. Fortunately, this condition slowly changed when the co-design process entered the design and prototyping phase. The participation role became more pronounced because of the openness and encouragement given by the design team.

To summarise, the findings from the three case studies show that the regulation and the socio-cultural background of the society are the dominant factors that influence the decision-making process. The experience of residents with previous projects that failed to provide space for participation made them less confident that the offer of the co-design process would make them heard. In addition, the regulations that have been running so far also do not provide space for participants to speak out in the development planning of their surroundings. As a result, they are relatively new to environmental planning activities. This distrust and lack of participation experience made the power relations between participants and designers unequal. Meanwhile, the Javanese culture, especially the culture of obedience or respect for the leader or expert, contributed to positioning the participants as inferior to the designer during the decision-making process.

Collaborative co-design is the criterion by which the design process must involve either the designer or the user plus other parties related to the design results. Therefore, this criterion can be assessed in two aspects: the level of the users' participation and how active they are in contributing their ideas during the design process.

Examining the findings of the three case studies, overall, the level of users' participation was relatively high, although not at the beginning of the process. On the contrary, in all three cases, the level at the beginning of the process was relatively low. The low level of people participation in Jakarta and Solo was caused by the same factors, namely distrust of the development processes offered by outsiders. In contrast, in Malang, it was caused by internal conflicts between the congregation and church leaders.

Furthermore, people's participation was increasing as the process progressed because designers in all three cases utilised culture to deal with challenges in their context. In Jakarta and Solo, a cultural approach was used to build people's trust in the co-design process, whereas in Malang, a cultural approach was used to resolve conflicts. It is also important to note that this cultural approach always involved local leaders as a bridge between designers and the community. Of the three cases, the designers have encouraged the collective culture of society. Although there were differences in collective levels in all cases, the roots of collectivist society could still be found and utilised. Local designers and leaders, through informal and personal meetings, eventually, had success encourage people to participate. They involved because they realised that the co-design process was nothing but the practice of *gotong-royong* mutual co-operation that they had often run. Furthermore, towards the practice of mutual co-operation, there were social obligations that they had to carry out.

In addition to user participation, the intensity of the participants and the designer's interaction during the design workshops also need to be examined. In general, the practice of co-design in these case studies succeeded in activating participants to play their role, especially in the production phase, both prototyping and construction.

Evidence shows that collaboration became more intense when participants were directly involved in the practice of construction. This tendency was strongly influenced by the participants who had good craftsmanship skills. This expertise was very appropriate and useful when participants were involved in the construction phase. The expertise was also a result of the cultural tradition of mutual co-operation activities such as *sayang* and *sambatan*. Based on this evidence, it can be proposed that the drive to fulfil social obligations and the expertise of craftsmanship skills are significant factors that have influenced the effectiveness of the collaboration principle in co-design practices these case studies. Both factors are included in the socio-culture factor category.

Unlike the decision-making process and collaborative criteria, the criterion of flexibility in all cases has a similar origin, influenced by the tradition of ‘making’, a collectivist society characteristic of kampung communities. The influence of kampung collective culture in the co-design process became more evident as the project entered the design workshop and construction phase. In practical activities, participants tended to be more easily engaged in work. One member of the Malang project design team stated that the participants seemed more natural and enjoyed the workshop stage, as they felt more comfortable with the practical action of making, rather than engaging in discussions in the previous stages. For participants, exploring ideas practically was easier to understand than just listening to explanations and presentations.

There was a substantial similarity between participants in Jakarta and Malang in terms of the reaction to making things, either prototyping or construction. In Jakarta, although the design workshop eventually produced the design drawings, it frequently changed during the construction progress. These adjustments and changes were made

in response to the new issues or ideas that emerged during the evaluation process. This situation indicated that the design process was conducted simultaneously with the construction phase. The design team believed that participants' ideas could be better explored in the practical process of construction.

Similarly, in the Malang case, during the bamboo construction workshop, the design team also felt that participants were more actively participating when they were engaged in work activities. Their knowledge and local wisdom about bamboo could be explored and executed deeper through active work. The design team also felt more comfortable to transfer their knowledge to participants through this work more than in the indoor workshops or meetings.

These design steps are slightly different from what has been known about traditional design methods. Usually, these design methods are more focused on the design time, the phase where the concept or design system was developed. However, in these case studies, the design was developed more during the production phase or even in used-time phase. This finding confirms the idea of a meta-design, in which the user will have more chance to actively contribute, by directly giving input during the post-building phase. The distinction between design time and used time became blurred in all three cases.

The flexibility of the co-design process in these case studies was influenced by socio-cultural factors, namely the expertise of craftsmanship. The habits of building rather than designing then building are due to the habit of mutual co-operation activities. This tradition was reflected in the attitude of participants who preferred practical prototype building activities rather than designing on paper during the co-design process. This made the co-design more spontaneous and flexible. This spontaneity

showed up when participants were engaged in the workshops, for example, spontaneously using various materials as tools or supporting equipment. Also, they showed flexibility in changing the stages of the co-design process.

The last criterion is outcome-focused. Co-design is conducted to answer the real problems of products or services' users. Therefore, it must focus on the outcome that answers the real needs of the participants. All the case studies in Indonesia produced outcomes that indeed addressed participant problems. It can be said that the practices were effective in implementing the outcome-focused criterion. In Jakarta, the sample house was the answer to the threat of eviction. In Malang, the bamboo church was the answer to the needs of residents for the new church building, and in Solo, the toilet and playground were clearly an answer to residents' needs for public facilities in their neighbourhood.

These three case studies provide findings that the focus on the real outcome was influenced by the catalyst factor, namely, the purpose of collaboration. The cases in Jakarta and Solo were underlined by the notion of an effort to provide an alternative model of urban development, rather than a top-down model. This notion united the participant, so they agreed to conduct the collaboration process that resulted in a real outcome as the answer to their respective problems. In Malang, this catalyst factor also appeared in the agreement of all parties to collaborate in repairing and building the bamboo churches.

## 5.6 Chapter Conclusion

This Chapter discussed the findings of the three case studies in Indonesia. The analysis of each case study resulted in a link between contextual factors and the resulting co-design characteristic. The factors of city development regulation and

culture of the collectivist community influenced the practice of co-design in both contexts in Jakarta and Solo. In both contexts, top-down development regulation was a constraint to the effectiveness of the decision-making process during the co-design workshop. However, the character of the collectivist community drove the collaboration process and flexible nature of the co-design workshops.

While in the context of Malang, the influence of Javanese cultural factors that are embraced by the society was very influential during the co-design process in two aspects. It was felt in the emergence of conflicts early in the process, which resulted in a less effective level of collaboration at that time. In addition, it was also a factor that perpetuated the inequality of the relationship between participants and designers. However, it was utilised as a capital by the designers to overcome obstacles in the process of decision-making and collaboration.

This chapter also resulted in a conclusion that craftsmanship capabilities of the society in all three cases were very beneficial in supporting the flexibility of co-design processes. These skills form the character of the community who preferred to make rather than design. These preferences were seen in the co-design process, where participants were more excited to be involved in the prototyping or construction phases than in the design development phase

# 6 The Co-design Practice in the UK Context

This chapter discusses the findings of field research conducted on three case studies in the UK, namely the Rough Sleepers project in Worthing, BTC project in Lancaster, and the Redesign Ambulatory Care Unit project at Whittington Hospital, London. The discussion begins with a review of the policy of public involvement in the planning and development of cities in the UK. This is followed by an explanation of the findings of the two case studies, which focuses on how the co-design process was carried out, and the contextual influences on the co-design process. The next section is a discussion that compares findings from the three case studies. This chapter concludes with the characteristics of co-design in the UK.

## 6.1 Public Participation Policy in the UK

This section reviews public involvement in city development planning in the UK. It is essential to give an overview of the background of the UK, regarding the regulation, politics, and social-cultural aspects of British society in terms of public participation.

As part of Western society, people in the UK reflect the Western culture in a distinctive political realm, namely: (1) the limitation of government or the rule of law; (2) some institutional separation of the economy and of science from government and religion; and (3) popular participation or democracy (Weede, 1990). The third point can be a moral basis for the implementation of public involvement in every process of policymaking concerning public affairs. One of the values of applying public participation can be seen in the IAP2 (International Association for Public Participation) Core Values for Public Participation. It said that public participation is based on the belief that those who are affected by decisions have a right to be involved in the decision-making process (IAP2, 2018). Public involvement in influencing policies in the public sector has a long history that began in the mid-20th century. Some of the critical events to be mentioned as developmental milestones are as follows.

The NHS programme designed in 1944, had called for the importance of community involvement. However, more concrete structures were implemented at the time of the publication of the NHS Reorganisation Act of 1973, with the establishment of Community Health Councils (Crane, 2018). In matters of infrastructure development, around the end of the 1960s, the idea of community involvement in development planning began to emerge. The Town and Country Planning Act of 1968 required that local government listened to the voices of affected people in the development plan and provided information about all future planning for their environment (Shapely, 2011). A year later, in 1969, the Skeffington Report was released, which emphasised the growing need for a form of community involvement. The Skeffington Report had no immediate impact. In subsequent developments, the UK ratified the Aarhus Convention, compiled by the United Nations Economic Commission for Europe 1998.

Essential articles to note are the right of everyone to receive environmental information that is held by public authorities; to participate in environmental decision-making, and to review procedures to challenge public decisions (Sheppard, 2015). Much later the Mandatory Planning and Purchasing Act 2004 was finally published, and the Localism Act 2011 that gave more emphasis to public involvement by creating more open spaces for citizens to be actively involved and empowered in planning.

Although it has not been fully capable of empowering citizens, this rule of involving the public has been at least able to build a norm and habit for British society with regard to the built environment. Public involvement is automatically considered by any authority that wants to develop an environmental development design plan. This condition, coupled with an established democratic culture, has made the UK citizen familiar with the practice of engaging in participatory processes in developing their environment. Although it is not a guarantee that all citizen wants to involve, however, this custom can later be seen informing the UK's case studies discussed.

The initiative for public involvement in environmental planning appeared in the three case studies discussed below, all of these which were carried out after the application of the Localism Act 2011, so that from the outset, there was already an awareness of the city and county government to involve the public in the process.

The first case study is the Rough Sleeper project conducted in the council borough of Worthing in 2014. This project was an effort to overcome the homeless problem situated in the high street city centre area. This project was a collaboration between the city council and the Design Council. The second case study is the BTC project in Lancaster, which was conducted in 2012-2013. This project was a design intervention

effort on the green space around Lancaster Castle. At first, the city council tried to implement a participatory scheme by involving citizens. However, because it was not optimal, eventually, the city council took a team from Lancaster University to conduct the project.



**Figure 21: Map of case studies in the UK context**

The third project is the Ambulatory Care Unit redesign project at Whittington Hospital, London, in 2015-2016. This was a collaborative project between hospital management and the Design Council. The hospital had previously worked together with the Design Council in a redesign of pharmacy interior projects. The pharmacy project was carried out with a participatory approach involving patients, staff and management. This project was deemed successful and led to the management's desire to repeat it when the unit redesign plan surfaced. Finally, the Design Council designated the Tilt study to conduct a co-design series workshop to produce the

conceptual design of the ambulatory unit interior. The design project began in 2015 and took effect the following year.

## **6.2 Rough Sleepers Project**

### **6.2.1 Background**

This project was part of a long-term programme to end rough sleepers' issues. This programme was a national vision initiated by MHCLG (The Ministry of Housing, Communities and Local Government), formerly DCLG (Department for Communities and Local Government) in 2010. In 2011, DCLG formed a working group of eight ministries, which had the task of developing a national programme to overcome the problem of homeless people. The central vision of this programme, in short, was "There is no place for homelessness in the 21st Century" (DCLG, 2012). The key to delivering that vision was prevention - agencies working together to support those at risk of homelessness. In response to the Localism Act (2011), this programme considers that addressing of the rough sleeper problem must involve local authorities, which means providing more space to the local government to make a programme initiative to overcome the rough sleepers' issue. Therefore, one of the missions was to attempt to scale and understand this issue and develop a new vision for local areas to engage with, based on innovation and strong partnerships.

Adur and Worthing Council responded to this national strategy by drafting a local strategy for tackling homelessness, 2013-2017. In this strategy, the council emphasised strengthening the involvement of local actors to address the rough sleeper problem. This idea was in line with the spirit contained in the Localism Act 2011. Through this strategy, a series of policies and actions involving many elements of

government have been carried out. Among others, through the establishment of the ASB (anti-social behaviour) prevention team.

However, at the end of 2014, the ASB team was considered less effective in overcoming the problem of the street community due to reduced power and funding (Community Director, 2015). Although it tried to keep running, the results were considered not optimal. Therefore, the council tried to formulate a new policy related to handling the homeless problem. The new approach was carried out by trying to involve the local community. At the same time, the council heard that the Design Council offered public sector support programmes. Eventually, it approached the Design Council to consult how to get the programme assistance.

As a result, I attended a Design Council event on redesigning public services. This event led to a conversation with the Design Council about developing a proposal for them to become involved in the Worthing Street Community / Rough Sleeper issue. They encouraged me to submit a bid to them for funding support - which was successful (AW-IG 1, 2018)

In the end, the city council managed to get a £10,000 fund from the Design Council to run the programme to handle this community / rough sleeper street problem.

In addition to the programme conducted with the Design Council, the city council also sought to deal with the problem with various other programmes in collaboration with many agencies. These were the: Intensive casework, Street Triage, Worthing Winter Night Shelter, Licensing - Enough is Enough, Systems Leadership pilot. These programmes were carried out through city-council collaboration with different agencies. Each has a specific target and area related to addressing homeless people. The projects with the Design Council were different because they brought all agencies to work together in a co-design project.

## 6.2.2 Co-Design Process

The Design Council then appointed associate designers to work together with the city council to run this programme. As an initial understanding, this project tried to involve stakeholder issues to be actively engaged in efforts to solve problems. The design studio appointed by the Design Council then presented a series of meetings with the city council to discuss what strategies would be carried out.

### Initial phase

The first step was to identify and gather all stakeholders who were interested and wanted to be involved in addressing the rough sleeper problem. The initial phase was conducted through organised several meetings. The meetings resulted in a map of the stakeholders. Then from the map, they selected which participants would participate in the next process stage. The associate designer of this project said: “We compile a map of stakeholders. Then quickly determine who will be involved in the next process. This team consists of the Project Manager, the design team and the city council officer” (AW-WF 1, 2018).

After the participants were determined, the co-design process began. The first step was identifying the problem through a series of meetings involving all participants. The participants were: representatives from Adur and Worthing Councils from Housing Services, Licensing, Safer Communities and Parks and Foreshores, Sussex Police, Worthing Churches Homeless Projects, St Mungo's Broadway, West Sussex County Council (Adult Services), My Key (Support service run by Southdown Housing), Hospital Alcohol Liaison, STORM, and Sussex Homeless Outreach Re-Connections Engagement (SHORE).

In this identification meeting, they formulated the challenges faced by this project. The meeting agreed on the focus of street community issues and the broader impact caused. The challenge was formulated in the following sentence (Adur and Worthing Council, 2015):

What is the true cost of the Street Community in Worthing and how can organisations work more effectively together to put appropriate solutions in place to (1) reduce the negative impacts of the Street Community in the town, (2) prevent the growth of the Street Community.

## Workshop 1



**Figure 22: The first workshop to capture all participants' ideas and input (Design Council, 2015)**

The first Workshop aimed to receive as many ideas as possible from the participants. Each participant was given a piece of paper with a template containing a set of tasks. The template included questions about the idea, title and summary of the idea. Participants then developed their ideas, either individually or in groups. This first workshop resulted in 32 proposed ideas. These ideas were grouped into nine themes, then four main themes: improve awareness, activities, integrated coursework/service, alternative accommodation. All participants then reviewed the 32 proposed ideas (see figure 22). After the review, the ideas were voted on to choose which would be continued to the next workshop stage. The voting resulted in four ideas to be developed.

## Workshop 2

In the second workshop, the four selected ideas were further developed. Each team designed the product or service prototype and the planning to test the prototype. The four ideas are discussed below.

### 1. Understanding Our Community

This idea focused on how the stakeholders could get better insights into the issues about the street community and help others gain a greater understanding. The intention was to establish the costs associated with this group. This proposal was primarily an effort to raise the story or voice of members of the street community so that they would be heard, both by fellow street community members, as well as by the townspeople. The team planned to create two product prototype designs. The first was a DVD containing stories of the street community member. The second was a desktop exercise that tried to calculate the living cost of each street community individual.

### 2. Worthing Market Stall

The second proposal was an activity to run a market stall during the Wednesday market held on High Street that would later involve a street community member as a kiosk keeper. The proposal aimed to strive to bring people closer to the street community members in different ways and to open up opportunities for people to see their human side and how they were allowed to develop themselves. In addition, it was also a means to increase confidence, re-hone the skills that the homeless actually have, in order to be valuable capital when in search of jobs in the appropriate field. The team designed the prototype of the market stalls that would be run, by involving members of the street community. In its design, the

stall would be supported by various public communities to provide goods for sale (e.g. Christmas ornaments, tombola, crafts).

### 3. Mentoring – Integrated Casework

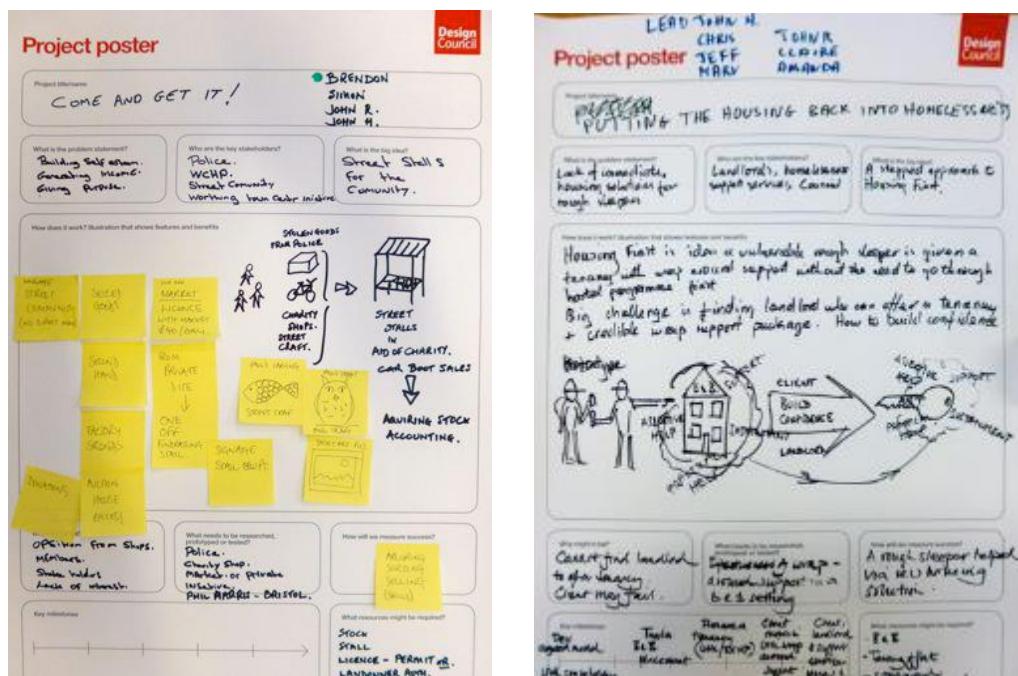
This proposal was a programme of mentoring by a rough sleeper. In detail, a mentor would become an integrated support worker, accompanying a rough sleeper sustainably throughout their process until they managed to settle in the accommodation, or even became more economically independent. In the design, the mentoring programme emphasised several principles of mentoring, namely: it would be small scale (1:1) so that mentoring could take place intensively; assertive and flexible, both in terms of the way and the definition of success of the final achievement; and comprehensive until the post-move phase.

### 4. Putting Housing back into Homelessness

This proposal departs from the idea to provide accommodation for the homeless that can be accessed quickly outside of the existing rough sleeper hostel. In its prototype design, this proposal would cooperate with landlords to prepare bed and breakfast facilities for the rough sleeper. This proposal would also cooperate with the existing rough sleeper hostel, both from the Council and from Worthing Winter Night Shelter, to extend the time or add to its operational day. In addition, this proposal was also designed as a kind of map of accommodation that can easily be accessed by a rough sleeper at any time they need. The proposal was also designed as individual wrap-around support (bespoke package) for the rough sleeper that went into the property.

## Prototyping

The second workshop resulted in prototypes' design. As a test, the four prototypes were run within three months. The first proposal focused on DVD production of a rough sleeper story. The team performed a series of shooting and documentary filming. Moreover, the living expenses of street community members were also recorded. Three street community members were willing to be volunteers for the living cost sample. As for the second proposal, the market stall ran every Wednesday. The stall was run three times between October/November 2014. It was very popular with 15 street community members volunteering and nobody rejecting the opportunity to engage.



**Figure 23: The poster that summarises the approved proposals for the prototyping stage (Design Council, 2015)**

For the third proposal, the team tested three mentors on the mentoring programme. Each mentor eventually accompanied two rough sleepers for three weeks. The mentor was equipped with small funds during the mentoring to accompany the mentee into a

new environment out of the rough sleeper. In its development, the team decided to extend for six weeks. For the last prototype, the implementation was in cooperation with landlords. Also, the winter night shelter opened its additional operational day, while the provision of the bespoke package involved cooperation with one of the private providers.

## **Evaluation**

The evaluation was mainly to assess how the final output of the prototype was carried out. Also, it sought to identify the difficulties or obstacles faced during the pilot as a lesson to learn. This evaluation also compared which of the four proposals would be possible to be followed up into a real programme for addressing the rough sleeper problem on the high street.

### **1. Understanding Our Community**

The first proposal resulted in a prototype DVD of street community member stories. The final recording was about 90 minutes but later compacted to eight minutes. The assessment against the DVD showed that the required editing time and cost was not comparable to the final DVD's achievement. The obstacles faced in the film's production process were the reluctance of the street community members to get involved. The recommendation for the sustainability of this proposal was to compile as much feedback as possible from the resulting video for future exploration.

While the desktop exercise generated an estimate of the cost required by an individual as homeless, data taken in time varied from the lifespan of 10 to 20 years. The results of this cost calculation varied widely, depending on the condition of each individual regarding their health history, and the tendency to drug addiction and alcohol.

Evaluation of this desktop exercise required a complete analysis of the possibility of investment cost handling the problem of this rough sleeper.

## 2. Worthing Market Stall

During the three months of the market stall trials, there were some positive results. The results are the high enthusiasm of street community members to be volunteers at the kiosk; enough goods were sold; local business enthusiastically participated in this activity, and interaction between townsfolk with volunteers was quite intense (reducing the barrier between parties) (see figure 24).



**Figure 24: Worthing market stall prototyping (Design Council, 2015)**

The report also noted no ASB action during the kiosk initiative to run. The evaluation of the volunteers indicated that they felt confident and their comfort increased when in the environment outside their community. One even intended to pioneer a business in Parker-Valet in the city's central area. The future recommendation was to increase the

involvement of other communities, involving the police to sell unclaimed findings, as well as the possibility to employ a paid volunteer.

### 3. Mentoring – Integrated Casework

After nine weeks of running, a lot of positive results were gained from this programme prototype trial. The main positive results were the sustainability of accommodation, supported housing referrals, mentor-backed medical appointments and supporting mentors to engage in other activities (e.g. joining the gym). A significant positive achievement was the recognition of the mentee that they felt they had become a better individual, had a goal to progress, developed a lot of new interests or hobbies, and spent less time with the street community group. Another positive result of the mentor's side was the enthusiasm of professionals in the field of self-development to join as a mentor. They expressed interest in joining for the implementation of this programme in the future.

### 4. Putting Housing back into Homelessness

The evaluation of the third prototype showed several obstacles. The main obstacle was the rough sleeper access to the accommodation provided. It needed more support from the team, so they were willing to go to the property. However, there were also some success stories; for example, some of the rough sleepers moved from a temporary stay to a permanent stay. The evaluation recommended to increase collaboration between the management of the programme with the rough sleeper team of the city council and strengthen cooperation with other support organisations which already exist to handle the problem of accommodation.

### **6.2.3 The Effectiveness of Co-Design Process**

From the series of co-design processes carried out above, further investigations about the effectiveness of the co-design process are conducted, as well as the influence of the contextual factors on the process.

#### **Decision-making power**

Observing the decision retrieval process during the co-design process, for example, when selecting four ideas which would be prototyped, it was found that participants had a role in decision-making. They performed a voting mechanism, after previously holding a curatorial process to narrow the choice. The vote was a common activity conducted by participants as a mechanism to decide a choice. The culture of freedom of speech made it easy to do this. As affirmed by Kim (2010), freedom of speech and expression plays a vital role in the individualistic culture of Western society (Western Europe and North America). The city officer's statement also supported this idea that citizens were not experiencing obstacles when participating. He said: "the response was very positive - they found the process very engaging and liberating. There was no sense of hierarchy and participants found it easy to propose ideas for initiatives" (AW-IG 1, 2018)

In addition to that culture, another factor that influenced the decision-making process is the regulation factor, that is changes in the direction of regulation that provides more significant space for citizen involvement in environmental planning are mandated by the Localism Act 2011. This public involvement is about fairness and a usual thing to do. As confirmed by one of the city council's staff: "Yes - it is embedded in legislation and many aspects of the process from planning

consultations/neighbourhood forums, parish councils, residents' groups etc." (AW-IG 1, 2018).

He also added that the success of this co-design process otherwise also affects the councillors who shape the policy, to accept and encourage citizen engagement in addressing public issues, in this case, the rough sleeper issue. He added:

As officers, we were always conscious that our ideas would need to be presented to the elected members who have the final say on policy, practice and resources. In this case, we were able to present a compelling report and ideas on dealing with the problems around the street community / rough sleeping. The response of the members was overwhelmingly positive - they encouraged us to go further, faster. It changed the whole tone of how we went about dealing with this issue - which was very satisfying (AW-IG 1, 2018).

The change in the direction of development policy from the central government was translated by the local authority of Adur and Worthing, one of the ways was by involving citizens in planning the solution for homeless people issue.

## **Collaboration**

The co-design process that took place in this project cannot be detached from the willingness of participants to engage. In the beginning, the participants felt sceptical that the process was worthwhile. One of the participants admitted to not knowing any of the methods offered by the Design Council. They thought the design effort was a kind of design intervention to transform the city centre in order to drive the street community out. Meanwhile, the city council officer mentioned those convincing residents that this new approach would be promising was also a challenge in the early process

Apart from the problem of time constraints, it was convincing people that this was a valid approach to take to problem-solving. Some thought that the answers lay in more punitive measures to tackle the problems, rather than undertaking redesign / participatory processes. (AW-IG 1, 2018)

Although sceptical at the beginning of the process after people had meetings with the city council and the design team, the citizens were seen as willing to participate. The awareness of stakeholders to be willing to engage in this project was an indication that they really want their opinions and voices to be heard, as explained by one of the city council staff, “where an issue or development directly affects people, they will get involved and expect to be heard. There is lots of evidence of this in the UK - especially when it comes to housing development” (AW-IG 1, 2018).

The designers involved in the project assessed that the practice of participation had become a natural thing. When asked what factors that made people want to collaborate, he explained the people's desire to “colour the city” as the reason: “I felt I had no capacity to answer. It is just that practice is natural here. That citizens came with their idea to colour their city. That it also demonstrates their identity” (AW-WF 1, 2018)

The people have an awareness of and are able to make decisions on something that had an impact on themselves. The enthusiasm of the participants was certainly positive capital to realise the collaboration of all parties. In practice, the collaboration went well; one of the factors was because the designer was able to play the role more as a facilitator, encouraging the collaboration of all participants. Regarding the relationship between the designer and the participant, the designer said:

This is an interesting question. Yes, designers can no longer direct the expected results. But participants work together, explore ideas. That everyone has the potential to be creative. Designers are more facilitators than just calling them and saying this is the idea, and you have to follow this idea. But as a facilitator, we also cannot just accommodate ideas; we must prepare a framework, receive a response and then guide them towards resolving the problem faced. (AW-WF 1, 2018)

## Flexibility

The process of co-design in this project was designed to provide a space for participants to contribute to solving problems. The method implemented was enough to provide an opportunity for participants to be actively involved. The experience felt by participants was generally positive. Flexibility was felt by participants when trying various media and tools when they arranged the proposals. A participant was pleased with the use of various visual aspects in this project; this gave a new experience that was both challenging and enjoyable.

I liked the visual aspect of project planning and think that this is a very accessible way of working as a team. Helpful because they quickly led to action being taken and ideas being explored practically (Rough Sleeper project report, 2018).

Participants also considered that the idea of running a prototype or small pilot project was beneficial to overcome the problem. They have the opportunity to evaluate the proposals they designed, to see if it deviated or had any constraints so that later it was possible to have a design revision. The flexibility achieved by this co-design process was entirely the design of the designers who stated that the framework of the method that was built was to provide flexibility for participants to express their ideas. The designer said, “Yes, we already have a framework on how to deliver the service to the participants. We strive to ensure that the participants ' vision can be conveyed, as inputs, and later the output of this process can provide a satisfactory future” (AW – WF 1, 2018).

The designer also added that the participants were facilitated by the methods that were carried out when they conveyed their ideas. He said, “Definitely, we saw participants flourishing in the creative space they were given - a way that would not have happened through more traditional consultation/management” (AW – WF 1, 2018).

From the findings above, the flexibility in the exploration of creativity was supported by the availability of appropriate frameworks and tools that were previously designed by the designer team. Even so, the obstacle that occurred in this co-design process was time. Participants and the design team still had difficulty in arranging the workshop implementation time commitment. This flexibility, in terms of schedule, seems to have not been fulfilled in this co-design process. According to the designer, “the response is natural; it seems that they also have problems with managing time and are committed to following this process. That is one of the challenges in implementing this process” (AW – WF 1, 2018).

### **Outcomes focus**

The co-design carried out in the case study in Worthing is an approach that was initially chosen by the City Council and Design Council. Both parties, especially the Design Council, believed that real community involvement in the design process would produce a better solution. The city council said that various previous policy efforts had not been very successful in resolving this homeless problem, so they hoped this new approach would be more successful. Its report said this new approach would be more effective and efficient and people-centred.

The approach of the Design Council is to help to deliver more effective and efficient services that are people-centred. This is done by embedding best practice design thinking, skills and techniques. The Design Council’s approach is to mentor, guide and support so that people learn by doing, rather than being told what to do (AW-IG1, 2018).

The desire to solve homeless problems was felt to colour the beginning of the collaboration process. All parties, both city council and all stakeholders, wanted this collaboration process to overcome the problems faced. The initial stage of the co-design process began with formulating the objectives of the process, and the results

guided its course. All four design proposals that were developed into prototypes were in accordance with trying to answer the demands of the same problem. This finding indicates that the co-design project at Worthing was effective in its focus on the outcome, which was guided by the objectives.

#### **6.2.4 Contextual Factors Influence**

The process of co-design in Worthing has strong legitimacy because the city council fully supports it. The city council, which had previously made efforts to solve this rough sleeper problem, felt the new approach offered by the Design Council would be able to effectively and efficiently solve the problem of rough sleepers. Despite the influential role of the city council, the decision-making processes were still carried out reasonably democratically, meaning that the city council was not the dominant party. The city council officials and designers recognised that there should be no hierarchy in the process of co-design being carried out.

Decision-making that gave participants ample room to contribute was possible because of the political climate factor. Participants were familiar with participation in a broader term, for example, election voting. However, they recognise that the concept of involvement in public design is something new. Both participant and the council said that further participation of citizens in the design process had never been done before.

## Innovating through design



**Figure 25: Innovating through the design diagram for the Rough Sleeper project**  
**(Design Leadership Programme – Design Council, 2015)**

Even though this is something new, the participants understood they could be involved in decision-making. It could be seen from the project report, for example, at the initial proposal stage, there was a note of how enthusiastic participants were and how they were able to produce 32 initial ideas. This fact was one indication that participants did not need to adapt or learn to speak out. They already had a democratic culture due to the political climate that has long existed.

The co-design process that took place in this project can be said to follow the typical stages of the design process, starting with ideation, then development design, and finally delivering, as can be seen in figure 25. From the ideation to prototyping, participants were actively involved in the process of shaping the decisions. However, before entering the co-design process, there was one step, namely the process of determining participants. Participants were recruited based on participant mapping. This was prepared by the project manager, together with representatives of the city council and the design team. Participants who were involved in the process were from

agencies that have a long history addressing the homeless problem in the Adur and Worthing region. They were included in the participant map because so far, they already had a track record of handling homeless issues, so they were considered to have the expertise needed to contribute to this co-design process. The decision to include them was in line with the mission of this project, for different perspectives from the various agencies involved, to enrich the problem-solving. As stated in the project reports, this project emphasised the expansion of opportunities for problem-solving from various angles.

The Design Council project has encouraged collaborative working and a person-centred approach. The Design Council associate provided mentoring support to encourage people from a number of agencies to come up with different ideas to attempt to solve the same problem. The ideas were wide-ranging, which was partly due to looking at the same problem from different perspectives. (Council Report, 2015)

This desire to involve various stakeholders can be justified considering that homeless problems are one type of wicked problem, which requires wicked solutions (Brown et al., 2009). Although a solution may never exist for a wicked problem, reducing the symptoms as much as possible is essential. It can be argued that involving as many of these stakeholders as possible is in order to gather as many solutions as possible.

Although this co-design process has proven to involve various agencies as stakeholders of homeless people issues, the street community members were not included in the series of design processes. Street community members were eventually involved in the testing phase of the product and were referred to as clients. So, if viewed from the interaction that occurs in the whole process, members of the street community are the real end-users of the products produced. Why members of the street community not involved during the design process was undoubtedly a problem when this project claimed to use the co-design process, as one of the principles of co-

design is the involvement of end-users in the entire process of the stages of design development (Sanders and Stappers, 2008).

Reading the report on the Joint Strategic Committee 2016, there were indications why the involvement of street community members in the co-design process was difficult. First, the street community is not a permanent community, the report said, only a few remained in one city year-on-year, while others always moved. It would have been a difficult thing to build a long process by involving their participation. Second, the problems of the street community are not just a matter of lack of housing, but its members experience a variety of other problems. According to the report, street community members on average experience chaotic lifestyle problems, such as the history of trauma, self-medication through to substance misuse, homelessness and mental or physical health conditions. In addition, they often suffer from feelings of distrust. The combination of these factors resulted in the difficulty of involving members of the street community in the co-design process. Even though they would be actually end-users of the product that would be produced, their absence was indeed a problem, because their interests and desires could not be represented by agencies, even though they had long interacted with them.

Even so, the absence of members of the street community was expected to be mitigated with the involvement of as many stakeholders as possible, one of which was Street Outreach. They are people who have more experience and understanding of street community members because of the long track record working with them. The involvement of Street Outreach also facilitated the prototype testing stages involving members of the street community.

## 6.3 Beyond the Castle Project

### 6.3.1 Background

The second case study was located in Lancaster. It was a project to develop the green area around Lancaster Castle. This project involved a long series of activities that began in 2011 and is still ongoing. This study investigated BTC as a co-design project carried out by the PROUD (People Researchers Organisations Using Design) Lancaster University team during 2012-2013.

BTC was the operational name for the City Park proposal, one of the three Lancaster Square Route project proposal ideas by Lancaster City Council which began in early 2009. Lancaster Square Route was a project that aimed to rejuvenate Lancaster's city centre area to become a quality destination for visitors and residents (Lancaster Square Route - Consultation Board, 2010). Gillespies, the consultant appointed to run the proposal conducted a series of consultation meetings, held online discussions through Facebook, made video podcasts, and held exhibitions for two weeks. Feedback from the community was then reviewed and processed by Gillespies' team, and in summer 2010, it produced a design concept as stated in the Lancaster Square Route - Consultation Board 2010 document. From 2013-2014 through two phases of construction, several design points were completed and built according to the design concept produced by Gillespies.

Of the three ideas in Lancaster Square Route, the third idea - City Park, has not been fully developed. In the overview document of Lancaster Square Route, the coverage area of the City Park project included Lancaster Castle and its surroundings. The site can be understood as the 'historic centre' of Lancaster with the hilltop and river providing a strategic position for early development. It can broadly be divided into a

Lancaster Castle area b) Lancaster Priory and Priory Churchyard; c) Vicarage Fields containing a series of Roman Forts (built during 400 years of Roman Military Occupation); medieval earthworks possibly relating to the early mott and bailey castle, and d) one of the finest 18th-century Georgian quaysides in England. This area with a total area of around 4.2 hectares would then become the zone of coverage of the BTC project.

In early 2012 through a series of consultation meetings, Lancaster City Council continued to develop the City Park concept but did not make significant progress. In a consultation meeting, Lancaster University's open and exploratory research lab, Imagination, voluntarily attended the event. In the meeting, the team from Lancaster University offered a new co-design approach to public engagement that was more realistic. This proposal arose because of the widespread frustration of residents who were present at the consultation meeting, that the process was not able to manage citizen participation indeed. As expressed by one team from the university:

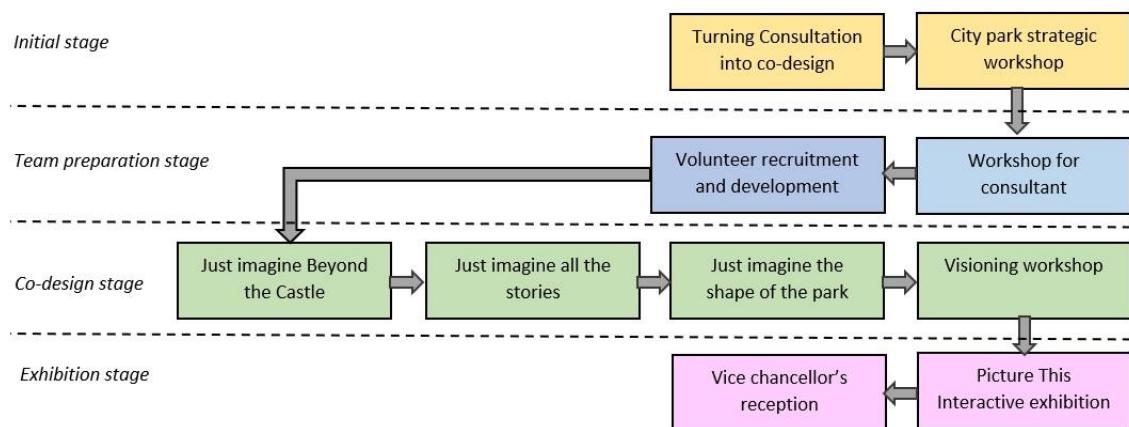
Yeah, cause, they were asking people the same question, the same answer, that was not moving [any]thing. It was also, at that time, there was a culture in the council. It was more like we decided this: what do you think? Rather than a real dialogue, a real aspiration and further into the project (LAN-WF 1, 2018)

Finally, the model offered by Lancaster University through PROUD was approved. Lancaster City Council and Lancashire County Council joined together in this project. PROUD ran the BTC project with funding from the EU through the INTERREG IVB Programme. The first step taken by the PROUD team was to stop the ongoing consultation process. PROUD then recruited a team of designers and volunteers who would then carry out this project

### 6.3.2 Co-Design Process

The PROUD team tried to do a genuinely open co-design process and involved people directly and creatively to help determine decisions to achieve project goals. This approach was arguably something new for the council. The previous public project processes only placed people as commentators; they did not involve them in the design development (such as in the Lancaster Square Routes project proposal). The people were invited only to hear the consultant's planning and, in some case, give their feedback so that even though residents were involved in the process, their roles were actually no more than as commentators, and did not really participate in designing the final design decisions.

What the PROUD team tried to offer was very different, because it was prepared to design the co-design strategy that would be implemented, not to design the product that was produced. The strategy would be a kind of structure that allowed participants' creative potential to contribute to this series of co-design processes. Overall, the stages of co-design carried out by PROUD were as follows:



**Figure 26: The co-design stage of the BTC project.**

## Initial stage

The initial stage was one where the PROUD team tried to introduce a co-design approach, as a new approach that was completely different from the community engagement model in the form of consultation meetings that the council often does. This stage was carried out by holding two workshops involving the community and apparatuses of the City Council.



**Figure 27: Workshop in the initial stages as an introduction and initial explanation of the co-design approach (PROUD, 2013)**

The first workshop, Turning Consultation into Co-Design, was held on April 23, 2012. Fifteen community representatives attended this workshop. In this workshop, participants were encouraged to explore ideas, essential things related to efforts to redesign the castle areas. From this first workshop, five themes were finally produced, namely: Culture and Leisure, Heritage and History, Environment, Accessibility, and Way-finding, which would later be developed in a co-design workshop.

Then the second workshop, the City Park Strategic Workshop, was held on June 12, 2012. Its purpose was to explore problems that might arise in the effort to develop the park. The workshop was attended by local representatives from the council, the Duchy

of Lancaster, and elements representing several communities. The second workshop succeeded in identifying what had to be considered significant, obstacles that might arise, and how to overcome them.

### **Team preparation stage**

To run and organise the co-design process, PROUD needed to build a team of consultants composed of designers from various backgrounds. The design team acted as a consultant, which designed the co-design activities that would be carried out. Therefore, during the preparation stage, the team recruited designers to form a consultative team, as well as volunteers who were tasked with helping the process of co-design.

Recruitment of the consultant team members was publicly announced. Members were sought not only with a background of designers but also experts from the disciplines needed to organise co-design activities. In addition, volunteers were very much needed to run various co-design activities involving many people. Volunteers and the consultant team worked together to convey the prepared activities so that participants could maximise their creative potential to contribute to the co-design process. Volunteer recruitment was also carried out openly. Various kinds of motivation arose from volunteers, among others, because they lived around the castle or because they wanted to learn about the co-design process.

### **Co-design workshop stage**

After the consultant team and volunteers were ready, the co-design process started. There were four workshops held during the co-design process.

## 1. Just imagine beyond the castle

The first workshop was held in the Market Square Lancaster on August 4, 2012. Participants who were targeted were all residents passing through the location. Overall, this activity involved 226 participants. The purpose of this workshop was to emphasise that the voices of citizens are heard and that their opinion on the design of the BTC area could be channelled. The workshop was carried out by providing icons from wood, which represented various forms of design ideas that had been discussed. Residents could freely choose the icon, add the caption on the icon label and plug it into the BTC model that was available, according to the location.

The results recorded from this workshop were, among others, that some residents were not aware of the BTC area. Some residents also paid attention to several aspects related to the development of the area, such as parking and traffic. There were also concerns about the importance of conservation for the areas of the project. This first workshop became an opening for two parties to interact with each other to affirm that there was an area behind the castle that had been neglected and that when there was a development plan, input and involvement of citizens were needed.

## 2. Just imagine all the stories

The second co-design activity was carried out at the BTC site area. This activity sought to allow participants to feel the real conditions of the site. The purpose of this activity was to map the physical condition of the site, as well as to make recommendations or suggestions for physical development that needed to be done on the ground. Participants were invited to think about how visitors could stay longer in that location. By presenting a sense of the Roman atmosphere at the site, the activity was quite capable of gathering 59 participants to do the co-design process.

This activity produced some location mapping records and physical recommendations that needed to be done. These results include, for example, the difficult accessibility to the location, the need to pay attention to the potential for ASB behaviour in these locations. Recommendations were given for the need for practical facilities, such as toilets, BBQ spots, and cafes. There was also the idea of developing a trim track, as well as particular locations intended for archaeological excavations. The entire activity was designed so that the co-design process could run optimally by making it easier for participants to interact with the team and provide their input through direct interaction at the site.

### 3. Just imagine the shape of the park

The third workshop consisted of two activities. The first was carried out in the morning, with locations covering the entire area of BTC. Participants numbered 28 residents, from various backgrounds and ages. The purpose of this activity was to encourage participants to imagine ideas for developing the area. Each participant was equipped with a map of the BTC area, pen, and location marker stickers. For six hours, participants moved around the location, imagining, and putting their ideas onto available maps.

The second activity was carried out in the afternoon in the Storey building. It was an interactive workshop that gave space for participants to visualise their ideas in the form of 3D models. Workshop participants were from the ages of three to 92 years. Some participants stayed a long time to complete the 3D model design.



**Figure 28: The activities and the tools used during the “Just Imagine the Shape of the Park” workshop (PROUD, 2013)**

#### 4. Visioning workshop

This workshop was conducted at LICA, Lancaster University. The main activity was to process all 500 pieces of data that had been obtained from previous workshops. A series of analytical processes were needed to read, organise, and conclude an understanding of the data. The visioning workshop was conducted to find conclusions from a series of workshops that had been previously conducted. This workshop included 15 participants who were considered consistently active during the co-design process. Together with their team designer, they jointly conducted this workshop.

There were two stages of activities. The first was the activity of identifying all data according to the theme that has been determined at the beginning of the project introduction process. The second was an analysis of ideas that had been grouped based on the theme above. The analysis resulted in no new theme; the overall themes agreed upon were sufficient to accommodate the ideas produced. The analysis also produced several essential notes (e.g. debate about whether they needed to change or maintain the authenticity of the area, the problem of the extent to which changes in the development of the region would not damage its history).

After the analysis step, one more thing to be achieved from this visioning workshop was to determine the core value of the co-design process carried out. The process of determining core values was conducted by equipping each participant with ten cards and asking them to write the top ten things they felt were the most important things not to forget when it comes to improving the area. After all the cards were collected, negotiations on those choices were made by all participants, to produce four levels of things that had to be considered - called the core values, starting from the most important to the least. The top tier values were: realise the site's historical importance; understand the site can be a cultural hub and strong pulling point to the city centre; keep involving people in a meaningful way in the process; and the arts - performance, sculpture, and re-enactments.

## **Exhibition**

The results of the analysis that had been carried out at the previous stage were then displayed in the form of two exhibitions. The first was an interactive one held at the Storey Institute Building. This exhibition packed the results of all data and analysis that had been done while inviting visitors to actively interact in response to the results of the process on display. The second exhibition was held at Lancaster University, as a final report on the overall implementation of the BTC project.

### **1. Interactive exhibition**

This interactive exhibition s titled “Picture This”. The purpose of this exhibition was to explain the results of the analysis and evaluation of the visioning workshop. The results presented in the form of four-level core values were arranged in the form of a pyramid. Then five themes are categorised along with

ideas of activities. The exhibition also presented a series of agreements and contradictions from the data collected.



**Figure 29: "Picture This" interactive exhibition (PROUD, 2013)**

The PROUD team then designed an interactive activity for exhibition visitors by responding to the exhibition material. Visitors were provided with a carton and then, armed with readings on the exhibition material, were asked to respond in the form of ideas. The interactive activity produced 122 new co-design ideas, which were then compiled to perfect the exhibition that was held. Two hundred nineteen people visited the entire five-day exhibition.

## 2. Vice-chancellor reception

The exhibition held at LICA, Lancaster University was an opportunity for all parties involved in this project to see the final results of the entire series of co-design processes, including the interactive "Picture This" exhibition that had been held before. All parties involved partners, and donor agencies and a network of cooperation from several cities in Europe were present to witness this exhibition. The exhibition also provided an opportunity for visitors to learn how PROUD carried out the co-design process.

### **6.3.3 The Effectiveness of Co-Design**

#### **Decision-making power**

From the series of co-design phases above, it can be recognised how the decision-making process was carried out. In the preparation phase, there were three main activities, namely designing the co-design method to be carried out, the socialisation of the concept of co-design, and the formulation of the main themes for the proposal to be developed. In the first activity, the design team came from various design backgrounds; none had been involved in the co-design process. In the workshop that was held to design the co-design method, all of the design team members were in an equal position. How the stages of co-design were executed, how the methods and tools were used, the venue and the duration of the workshop were decided together in a co-design workshop. The effective decisions were made collaboratively by all members of the design team to try to avoid 'design by committee'.

In the second activity, the designers explained the co-design approach to all stakeholders who were involved in the project and also tried to define the central theme of what should be developed. From the project report, it is revealed participants were also able to shape and influence the decisions. The designer acted more as a process facilitator in the workshop, while the participants actively designed the decision.

In the later phases, equal decision-making also effectively worked. For example, when curating and evaluating the results of co-design workshops in the visioning workshop activities, the design team and partners involved had an equal role and a voice to determine how the works would be exhibited. This included the concept of an

interactive exhibition that was intended to be held, which was decided openly by all workshop participants.

The effective decision-making process in the BTC could be defined through several factors. The first factor was the design of the co-design method that allowed the decision-making process to run equally so that the participants had sufficient power and role in speaking out. Furthermore, participants succeeded to use the method as a tool to realise the project objectives. Thus, in this case, the participant factor with their background also greatly influenced the effectiveness of this decision-making.

When starting the project, the design team and participants were influenced by experience and habits in carrying out democratic processes, especially when faced with the decision-making process. This background influenced the success of the decision-making process during the co-design workshop.

It can be suggested that BTC was conducted in the democratic environment. Referring to Kim (2010), in general, English society is classified as having a robust democratic tradition. One of the democratic traditions is characterised by freedom of speech. The value of freedom of speech has been embedded as part of the culture of the UK, as expressed by a workshop participant.

I agree that the culture in this country is people greatly valuing freedom of speech, sometimes [it] goes too far; some people [are] extremely rude about the individual. I remember when it's coming to the public vote, I always encourage my children to vote. We consider the importance of who represent us in the city council. We have discussions on a regular basis. We felt that our voice at least [is] being heard. With all the rule[s] of our political system locally or nationally, we try to influence the individual who [is] speaking for our voice (LAN-WP1, 2018).

In addition, a volunteer on this project also emphasised that freedom of speech is an extended part of the culture of the UK.

It was started for me as around the general election when I could vote for the first time, and I did not vote, and my dad was angry with me, because he said, “women died so you could vote”. I think for my experience, shortly after in the university, somehow influence from friends and community, I [have] come to be more political and socially, as part of the community, doing stuff that was a social concern and working with the community, in a different way of helping with the community (LAN-WF 2, 2018).

The culture of freedom of speech is confirmed by the participants and is facilitated by the co-design framework. BTC's co-design seeks to accommodate the active role of participants, and the method works because participants are accustomed to speaking. Thus, the decision-making process seems influenced by the role of participants who are willing and able to argue throughout the process.

## **Collaboration**

The final report of the project records that overall, there were over 1,000 person-hours of participation and engagement involved in this project (PROUD, 2013). This participation level can be categorised as high. More in-depth research into the participants found that they can be separated into two groups based on the degree of involvement in the co-design process. First, groups that were involved explicitly in the limited workshop processes at the beginning and end of the process represented the stakeholders associated with the site of the project. They consisted of community members related to the castle, residents who are live around the castle, and business entities affected by the castle development. These participants consciously participated in the process because they thought they had the right to participate in shaping the future of the castle's environment. They felt that changes or interventions would affect their lives or interests. One participant expressed their motivation:

The castle area, because we live in the heritage area, conservation area, we do have a belief that this is a bit special. It is not restricted special, but we think that this heritage and protection is important for the future generation. That

was why we have the Residents of the Castle Association, around 100 hundred families in the castle area. I know three-quarters of those families, and now they are my family. A lot of those people [have been] happy here for a long time. We all want to [be] involve[d] because this is our neighbourhood (LAN-WP1, 2018).

The second group is the general population, or residents who spontaneously engage in open workshops held several times in several places in the city. This group of participants was initially interested in joining because there were opportunities for activities that were easily achieved and carried out in front of them (held in the town square and on weekends). In this case, they do not consciously use their rights to help shape their environment. They tend to be involved because BTC offers co-design activities that are reachable and easily accessible. So that the resource factor, in this case, the designer's ability to design public events, is a factor that determines the collaboration of this second group.

From the two groups, it can be concluded that the people desire to collaborate in the co-design project was driven by two factors. First, the awareness that there are rights they have to determine the future of their environment. The second is the ability of the designer to deliver the co-design event in public.

### **Flexibility**

One thing that really stands out from the co-design process at BTC is that the process was very flexible. This provided an opportunity for all groups of participants to be able to give their contribution in the way they felt comfortable. As mentioned before, from the beginning, BTC wanted and succeeded in recruiting as many participants as possible from various diverse groups in terms of professional background, ethnicity, gender, and age

With such a wide range and variety of participants, the co-design process had to be able to accommodate the capabilities and methods they preferred. Likewise, besides having to be varied, the methods and tools offered had to be both interesting and fun. The design team successfully answered the challenge to present a flexible process.

The methods and tools presented were proven to be able to answer the challenges of a flexible process. The methods carried out starting from observation and direct visits to the site, open workshops in the city public spots, to creating more intensive indoor workshops. The tools presented also varied from visuals, mock-up modelling, to storytelling. This wide range of media and tools guaranteed that the process carried out met the criteria of flexibility.

The framework offered by BTC was also considered open, able to accommodate the voices of people who had interests with the Castle (e.g. residents and business entities). One participant expressed his appreciation that the BTC method was really bottom-up and able to accommodate the voices of ordinary people in a collaborative process.

The good thing (about the BTC approach), it was not purely academics coming up with the ideas and imposing them on [the] public, which usually happens [...] in this country. The idea of having local people like me that have [a] vested interest to be involved. The people that lived here worked here, set up a business here that depend on people coming in. They were feeling involved and feeling that they maybe have a say on the future, and that was really good (LAN-WP1, 2018).

Overall, it can be said that the design team's ability to design flexible and open co-design processes made the BTC co-design flexibility effective. Flexibility was achieved deliberately because it was included in the design by the designer.

### **Outcome Focused**

The BTC project is a substitute for the City Park project which has been running in a half. Therefore, the main themes of the proposal to develop green areas from the City Park programme were still used. Participants were generally also involved in the City Park programme before, but there were differences in methods, from consultative to participatory. The continuity of the central theme was realised to have built the foundation of the common goal of collaboration in BTC, the attempt to develop the Castle area.

Referring to its purpose, the project clearly tried to solve the problems of redesign the green space surrounds the Castle. However, there is a disagreement about the outcomes between some of the participant and the PROUD team as the project organiser.

It was noted that some participants felt that the outcome of the BTC process did not meet the expectations of the initial discussion. One participant felt that what was produced did not leave anything practical on the ground.

A plan that [did] not involve new things. The BTC was very visual with the exhibition in the Storey with massive cardboard. I am very sceptical, and a lot of people were too about the used and exposed symbolism, by using several hierarchies of aims and put[ting] social theory going into it, and some of the time talk[ing] and always thinking about creative ideas. It might really have been better spent on doing something on the ground, some practical thing that everybody wanted [...] and we all knew that we need. During all of this symbolic thing in the exhibition, they keep people writing, sticking note[s], I think a lot of people knew it [would] never ever happen. I am not [...] terribly in favour of dreaming up a great idea, artwork, but people think might be, and it will never happen. I think it was self-centred of the academic. (LAN-WP1, 2018).

On the other hand, one volunteer said that the project was trying to capture all the participants' idea and formulate them as recommendations presented in the exhibitions. The volunteer added, there were indeed proposals that surfaced to maintain the green

space as it is, so that the addition of artificial elements was not desirable. The idea to keep the site as it is was also a decision.

The difference in expectations among participants shows that the outcome-focused of the BTC failed to achieve. This does not mean that the BTC results are useless. It is more about the process that failed to keep the focus on a practical outcome to respond to the problems raised by the participants.

#### **6.3.4 Contextual Factors Influence**

Overall, from observing the co-design process at the BTC project, two very prominent contextual factors were found, namely the political power factor and resources factor, that influenced the decision-making during the process. The discussion regarding the first factor focuses on the extent to which these political power factors influence the effectiveness of the co-design process. Two aspects included in political power, the first is a democracy, which is the political climate in the UK. The climate of democracy encourages the culture of freedom of speech.

Meanwhile, the resources factors that played a role were human resources, precisely the quality of designers. The designers were able to deliver the design of co-design methods that allow participants to have the power to participate in shaping design decisions. Observing these findings, it can be suggested that the political climate had formed a political power factor, while designer quality is defined as the resource factor. Both contextual factors influenced the effectiveness of decision-making in this BTC project.

With regard to the collaboration criteria, the influence of political climate and the quality of the designer were also the factor that drove the success of the collaboration.

The awareness of people to contribute to affecting their environment was robust. Awareness of the right to shape their environment was slowly developed; one reason was because of the implementation of participatory development regulations. One participant said the awareness of this right made him feel he had to participate in the BTC project. Because of that reason, participants came to the workshop with awareness to determine the shape of their environment. There was an active encouragement from participants to contribute as their participation was considered essential in affecting their environment. Therefore, it can be labelled that the nature of collaboration in this project as active.

On the other hand, other groups of participants joined in the BTC co-design process, inclined because the process was presented easily accessed in front of them. Looking at these findings, it can be said that the ability of designers as human resources factors had a contribution in shaping the success of co-design collaboration in this project. The PROUD team with the design team built an open but at the same time, flexible scaffolding to conduct co-design practice. The method they designed was able to provide extensive opportunities for various types of participants to convey their ideas in multiple ways.

BTC started from the desire to develop green areas around the castle. The resulting outcome was a design recommendation submitted to the city council to be used as the basis for the design of the future development programme. These recommendations were a concrete answer to the problems raised during the co-design process. However, some participant felt that the recommendation is kind of something to academic. He suggested that the BTC can do more in creating physical outcome on the site.

Therefore, BTC seems to have a problem in managing the outcome-focused process. The process failed to manage the expectation of the participant. Although the recommendation that presented through the exhibition was a great outcome, it just not makes satisfaction for some participants. The agreement to think about the conditions around the castle was a common goal that drove the collaboration to work. The similarity of these goals can be said to be a kind of the impetus for this co-design process to produce a real outcome that answers the problem. However, it seems the BTC failed to cope with the goal at the end of the process.

## **6.4 Whittington Hospital Ambulatory Care Unit**

### **6.4.1 Collaboration with the Design Council**

Whittington Hospital on Magdala Avenue, North London. It is managed by the NHS Trust and one of the busiest hospitals in London, serving up to 500,000 people with more than 4000 staff. The hospital building at this location was established in 1848, although previously, health services at this location had begun in 1473. However, it just from 1948, the institution of Whittington Hospital started to operate.

According to the 2013-2018 Hospital Estate Strategy, there were several critical issues in several facilities that required an increase or renewal of facilities related to medical services. One of the key issues was the need to provide additional facilities in the Ambulatory Emergency Care unit (Lent, 2013). The management realised that the experience of patients in the process of hospital services was sometimes unpleasant. Therefore, when they wanted to make an interior redesign of service spaces, the management collaborated with the Design Council, to find out the most appropriate way to improve the quality of patient care through the interior redesign.

This ambulatory redesign project at Whittington Hospital is the second collaboration project between Whittington Hospital and the Design Council. Before this project, a pharmacy outpatient redesign project was completed in 2013. After conducting in-depth research on the problems faced, the team from the Design Council formulated a new, more participatory approach to the design of the pharmacy unit. The co-design approach carried out in the project's redesign of the pharmacy unit was assessed as being able to improve the efficiency of hospital services for both staff and patients.

This conclusion prompted Whittington Hospital to continue the same approach for the next redesign project in the ambulatory emergency care units. This redesign needed to be done along with the increasing number of emergency patients that had to be served; this is the same situation as the general picture of NHS hospital conditions in the UK. This challenge requires hospitals to enlarge the capacity of ambulatory medical services so that they increase the chances of people getting emergency services on the same day.

Hospital management had implemented excellent service performance by organising collaboration between various departments, but they wanted to go further by bringing people, especially patients, to the centre of the service. Departing from the desire to make the patient the centre of service, the co-design approach was considered very appropriate. Eventually, hospital management re-engaged the Design Council to assist this design process. It again collaborated with Tilt studio to produce design concepts with a co-design method that involved patients and staff. Furthermore, Lewitt Bernstein Studio was appointed to deal with the concept built to meet the standards and technical requirements for construction.

This project was carried out throughout 2014. Consultations and workshops lasted three months. During the co-design process, the project involved 70 participants overall; this consisted of patients, senior-level management, clinicians, administrators, and infection prevention and control staff. The role of management in encouraging the implementation of co-design was quite extensive. Management consciously considered the role of staff and patients who interact directly with the services provided, which was significant in realising efficient services while delivering comfort. One senior management official said:

This was a very ambitious project and we wanted the needs of the patients to come first. Incorporating workshops at the beginning of the design process, the needs of patients and staff were understood and addressed in the design. We wanted to get away from a traditional model with long waiting times and create a less complex communal space to ensure a coordinated patient journey where their medical needs were met in a friendly environment. The collaborative effort has produced a beautiful yet functional space where the patient experience is excellent, there is lots of interaction and the clinicians can function efficiently (Senior Manager, 2014)

#### **6.4.2 Co-Design Process**

Before starting the co-design process, the Tilt studio team first studied the briefs provided by management as the main guide to this project. The brief contains the project objectives:

- Enhance the patient experience
- Intuitive and clinically directed layout and interior design
- Accessible with clear signage and branding
- Create opportunities for health promotion
- Improve staff experience

The design team translated these into the goal of the co-design process to get schematic designs that were intuitive, natural and effective from a patient's point of view, and that would improve the staff environment. After determining the objectives to be achieved, the co-design process was carried out by holding five workshops.

## **Workshop 1**

The first workshop could more accurately be called a meeting, where all stakeholders consisting of management, clinicians, staff, and patients held a round table to try to get to know each other. The first workshop also attempted to explain the purpose of the co-design process to be implemented. Objectives that had been received by the design team were defined to participants so that they understood the ultimate goal of the process.

## **Workshop 2**

The second workshop involved creating and was aimed to produce an interior layout concept to answer the demands of an intuitive design scheme. The thing that needed to be considered was how to synchronise between the centre (ambulatory care unit) and the sequence of services in the surrounding facilities. In other words, the challenge was to integrate this centre with all related hospital facilities.

Participants, according to their respective backgrounds, were involved in submitting their views regarding flow or efficient circulation of medical services. In the first stage, they were asked to provide priorities and ideas that were considered to be the most important when preparing layouts. By using the existing building layout, the design team and participants began to process layouts based on priorities that had previously been proposed.

### Workshop 3

The third workshop was the visualisation stage of the concept that had been produced before. As the primary tool, the design team had made existing models of buildings on a small scale. Participants armed with various tools, such as plasticine, cardboard, pins, and other tools visualised the ideas that had been generated (see figure 30). The purpose of this activity was to observe spatial relationships, including flow, space interactions, which are more easily obtained by using 3D models.



**Figure 30: Scale model was used during the workshop (Whittington Health, 2015)**

The results of this workshop showed the general concept of the layout; the main room for medical services would be centred from layouts surrounded by other supporting facilities in an open-plan scheme. This design was considered to facilitate circulation, including reducing patient movement between each treatment, waiting time, and presenting a calm, spacious atmosphere.

### Workshop 4

The results of the modelling at the third workshop described the space. Furthermore, to feel more space on an actual scale, in the fourth workshop, a mock-up of several

rooms on a 1: 1 scale was presented. This phase was the stage of prototyping. The purpose of making a full-scale mock-up was to investigate in more detail how the room would work, for example, the position of the doctor when handling the patient, the orientation of the table against the door window, circulation space, and other spatial aspects (see figure 31).

Participants provided input directly on the details of the layout. By utilising tape and cardboard and several wooden boards, the room prototype was built according to the layout design and also equipped with mock-up furniture. At this stage, architects were also involved; the role of the architect was to ensure that the design at least fulfilled the technical requirements. Besides that, the architects also paid attention to the material decision and the colour scheme that would be used.



**Figure 31: Mock-up 1:1 scale was utilised to give the real scale of space experience to the participants (Whittington Health, 2015)**

## Workshop 5

At this stage, the design that had been produced was summarized and presented back to all stakeholders involved. This activity was aimed to accommodate input and responses from stakeholders and participants on the designs that had been produced. After the design team processed input and responses, a schematic design plan was

established. The design concept was submitted to the project architect who processed the design so that it met the technical requirements of the construction.

### **From the schematic concept of design to the project realisation**

The role of the architect is to realise the design that has been produced into a technical document that meets the construction requirements. The involvement of architects in the stages of co-design gives them valuable input in realising the design. In this case, the architect collaborated with many other consultants and contractors until the construction was completed. In addition to the technical requirements of construction, the architect also ensured that the final results of the construction of the room met the aspects of sustainable design, such as water and electricity efficiency.

Although a schematic design concept was obtained from the results of the co-design process, when the architects translated it into measurable and specific technical designs, they still asked for further input from the users. One architect performed a prototype test for several rooms for the users (i.e. doctor, clinician) to test whether the final design would work to meet the needs and functions of the service. The architect said:

This definitely required the stakeholders' input. The stakeholders requested a number of clinical rooms that were smaller than technical standards. We test these spaces at 1-1 before construction, with the stakeholders. Without this input, I do not think the design team would have been capable of ensuring these were fit for purpose (LON-WF2, 2018).

In addition, a prototype trial was conducted because there were several results of a schematic design concept that did not meet the technical standardisation aspects.

### 6.4.3 The Effectiveness of The Co-Design Process

#### Decision-making power

The assessment of the efforts to involve all stakeholders associated with the ambulatory centre service indicated that the designer showed the earnest attempt to deliver the equality principle in the decision-making process. Given that previously the designers had run a co-design process with Whittington hospital management, at least the team had learned from the bureaucracy and corporate culture that the hospital management had from the previous project. However, examining the course of the co-design process, there were still obstacles that hampered the effectiveness of the decision-making process. Concerning the workshop, several barriers hindered equal decision-making by the parties involved. The designer said that management still held considerable power in determining the direction of the decision. They once changed the focus of the project from one room to another, even though management had given a brief objective, which was the essence of the goals of this project.

One of the designers stated that the biggest challenge was related to making decisions. Barriers came from the hierarchical environment and the corporate culture of the hospital. There was a feeling of concern expressed by management that this co-design approach would make their future performance uncomfortable. One of the designers offered the following viewpoint:

I think the main constraint is always about decision-making. I think so, who in terms of the project, who is setting the parameters of the centre. Who is really saying actually we need to employ this paradigm approach because we need to understand things that we ourselves are unable to understand, and we need the input? (LON-WF 1, 2018).

Looking at these findings, it reminds of how the hospital hierarchy had also become an obstacle in implementing the EBDCD project. The finding also indicates that an

equal decision-making process in this project could not be effectively run. There was evidence of management dominance in influencing project decisions.

## **Collaboration**

The experience of collaboration between the design team in the previous hospital project (pharmacy project) made the collaboration process easier. Although, indeed, for participants, this was a new thing. Previously, when there was an activity to design the workspace, staff were not involved in the process. They only had to adjust to the new space designed. Therefore, when there was an offer to be involved in designing their workspace, they welcomed it enthusiastically.

Participants were involved, starting from the initial stage of zoning exploration and workflow circulation design. They contributed a lot about how the service flow should work, and also how to connect this centre with other facilities at the hospital. These findings indicated that the participants (e.g. the clinicians, doctors, administrative staff) are experts because of their working experience.

Collaboration between designers and participants was possible since the preparation of the methods and tools made it easier for participants to participate in creative ideas actively. The use of interior models made it more apparent for participants to imagine the context, so they could focus on proposing ideas, likewise making the 1:1 mock-up allowed participants to test the real scale and situation of their proposed design.

Although enthusiastic, some elements of the management involved in the collaboration were worried about this approach. They were from the building management department. They were concerned that this co-design approach would make their work more difficult. The designer said:

I think the other side I would say is culture and personality within the hospital teams as hierarchical environment hospitals. So when you're working with co-design from a patient and clinicians point, it is something that they understand intuitively, whereas maybe from a facility's point of view or from a building management point of view, they're worried that it's going to somehow make their lives harder or make the project more expensive or ask them to learn something which they feel uncomfortable for delivering. (LON-WF 1, 2018).

By reviewing their objections, it can be understood that this was due to their working culture. The building management department is responsible for the work and physical functions of the building. They are accustomed to having the authority to design, build, run and maintain, while the staff are the users. So they were worried that if users participate in the planning process, the result would not be optimal. They were not assured about the participants' ability to participate in determining decisions related to planning the physical facilities.

The concerns of the building management certainly tried to be accommodated into the co-design process. The design team explained that in this series of co-design processes, it would also involve architects. The architects would then translate the design concepts into technical documents. So that their concerns would be answered, with the assurance that there would be a mechanism to ensure the design results meet the construction technical requirements and standards.

Overall collaboration in this co-design process ran effectively. The participation level was relatively high. Patients were also enthusiastic about being involved in the workshop. Although, once again, it is important to note that the positive dynamics of this collaboration was overshadowed by management's concern about the quality of the design results.

## Flexibility

The whole process of co-design took place quite rigidly, in terms of how the processes and stages were carried out. Flexibility to change stages or change the method that was implemented would disrupt the overall schedule. The design team said that one of the challenges when running a co-design process that involves management was the longer duration. Longer duration leads to costs and certainly trying to be cut as much as possible. The impact of this condition was that all planning of the co-design process would be adhered to and carried out according to the plan. This situation made the flexibility of the whole process to run less effectively.

Even so, the intervention of the management (by making some reasonably necessary changes, which of course affected the planned schedule), disturbed the progress. In addition to management intervention, the problem with the project's schedule was also related to participants' schedules. As the fact, some participants are hospital staff who still had to work according to their roles in the hospital services. This was a particular challenge because the workshops had to be able to take place effectively so that the time allocated for each one was optimal. On one side, the design team tried to conduct the project tightly following the schedule, but on the other side, the participants' schedule, the management intervention was the apparent barrier.

Meanwhile, flexibility in the implementation of workshops can be said to have been achieved. The design team, with experience holding workshops on previous projects, had prepared methods and tools that enabled participants to contribute. This flexibility was mostly felt in the prototyping phase. Another activity was in the layout design process. When participants were asked to create the layout and circulation ideas, they could flexibly use the various materials and tools provided. The communication built

by the design team and participants further facilitated participants to complete their tasks according to the purpose of the workshop.

### **Outcome focused**

The outcome of this project was palpable. Before the design team started the co-design process, the designers had received a brief objective from management as guidance. From there, the focus of the co-design process was clear, to produce a design outcome that answered these objectives. The design team and all participants were aware of the need to answer the project objectives. When they joined, they realised that the collaboration was an effort to improve the ambulatory unit, their working place, or their treatment facilities. These agreed-upon goals from the beginning made them very focused on completing the co-design process. The participants' daily interaction with the object of the design, made the goals of the project very relevant. They felt that what they were designing would significantly affect how their work environment would be.

#### **6.4.4 Contextual Factors Influence**

The political power factor was the biggest obstacle faced by the design team in completing this co-design process. In this case, the internal hierarchy inhibited the decision-making process. Hospital management has a relatively stable hierarchical culture. This culture made its position and role quite dominant on several occasions during the design determination process. Even though the management had wholly agreed with a collaborative approach that provided ample space for the roles of staff and patients, the interventions they did remain challenging to avoid. The practice of co-design had reduced flexibility where the design team was not able to optimise the dynamics of the design process because the management control that appeared several

times was quite dominant. Furthermore, what made it more difficult was that the management itself also did not have a fixed reference to the parameters to be achieved. This problem resulted in the process becoming longer, and this increased the cost of the project.

However, in general, the collaboration did work effectively during the co-design process. There were management contributions that encouraged collaboration to be effective. They had learned from previous projects (pharmacy outpatient), which were considered successful. In this co-design, the hierarchical culture of the hospital management seemed to have two sides; on the one side, it was able to encourage staff to be involved in the collaboration process. However, on the other hand, at some point, management with its hierarchical culture also wanted to intervene in the decision-making process. This situation is quite interesting because the hierarchical culture did not make it difficult for staff to express their creative ideas during the collaboration process. Participants were quite dynamically involved in the design process and make creative contributions. This situation was possible because of the design team's readiness in preparing the co-design method, which made the participants feel comfortable to contribute.

The good atmosphere of collaboration encouraged participants to voice their opinions. Moreover, the design team designed the co-design process by providing various tools, that made sure there was flexibility, so participants creativity was sufficiently embodied. For example, in the third workshop (creating a 3D model of the layout), they offered a broad range of alternative tools which served various participants' preferences. However, the evidence indicated that the flexibility in conducting the co-design framework was insufficient. The design team had to comply with the specified

schedule, so the plan of the co-design stage was rigidly implemented due to the time and cost-efficiency. That is why the intervention from the management into the co-design process was considered as a central challenge

Looking at these findings, it can be stated that in this project, flexibility in the creative process was effectively applied, and this was strongly supported by the readiness of the design team in designing suitable workshop methods and tools. However, in terms of flexibility of the co-design framework, this project was less effectively, run as the regulation and hierarchical corporate culture prevented its effectiveness.

The catalyst factor, in this case, was the purpose and reason for collaboration, which seemed to be strong enough to encourage this co-design process to focus on the final output. This redesign project was very close to the daily practice of participants. They got involved in designing facilities where they work and deliver the service every day. This encouraged them to focus on achieving the outcome. When they went through the stages of testing the prototype, they were very enthusiastic. The focus of the co-design process was also held together by all the design team, the architects' team and management. From the beginning, the purpose of this process was recognised, so that it was a catalyst for the entire design process.

## **6.5 Chapter Discussion**

Comparison of these three co-design cases conducted by examining how effective each co-design criterion was applied, and what contextual factors that affected it

Contextual Factors	Worthing	Lancaster	London
Decision-Making Power	<ul style="list-style-type: none"> <li>• effective</li> <li>• very fluid power relations</li> <li>• city council endorsement was significant</li> </ul>	<ul style="list-style-type: none"> <li>• effective</li> <li>• very fluid power relations</li> <li>• regulation factor</li> </ul>	<ul style="list-style-type: none"> <li>• less effective</li> <li>• management domination</li> <li>• political climate factor (the hierarchical structure)</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>• effective</li> <li>• awareness of participants to be involved</li> </ul>	<ul style="list-style-type: none"> <li>• effective</li> <li>• awareness of participants to be involved</li> </ul>	<ul style="list-style-type: none"> <li>• effective</li> <li>• management encouraged staff to participate</li> </ul>
Flexibility	<ul style="list-style-type: none"> <li>• effective</li> <li>• variety of methods, tools, strategies</li> <li>• resources factor</li> </ul>	<ul style="list-style-type: none"> <li>• effective</li> <li>• variety of methods, tools, strategies</li> <li>• resources factor</li> </ul>	<ul style="list-style-type: none"> <li>• effective</li> <li>• variety of methods, tools, strategies</li> <li>• resources factor</li> </ul>
Output Focused	<ul style="list-style-type: none"> <li>• effective</li> <li>• tackle the homeless issue catalyst factor</li> </ul>	<ul style="list-style-type: none"> <li>• less effective</li> <li>• recommendation</li> <li>• catalyst factor</li> </ul>	<ul style="list-style-type: none"> <li>• effective</li> <li>• redesign facilities</li> <li>• catalyst factor</li> </ul>

**Table 10: UK context case studies comparison**

### Decision-Making Power

Of the three cases in the UK above, a decision-making process that can run effectively occurred on the BTC and Worthing Rough Sleeper projects, whereas in the case of Whittington Hospital, the decision-making process was not able to shift from the dominance of management as the power holder. In the case of BTC and Worthing, the power relations between stakeholders involved in the co-design process were very fluid. The PROUD team of the BTC as the project organiser was able to prevent city council intervention in the co-design process. In contrast, in Worthing, even though

the city council was the initiator of the project, their commitment to public involvement was firm. They deliberately involved the Design Council and agreed with a participatory approach. Therefore, this circumstance provided space for the design team to run the co-design process optimally.

Observing the details of the entire co-design process suggest that participants in both the BTC and Worthing projects to some degree were able to contribute to making decisions. The experiences of some participants involved in the public consultation processes that were usually held by the councils gave them a basis on how to play a role in public affairs. However, when they engaged in the co-design process, their role was very different because they had space to speak out more actively. Fortunately, their democratic culture (in this case, awareness of the right to determine decisions on public affairs that affect them), formed by long experience of public consultation, was helpful to adapt to the new role as active co-designers.

On the other hand, from the government side, the council in Worthing realised that the role of local communities had to be established in the development of their environment. It seems that the council's endorsement of the co-design approach also helped drive the effectiveness of decision making of the Rough Sleeper project. Molnar, as cited in Alvarez & Kemmelmeier (2018), revealed that the government that gives a guarantee on freedom of speech would create a positive atmosphere to support the government's performance. Thus, in Worthing's case, both the government and the community produce a political climate that encourages the effectiveness of democratic decision-making.

A slightly different situation occurs in Lancaster, where the City Council at the beginning of the co-design process felt in limbo. They are familiar with predictable

processes and measurable targets, while the co-design approach taken is the opposite. However, as the process progressed, they saw that this approach produced positive results so that they felt more comfortable doing it.

In the case of Whittington Hospital, like in Worthing, the authority (in this case is hospital management) was also the initiator of the co-design process, however, what happened in Whittington was different. Although the co-design process can provide space for participants (staff and patients) to speak out, it has not been able to shift the power in making decisions from the management. Management has not been able to shift away from the hierarchical tradition, which caused them to be reluctant to give up control of decisions to co-design forums. The different nature of the authority caused this difference. In hospitals, management has a more dominant power to decide on hospital development planning. This situation leads to ineffectiveness the decision-making process in the Whittington project.

From the comparison of the three cases above, there is no single conclusion on how the effectiveness of decision-making power processed. Both in Lancaster and Worthing, it was effective, while the Whittington was on the contrary. However, there is an indication that the regulations and political climate were the main factors that influenced the result in all cases. In Lancaster and Worthing, regulation became a driver of effective decision-making, whereas, in the case of Whittington, it was a barrier. Meanwhile, the political climate tent to be the driver for democratic decision-making in all cases even though it was not enough to help the Whittington to be more democratic.

## **Collaboration**

In term of collaboration criteria, all of the three cases produced similar findings. Collaboration in workshops showed that participants could actively deliver their creative ideas to realise the project goals. The effectiveness of this collaboration could be achieved not only because of the awareness of participants but also encouraged by the proper co-design framework offered by the designer of each project.

In Lancaster, residents living around the project site were enthusiastically willing to be involved in the collaboration as they felt entitled to determine any design would change their environment. However, the composition of the participants cannot be said to represent the entire population of Lancaster residents, especially the disadvantaged. Such awareness also emerged from participants in Worthing. They want to have a contribution to helping solve the homeless problems in their city. The awareness of rights has its roots in the political awareness of citizens. This awareness was also reflected in the high enthusiasm of participants from staff and patients in Whittington projects. However, the hierarchical hospital culture also played a role in encouraging staff to participate in the co-design workshops.

In Lancaster case, this enthusiasm to collaborate in the process was encouraged by the readiness of the designers to design the right process. The co-design process was designed to place participants as co-designers; this situation encouraged collaboration to be more effective. Collaboration involves working together in producing solutions; therefore, there were roles and contributions from all parties.

## Flexibility

Not all participants have the ability to express ideas visually by drawing. Some of them were more accustomed to telling stories, others by writing, while others by making models. One of the important co-design criteria when dealing with the variety of participants' backgrounds is flexibility in accommodating all kinds of abilities, potential, and individual expressions. The findings of the three case studies showed that the co-design method was sufficient to accommodate various ways and expressions of participants in channelling their ideas. In Worthing, the participants using many visual tools have a large space to explore their idea. Meanwhile, in Lancaster, by using clay, stick and others material, participants were encouraged to freely develop their idea into 3D mock-ups as well as in Whittington, where the designers develop 1:1 scale interior mock-up to service the idea of participants.

The flexibility of co-design was proven by the freedom of participants to choose how they conveyed their ideas. Participants from each project were thus not shackled by tools constraints, so they were able to contribute creatively. This kind of flexibility was possible because the design team was actively planning flexible co-design methods by providing various tools. The design team, in this case, consciously considered that the provision of various tools and methods would increase the flexibility of co-design, which led to the improved quality of participant participation. The flexibility was intentional and designed. The design team's ability to design flexible design methods was a contextual factor that influences the effectiveness of co-design.

### **Outcome focused**

Each of these UK case studies had a different outcome. The Whittington project produced a physical outcome in the form of the interior design of a new ambulatory unit. In Lancaster, they produced recommendations to formulate the castle green space development in the future. In Worthing, the outcomes were programme and activity prototypes that were expected to be able to solve homeless problems.

To a certain extent, the co-design process in all three projects sought to focus on producing outcomes that addressed the needs of participants. Following the principle of co-design, the process must produce outcomes that affect the participants' interests. The factor that made the process of co-design above focus on the outcome was the presence of a strong catalyst, namely the existence of similar reasons or goals to conduct the co-design process.

However, there are different degrees of focus evident across the projects. At Whittington, the process successfully addresses the needs of staff and patients for new spaces that provide more convenience and comfort for the service. In Worthing, it can be said that the outcome also fulfils the expectations of the participants in the form of the prototypes for addressing homeless problem. One prototype was even forwarded to the full implementation phase afterwards. However, in the BTC project, there is a gap between the participants' expectations and the reality of the outcomes. The project was considered to be too academic and lacked a concrete outcome. Although from the very beginning, the project objective was to produce design recommendations, not physical outcomes. Overall, the three projects above differ effectiveness in terms of outcome-focused. Two projects, Whittington and Worthing, are arguably effective, whereas in Lancaster the opposite.

## 6.6 Chapter Conclusion

This chapter discusses findings from three case studies in the UK. The discussion focused on two mains themes, firstly, how the co-design process was carried out and, secondly, the influence of contextual factors on the effectiveness of the co-design performance. The co-design process carried out in the three projects above generally followed the same cycle, starting from the formulation of problems and objectives, followed by creating the design, prototyping, and evaluating. The stages of creating or making were conducted in three or four, timed workshops. In the creating stage, the participants were actively involved in designing with various tools designed by the design team. The prototyping stage involved making a model or pilot of a product or service that had been designed before. After prototyping, the next step was evaluation. This was the phase of the assessment of the test on the prototype. The challenges, shortcomings, and overall achievements were discussed before the design concept would be realised.

The effectiveness of the co-design process varies in all the projects. In the decision making-power criterion, the differences between parties involved would create various power relations between designer, participants, and other stakeholders. This power relation influenced how the decision-making process worked. At Lancaster and Worthing, where the design team's position has a firm stance, they were able to manage the co-design process by giving guidance to the process, so that more democratic decision-making could be realised. Whereas, in Whittington, it was a little different, because hospital management was still quite dominant. The political culture held by some participants, which resulted from long experience involving in public consultation, also influenced the effectiveness of decision-making. Although in the

public meeting, they were not actively involved in drafting the decision, it was enough to build the political awareness that they have a right on public affairs.

Collaboration criteria in all projects worked effectively. In Lancaster and Worthing, participation in the collaboration process was driven by participants' awareness as citizens who have a right to influence the shape of their environment. However, not all of them will use the right. Meanwhile, the flexibility that occurred in all three cases in the UK was affected by resource factors, in the form of the designers' ability to prepare and design co-design tools and activities. The flexibility of the co-design frameworks was indicated by the availability of tools and activities that enabled participants to channel their creativity according to their comfort. While in terms of being focused on outcomes, the three cases above were influenced by the catalyst factor where all stakeholders involved in the co-design process had the same purpose and reason for collaboration. However, in Lancaster, it turns that the catalyst factor did not work well, which resulted in ineffective of the outcome focus criterion.

# 7 Comparison of Co-design Practices Between the UK and Indonesia Case Studies

Chapters five and six have given an understanding of how co-design is practised in the chosen case studies in Indonesia and the UK. This chapter will compare these two contexts to understand better the influence of contextual factors and how they shape the characteristics of co-design. This comparison will specifically compare case studies from both contexts. Thus, the results cannot be considered to represent the whole picture of co-design practice in both countries. This comparison focuses, first, on the similarities and differences in the co-design practices, then on contextual factors and their impact that shapes the character of the co-design process in each case. The conclusion of this chapter will address the first research question, how does the social context influence the co-design process, and how the practice of these Indonesia's cases be distinguished from the UK's cases?

## 7.1 Comparison of Co-Design Method

The co-design methods in the case studies from both contexts can be divided into pre-design, design and post-design stages. The pre-design stage consists of project information. The design stage consists of formulating the problems, design development and prototyping, while the post-design stage consists of construction and evaluation. However, not all the stages were conducted in full in all cases. The three cases in Indonesia progressed until the construction phase, while in the UK, only the Whittington Hospital project did.

### 7.1.1 Initial Process

The initial process involved the preparation and included team setting, socialisation, explanation, of the initial presentation of the project to be carried out. In this process, the project scope, the timeline, and the basic concepts of co-design are described. Generally, the initial process is carried out as a form of initial introduction of the design team, stakeholders, and all community members who will later be involved. In both contexts, there were two urban public projects involving a large community. In Indonesia, these were in Jakarta and Solo, while in the UK they were in Lancaster and Worthing. The other case studies, Malang and Whittington Hospital, although conducted in public space as well, they involved a specific group of participants.

The initial co-design process in both contexts can be distinguished by looking at the involvement of the government. In Indonesia cases studies, with a tendency towards a centralised system, the government is rarely involved in citizens' projects. Therefore, in the sample house project in Jakarta, and also the public facilities project in Solo, there was no government involvement at all. Even in the case of Jakarta, the government tried to dismiss it. In contrast, for both the Lancaster and Worthing

projects, the initiator was the local government. In the Lancaster project, the city council involved a team from the university, while at Worthing, the city council received assistance from the Design Council.

The difference in government involvement is influential in the initial process of the co-design process. In Indonesia, since the regulations do not support the practice of co-design, the government has never been involved. As a consequence, the two design teams in Jakarta and Solo had to approach the participants through informal channels. They utilised local institutions as an entry point for the wider community. In the case of Jakarta, they used the riverbank community - Komunitas Ciliwung Merdeka (KCM, Ciliwung Merdeka Community). When the design team and community facilitators met with KCM, they discussed the 'threat of eviction'. They realised that this issue was eventually able to unite the whole community to accept the decision to build the prototype housing project.

In Solo, they utilised the kampung community institution to convince the residents to get involved in the co-design project. Previously, the kampung residents had had such negative experiences of development projects, both from the government or the private sector. Previously, residents only became the recipients, without being involved in the process and often what was offered was different from the realisation. At the beginning of this co-design process, the design team also got resistance from the residents, because they thought the project was not much different from the previous programmes. However, after several formal and informal meetings, the residents were convinced. Moreover, they were directly involved in the planning and construction of the facility.

Whereas in Malang, although the Church fully supported the project, the initiation process still utilised informal institutions, a kind of traditional village community. They needed this informal institution because of the conflict between some of the congregation members and the Church. The design team had to address these internal conflicts first during the initial process.

Unlike in Indonesia case studies, the initial process in the UK case studies, especially in the Lancaster and Worthing cases, was conducted formally and facilitated by the local government. This practice was part of the action to involve the local community in the development of the environment. The regulation in the Localism Act (2011) requires communities to be included in city development plans. In the Lancaster case, the project was a continuation of the City Park project that was carried out by a private design consultant and the city council, that is why the co-design initiation process involved the council. Although the city council officers initially found it difficult to accept the concept of co-design (seeing how they no longer had control of the process), full support was given at a later stage.

It is important to note that there were two groups of participants at BTC. First, a limited number of particular participants who followed the process from beginning to end. Second, participants from the general population who attended the open workshop held at the market square. For the first group, the formal approach at the beginning of the process, through the invitation to the various communities, made them aware they could contribute. In contrast, the second group joined because they happened to stop by or pass through the market square and were only then made aware, they could contribute.

In Worthing's case, the borough council's involvement was more substantial. This project from the outset was a local government initiative; they consulted with the Design Council on how to address the homelessness issue by involving the stakeholders. When the Design Council suggested holding a co-design process, the city council enthusiastically agreed. They then submitted proposals to get the funds—this encouraged local government involvement in the entire process of co-design. In the initial process, all city stakeholders were formally invited by the city council. Similar to the project in Lancaster, residents who were familiar with the consultation process were willing to attend. The reaction of the residents when they found out that they would conduct the co-design was almost the same as the BTC participants. In general, they felt surprised about the opportunities to be actively involved in designing and influencing the outcome.

In the initial process at Whittington Hospital, the management was actively driving the staff and employees to get involved in the collaboration process. This action can be understood because the management has had the experience of holding a co-design process on a previous project. The staff and employees had also learnt from the previous co-design process, so they could quickly understand and be ready to be involved in the collaboration process. The initiation process was also a success because the design studio that carried out the project had considerable experience of running previous co-design projects and knowledge and understanding of the corporate culture and bureaucracy of the hospital.

Looking at findings from both contexts, it can be seen that the initial process between the two contexts took a different approach. In Indonesia case studies, there was an informal approach utilising local institutions and this process was influenced by the

absence of the government, especially in the case of Jakarta and Solo. It took time and often required a personal approach between individuals. The role of facilitators and community leaders was very much needed in this process. In contrast, in the initial process in the UK case studies, it took place formally through a mechanism such as a consultation meeting or invitation to some specific communities. This process worked well, especially in Whittington, where the hospital management encourages the staff to engage in the process. While in Worthing and Lancaster, the formal approach worked well with the specific group of communities involved.

### **7.1.2 Defining the Problem and Development Idea for the Solution**

Defining or formulating problems or objectives are the critical stages in which participants are actively involved in formulating questions as guidance for the next process. This process helps to keep the following steps focused. So even though flexibility is emphasised, the objectives must be defined in the beginning. This stage is one of the spaces on how the decision-making process can be observed; also, how co-design encourages participants to voice their idea.

Defining problems in Indonesia case studies took place in workshop activities. In all three cases, workshops were conducted by the design team, involving all members of the community. Similar to the initial process stage, this stage is still very much dependent on the role of local institutions and community leaders. The design team took advantage of the tradition of *guyup* (kinship) through local institutions to persuade the people to engage in discussing the issues. The method in three cases was similar and started with a presentation from the design team about the background and references relating to the issue.

In Jakarta, the presentation consisted of the various projects of independent residential areas' development carried out by the residents. In Solo, they focused on public facilities' development. Whereas in Malang, there were several visual references to bamboo building structures that are considered to have attractive aesthetics and functionalities. The visual presentation and reference were expected to inform participants and give them insight into the design aspects of the facilities. In addition to the indoor workshops, the design team also invited the people to the project site to observe the actual conditions. After those two activities, participants were invited to formulate the problems they have to address. In this stage, it appears that the community leaders and designers influenced the decision-making process. Even in the case of Jakarta, the design team had prepared several scenarios that were likely to occur so that the decision which was finally agreed did not differ from one of the designers' preference.

The problem development stage in the UK case studies was also carried out with the same activities, workshops and field visits. In all three cases, this stage involved participants in the indoor workshop as well as visits to the project site. Compared to Indonesia, workshop activities were more structured. The tools used were designed and prepared by the design team deliberately to facilitate collaboration. Likewise, the activities and procedures of the workshop had been designed to encourage participants' contributions.

Another dimension that is distinguishable between contexts is the role of designers in the process. The UK case studies reveal that designers have a role as facilitators, designing activities and tools, and not actively involved in engineering decision-making. The decision was formulated jointly by all workshop participants and worked

because they were familiar with the decision-making processes that require participants' activeness.

Comparison of this stage in both contexts shows the differences in their decision-making process. In Indonesia case studies, the objectives were generated with the direction or guidance of the designer and community leader. Whereas in the UK case studies, the process appeared to be more independent, with participants deciding on the problem statement without the dominance of designers.

### **7.1.3 Design Development**

The design development phase was a critical stage where design activities to address the problems were conducted, based on themes, objectives, and criteria that had been established in the previous stage. In this stage, the design team had designed and set up activities and tools, so participants were actively involved.

The findings from Indonesia context show the design development stage had the same characteristic, the flexibility of its structure. In general, Indonesians are used to participating in *gotong royong* (mutual cooperation) - communal activities. Such activities are, for example, carried out when a neighbourhood wants to build public facilities, such as security posts, drainage system, and village roads. In such activities, people are not accustomed to planning the project with structured stages before building. The people intuitively do the design process as well as the construction as part of their traditional habits. This custom creates a flexible structure in the design development stage. There were small differences between each case study in terms of the details of the activities and tools used, which affected the ability of the workshop to accommodate participants' voices.

The influence of the flexible working structure increased during the stages of design development. Generally, the people were not familiar with the following process of design: design development - prototypes - then building the products. Nevertheless, the design team still tried to carry out those processes. However, in its implementation, improvisation took place to adjust the dynamics of the workshop. This model presents the flexibility of the co-design method in Indonesia. In Jakarta, a two-storey building that had been built could be modified into three floors, even after the construction process was underway. In this situation, the stages of design, construction and evaluation were conducted simultaneously.

In addition to the unstructured method, the design development stage involved full knowledge exchange between participants and designers, in the case of Malang. People provided knowledge about traditional methods of harvesting and preservation. On the other hand, designers introduced modern chemical preservation techniques. The two procedures were finally put together in several workshop trials.

During the design development process, the construction phase also ran simultaneously, especially in the Jakarta project. The time pressure was the reason given for the threat of eviction. This led to a real-time co-design process model being applied: the design was immediately decided on-site, and directly followed by the construction. This also, more or less occurred in Malang, which is a characteristic of the design development process in co-design practices in Indonesia.

Unlike in Indonesia case studies, the process in the UK case studies is considered to be more structured, with a detailed timeline, stages of activity, and tools that have been prepared. The three case studies present how the design development process was conducted. In the Lancaster case, there were several workshops; each one

designed with concrete goals, targeting specific participants, and detailed time and place of implementation. Likewise, in the Rough Sleeper and Whittington Hospital projects. When the workshop took place, information about how activities should be carried out was also presented in detail. Participants got clear instructions of what they could do and also information about the output of activities. With these relatively rigid instructions, the design team had to provide the tools that could accommodate the creativity of the participants as much as possible. Therefore, the case studies emphasise that designing the tools are essential in the practice of co-design. The tools are a means for the co-design process to be able to provide flexibility for participants. The design team consciously designed various type of tools to accommodate participants with different background and preferences.

If the design process in all three cases in the UK is examined, it is evident that a variety of tools were used across them. These tools range from 2D media such as drawing paper, paper card, and stickers to 3D media, such as Lego, clay, sticks, mock-ups and various other materials. Even in the Whittington project, the design team built a 1:1 scale mock-up to provide a real-scale situation to participants.

Compared to the UK case studies, the tools used in the series of workshops in Indonesia case studies were somewhat less designed. Generally, the design team only prepares generic material: stationery, blank paper and label stickers. In practice, participants with their spontaneous improvisation created tools from material that could be found in the surrounding. This was possible because workshops were often conducted at the project site, allowing interaction with many materials. Another contrast between both contexts is the role of designers in creating 3D models. In the UK case studies the design team provided all the materials that enabled participants to

produce the 3D models, whereas, in Indonesia, the models of the Jakarta and Solo projects were created by the design team, after the participants had previously given their ideas in a design workshop.

Another difference can be found in the role of the designer during the design development workshop. In the UK cases studies, designers positioned themselves as facilitators, providing a space and platform for the participants to proceed with their design proposals. To avoid design by committee, the decisions taken were not only because of the agreement of the participants but through a curatorial process, with a mechanism prepared by the designer. Thus, the final decision was the optimal design produced by all participants. In this case, a team of designers was able to design a co-design that enabled participants to maximise their potentials.

In Indonesia case studies, the role of the design team felt more dominant than in the UK. The design team was actively involved in overseeing design decisions, from the ideation to the final construction of the design. In Malang and Jakarta, ASF ID, as the design team, prepared all the possible design scenarios. In Jakarta, to shorten the time (due to the threat of eviction), from the initial stage, the designer contributed to directing the design. Although the community voiced their idea, the selection and curation were carried out by the design team, which was then subsequently manifested in the design mock-up. The design was then brought back to the people. A similar process also ran in Malang; the difference was that the people were allowed to develop design mock-ups. Considering these findings, it is no exaggeration to say that the role of designers who are supposed to be facilitators of the co-design process tends to be less consistent in the Indonesian context.

#### **7.1.4 Construction/Prototyping**

This stage takes place after design development, and it can be either prototyping or constructing. In Indonesia cases studies, the construction stage was not identified because it took place simultaneously with the design development stage. The most obvious example is in the case of Jakarta, where the stages of design, prototyping, testing, evaluating ran simultaneously. Even when residents occupied the house, the evaluation and design revisions were still ongoing, for example, there was the addition of a window canopy because the initial design of the canopy was not enough to be able to withstand the heavy rain. Some other forms of spontaneous modification are also done, such as changing the colour of the wall paint. Other design adjustments are also made, for example, alteration of the rear façade, and allotment of space for the third floor. These direct modifications indicate that the design process would continue to be ongoing and carried out by occupants.

In Malang and Solo, changing from design development to construction stage was more prominent, although in practice there was also overlapping between the two stages. In Solo, during the construction process, they kept making design adjustments, which were carried out directly in the middle of the construction process as the result of the people's suggestions.

While in Malang, the construction stage took place with citizens' participation, people with expertise and knowledge about traditional bamboo structures provided input to create the building design, which was more efficient. Instead, people also learned about modern structure techniques from the designer team. During the construction stage, a combination of traditional and modern techniques was eventually created. At some points, these combinations of techniques caused the initial design to be revised.

The ultimate goal of those three co-design projects in Indonesia was to build the facilities needed by the community. Participants were not only involved in the pre-construction stage but also were actively engaged in the construction stage. Looking at the whole process, it can be learned that co-design practices do not stop at design workshops. On the contrary, the practice continued during construction, even in the post-construction. This model means that the co-design process in Indonesia worked throughout the project, starting from ideation to post-construction.

From the UK case studies, only the Whittington project aimed to create a physical product, which is interior redesign. The BTC Project at Lancaster delivered design recommendations, whereas the Rough Sleeper project at Worthing presented programme proposals. However, both cases had different directions at the end of their process. The Lancaster project had an interactive exhibition, which showed all the works of the co-design process. The exhibition itself was part of the co-design process because visitors were still asked to be involved.

In comparison, the Rough Sleeper project produced four programme proposals to tackle the homelessness issue. The four proposals were then prototyped and evaluated, and the results were then presented to the city councils. The selected proposal was then developed to the full-scale implementation programme.

The Whittington Hospital project is quite different compared to the other two UK cases. This project divided into two main stages — design development and construction — produced interior design as an outcome. In the first stage, the participants were actively involved in producing the schematic design concept. In contrast, in the second, they acted as objects to carry out tests on the prototype created

by the architect. From this series of processes, it was noticed that participants were actively involved as co-designers only in the design production stage.

Comparison between the final stage in the case studies in both contexts suggests that there was one distinct similarity identifiable, namely the strong desire of participants to implement the design that resulted from the co-design process. The findings suggest that almost all case study projects produced real-world implementation after the design process. Participants felt that the co-design approach succeeded in meeting their expectations. The only exception was the BTC project in Lancaster, which shows a gap between the people's expectation and the outcome of the project.

Besides the similarity, the difference between the two contexts is that the co-design practice in all Indonesian cases worked continuously throughout, from the design development stage to the post-construction stage. In contrast, in the UK cases studies, it only effectively worked in the design development phase. Fischer (2003) suggests the term meta-design for a method that goes beyond co-design, where stakeholders continue to be involved as co-designers through to use-time. Therefore, the process in Indonesia might be referred to as a meta-design practice.

This situation occurred because the cases in Indonesia involved users as co-designers in the whole process. Also, the less structured design of the co-design process, plus the influence of the *gotong royong* collective culture, produced many spontaneous design ideas during the projects. That is a contrast to the UK cases studies, where participants were only involved during the co-design development process, and the structured co-design process means there was less freedom for participants to shape the post-design stage.

## 7.2 Contextual Factors Influences

In this section, the criteria of co-design effectiveness of case studies from both contexts are examined to compare the influence of the contextual factors on the co-design process. The comparison of these criteria also gives an understanding of the characteristics of the co-design method in both contexts.

### 7.2.1 Decision-Making Power

Ideally, co-design aims to share the power to make decisions, mainly from the designer to the user, acting as co-designer (Sanders, 2008). The three case studies in Indonesia indicate that the power to make decisions tended to be led by the designer, whereas, in the UK, the designer's role was as facilitators. Both contexts are influenced by political structural factors, though socio-cultural factors also influence the Indonesian context.

Context	Characteristic	Influence of contextual factors
Indonesia	Led by designer	Social-cultural factors Political power factors
UK	Shifting of designer's role	Political power factors

**Table 11: Comparison of decision-making power**

Sutoro (2014) stated that in Indonesia, the tradition of addressing decision-making in public affairs is strongly influenced by the role of local institutions, based on cultural and spiritual values. This condition is undoubtedly different from the UK, where the mechanism of public decision-making has been formally institutionalised and regulated. This has contributed to shaping the co-design practice in both contexts.

In Indonesia cases studies, the decision-making process in co-design seems to have been shaped by the unequal power relations between the parties involved. Several

factors influence this. The first is the socio-cultural factor, identified during the design workshops, especially in the Malang and Solo cases. The sociocultural factors of the community strongly influenced the decision-making process in both cases. Local leadership structures and Javanese philosophy (*mbendhol mburi*) mean the decision-making process tended to depend on the dominant actors, community leaders and designers.

Moreover, the tendency of Javanese culture to maintain harmony among the group created a reluctance to disagree during the workshops. In Malang, the role of conflict resolver between the people also resulted in the domination by the designer. The designer's successful role in conflict resolution increased their position in the power relation between them and the people, while in Jakarta, the involved parties had relatively equal power. The Jakarta project had a more dynamic process in its co-design workshops because of the urban nature of the society. The findings show that people were relatively able to propose their ideas and have their voices heard. However, the decision-making process, in the end, was still strongly influenced by the designers or community leaders.

In contrast to the Malang and Solo cases with their socio-cultural factor, the political power factor had more influence in shaping the decision-making process in the Jakarta project. In this case, the government regulation factor was a constraint. As the project was faced with government threat, decisions had to be made faster. The consequence was that the role of designer and community facilitator is dominant.

Another finding from the Indonesia context was that the designers realised that there were unbalanced power relations during the co-design process. To address this issue, in all three cases, they relied on informal approaches. They recognised that social

rules are based on traditional values applied through local institutions, in contrast to the West, where regulations are more formally codified. Hence, they understood that the role of local institutions and their leaders would be essential. They utilised the regular meetings of local institutions to conduct an informal approach to the people to raise their voices. This finding is similar to what Hussain et al. (2014) found in their co-design experiment in Cambodia, in which they built a co-design model suitable for the context. One important suggestion is the emergence of local leaders as intermediaries between participants and designers. Like Indonesia, unequal power relations in Cambodia led to the difficulty for people to speak directly to the designer.

In addition to reducing hierarchical constraints, informal meetings were also useful to build participants' trust in the designer. These were easy to implement because of the value of *guyup* (kinship) as part of the collective culture. The designers were welcomed when they visited the people who felt happy and appreciated this kind of personal approach. While the first people-designer relationship was formal (where the designer was considered an entity outside the community), after some time it turned into a friendship. Furthermore, the designer was regarded as a family member — the impact of this change was that workshops were conducted in a more fluid and dynamic atmosphere. People tended to be freer to express their opinions without having to depend too much on community leaders.

The opposite situation occurred in UK case studies. The power relations in the UK, specifically in Lancaster and Worthing, had more equality compared to Indonesia. Interviews with two participants from the Lancaster case confirmed that the roots of democracy and freedom of speech were enabling them to carry out their participatory roles in the series of co-design workshops, whereas in Indonesia, people do not have

this, especially the older generation, due to their experience of living under an authoritarian regime.

Besides this political climate factor, the factor of regulation also made the decision-making process work in a more balanced way. The UK has more established rules in terms of decentralisation of authority. With the existence of the Localism Act 2011, the voice of local people must be taken into consideration in planning development. However, the existence of the regulation does not give a guarantee that the people would always be involved in the co-design process. However, at least most of the co-design participants have experience of attending consultation meetings, and that made it easier for them to express their views in co-design workshops.

The informal or even personal approach was not encountered in the UK case studies. The entire co-design process was carried out as a scheduled formal event. Worthing's co-design organiser mapped out the stakeholders who would be involved in the project then invited them based on this. This mechanism proved to work well to make collaboration in co-design.

The participants were aware of the right to have a say in the public issue, which affects them. Even though the co-design process was seen as something new, they did not appear to experience obstacles in actively participating, because the methods gave them flexibility. They were pleased since the co-design offered them the opportunity to be involved in the participatory process with more power to decide.

In conclusion, in terms of decision-making, the co-design process in the UK case studies was conducted more equally compared to Indonesia cases studies. Two contextual factors influence the decision-making process in Indonesia. The first is the political power factor; namely, the regulation of development is still centralised. The

second is socio-cultural factors, one of which is that Javanese culture prioritises harmony. The factors that influence decision-making in the UK were political, where the democratic political climate and decentralised development regulations were very supportive of the growth of more democratic models in decision-making.

### **7.2.2 Collaboration**

Co-design starts with participation in the design process of users or people affected. This participation underlies the principle of collaboration in co-design practices. Collaboration in both contexts demonstrates its effectiveness, although each context has different characteristics in terms of motivation to collaborate.

In the case studies of Indonesia, especially in Malang and Solo, participants were eager to collaborate, more so as a form of compliance with social obligations as part of the community. This reason is different from in the case studies in the UK, where the people participated because of the awareness that they had the right to participate in public affairs. Each contextual factor influences the difference.

Indonesia is a collectivist society which means that individuals are part of the community and expected to conform to the values and ideals of the group (Sulastini, 2016). The individual's role in their community is reflected in various collective cultural practices such as the *gotong-royong* as mentioned earlier (mutual co-operation). Individuals will receive social sanctions if they do not participate in the collective affairs of their community. This socio-cultural factor has contributed to driving co-design practices in all three case studies to have a high level of participation. The people were encouraged to participate in the collaborative processes because of the *gotong-royong* practice. They felt that participating in the project was their duty as part of their group community.

Context	Characteristic: Motivation to participate	Influence of contextual factors
Indonesia	Social obligation	Socio-cultural factor: collective culture: collectivist society
UK	Right to determine themselves	Political factor: Awareness of citizens' rights

**Table 12: Comparison of collaboration**

Conversely, in the three UK case studies, participation in the co-design process was seen as a right instead of an obligation, the right guaranteed by law as citizens to participate in the development plans of their area. This difference in motivation resulted in different characteristics of the co-design process, especially in terms of the method to encourage collaboration.

The designers of Indonesia case studies also use local institutions and leadership to enhance the people's role in collaboration. The obligation of individuals to contribute to community activities helped facilitate collaboration, even though for Jakarta, with a relatively low degree of collective culture, the designers needed to make extra efforts to improve collaboration. In this case, the influence of collective culture has diminished and been replaced by the values of urban culture. However, the previous cultural impression can still be identified. One participant admitted that his participation was also encouraged by the sense of being part of the whole community. The designers and community facilitators raised the traces of collectivist values by utilising the issue of eviction. They hoped that solidarity would be strengthened and lead to the desire to be involved in a collaboration on the co-design project.

Unlike Jakarta, the influence of the collective culture in Solo and Malang was considerably more substantial. In Solo, every month, the community hold public meetings to discuss their environmental issues. The designers used this regular meeting as an entry door when they proposed the co-design project plan. Whereas in Malang, where the collective cultural value is the strongest, the designers were aware of and utilised local traditional institutions (besides the formal church institutions) to deliver co-design collaboration plans. By utilising these local institutions, projects in Malang and Solo were able to gather participants who adequately represented the community population. What was interesting is that every element of the community had its regular meeting (men, women, youths). The designers could take advantage of each meeting to attract participants from various elements of the community to represent the diversity of the population. The critical success of using local institutions was to convince the leaders first. Afterwards, the members were more receptive. This strategy was possible due to the hierarchical character of Indonesian society, where people are accustomed to respecting their elders and leaders (Mangundjaya, 2013).

While in the UK cases studies, especially Lancaster and Worthing, the right to contribute to the city development plans drove participation in the co-design process. This motivation is rooted in the political awareness of citizens who are accustomed to engaging in public affairs. The long history of consultation meetings, although criticised because they lacked real power for the people - was able to build a 'participation' awareness of the community. By the end, when the designer invited the people to engage in a co-design workshop, they agreed to participate in the collaborative process.

In the initial meetings of the BTC and Rough Sleeper projects, each project manager, in collaboration with the city council, invited representatives of city stakeholders, and then they would come. For the open workshops involving the general population, the design team disseminated publications of the events. As a result, in the BTC's open workshop held in the market square, there were plenty of people who were interested and eventually engaged in the workshop. Even so, because this participation is defined as a right, people are free to choose to either participate or not. Certain groups, such as adolescents, did not seem to want to engage. To overcome these challenges, methods and tools that were interesting, flexible and as open as possible were designed to attract all groups of participants. Thus, designing the co-design method was an integral part of the process in these two UK case studies because it affected the level of collaboration.

Reviewing both contexts, it revealed that the different methods to encourage collaboration lies in the approach taken. The design teams in Indonesia had to take an informal and even personal approach by utilising local cultural institutions. While in the UK, they achieved it by designing methods and tools to attract the participants.

In conclusion, the collaboration criteria show the same effectiveness in both contexts, and public participation could be managed through a co-design process. However, there were differences in the influence of contextual factors on the effectiveness of the collaboration. In Indonesia case studies, the collaboration reflected how much participation was influenced by the socio-cultural factors of the Indonesian collectivist society. On the other hand, in the UK case studies, participation was influenced by political power factors, reflected in the awareness of citizens' right.

### 7.2.3 Flexibility

Flexibility is essential to provide space for participants to contribute according to their backgrounds and abilities. Co-design is built on the belief that everyone is creative, and that the user is an expert because of their experience; this experience is beneficial in the design development during the co-design process. However, not everyone can be a co-designer unless flexible activities with the right tools are utilised so that users can be activated as co-designers.

The findings from the UK case studies suggest that the co-design practices successfully implemented the flexibility criterion. In each case, the designer successfully presented activities and tools that could accommodate the creative potential of participants in various media. The co-design method offered freedom and openness to participants to use multiple ways of conveying ideas — from the oral method (storytelling), writing, drawing, and prototyping 3D models. Even in the case of Whittington Hospital, the design team delivered a 1: 1 scale of a room mock-up with the aim that participants would experience the dimension and ambience of the room space.

Although the co-design method is considered to provide freedom and flexibility, it still has a framework to keep the activities running to pursue the project objectives. The Rough Sleeper project gives a notion that participants in one workshop session were facilitated with various tools and got a space to arrange the composition of their team freely. However, the designer team provided clear guidelines about the output to be achieved from the session. In the assessment session, when the participants had to curate their proposals, they would stick to the guidelines to assess which plans could pass through to the next stage, and which ones should be discharged. Thus, it was not

the design team that directed the decision, but the fellow participants themselves decided, based on the guidelines. At this point, it proves that the flexibility achieved remains controlled under the framework that has been designed from the beginning.

Context	Characteristic	Influence of contextual factors
Indonesia	Spontaneous flexibility	Socio-cultural factor: mutual co-operation – “sayang.”
UK	Designed flexibility	Resources factor: human capital - the designer’s capability

**Table 13: Comparison of flexibility**

From the series of activities and tools used in the co-design process, it can be observed that the role of designers in designing the co-design process is the key to achieving flexibility. The designer can be categorised as human capital, which is one element of the resource factor. Thus, the contextual factor that influenced the flexibility of co-design in the UK case studies is the resource factor. Indeed, co-design is not new in the UK and can be traced back to participatory design experiences in the 1970s at the Tavistock Institute (Asaro, 2000). The experiments helped shape the design landscape in the UK so that the designers were familiar with participatory issues. This contrasts with the design landscape in Indonesia, where formal participatory co-design is considered newly developed.

Although Indonesian designers have fewer empirical references than the UK, if the three case studies of Indonesia are scrutinised, they also have effective flexibility. The co-design processes succeeded in establishing freedom for participants to voice their creative contributions. From observations and interviews with participants and designers, it is proposed that the background of the participants more strongly shapes

the flexibility than the methods of the designers. A participant in Malang stated that they were accustomed to solving technical problems related to buildings or daily work through the practice of mutual co-operation. This ability led to their tendency to improvise during the workshops.

Furthermore, people's abilities can be found in all three case studies. Therefore, the participants' initiative in modifying the workshop activities or tools was quite prominent and shaped the flexibility of the co-design process in Indonesia. The workshops in Malang and Jakarta clearly showed the spontaneous initiatives of participants in utilising materials around them to create tools or supporting equipment in the workshop process and construction process. When the designers were asked whether they deliberately designed the tools, they answered that they and participants could quickly and spontaneously use the objects around them as tools. Therefore, a key characteristic of co-design flexibility in Indonesia case studies is spontaneity.

This experience is supported by literature that indicates the socio-cultural factors of Indonesian society influence the tendency of participants to modify the co-design process spontaneously. Armand et al. (2014) said the culture of craftsmanship strongly influenced the history of architectural creation in Indonesia. They define craftsmanship as the ability to create by using the potential of the whole body and hands, supported by tools. This craftsmanship culture is rooted in traditional Indonesian production methods, which are characterised by an abundance of labour, flexible work time, expertise in crafting, collective work, and interaction with materials in the environment (Armand et al., 2014). The people of Indonesia have a craftsmanship culture because it is practised in daily work, both individually and collectively in the practice of *gotong-royong* (mutual co-operation). This ability not

only psychologically encouraged people to participate technically but also gave them the ability to carry out creative activities in the co-design workshops spontaneously.

The findings from the three cases indicate that people tend to be more active in contributing to the construction phase, where they can use their craftsmanship skills directly to make the products. Participants from Malang emphasised that it was easier to understand and give ideas by directly making products, rather than designing on the table in the design workshop.

Besides spontaneity in modifying activities and tools, there was flexibility in the design process in Indonesia cases studies. This flexibility means that the sequence of the stages could be flexibly changed or modified, unlike in the UK case studies, which had a more robust framework and series of steps. For example, in the case of Jakarta, due to the time constraint, the design development workshop only produced a general design of the house. It then immediately moved to the construction stage (making). When construction was taking place, comments on the design from both participants and designers often led to a re-design discussion. After that, the construction was revised as a result of these flexible design methods.

This flexibility can also be traced to the history of people's experience when carrying out mutual co-operation practices. Specifically, in Malang, the culture is called '*sayang*' or '*sambatan*', where the whole community joins together to build public facilities voluntarily. In the practice of *sayang*, people work on the whole project based on hereditary habits and slightly spontaneous acts (Koentjaraningrat, 2000).

Comparison of the flexibility of co-design between two contexts shows that they have different characteristics. From the description above, it can be suggested that flexibility in the UK case studies is designed flexibility, deliberately created by the

design team when developing activities and tools. Designers from the UK cases studies could do so. They did it to provide the most extensive possible space for participants in channelling their creativity. Designers designed co-design to give flexibility and openness but within a framework to ensure the process was in line with its objectives. These contextual factors were used to form the designed flexibility of co-design in the UK's case studies.

As discussed above, the flexibility of Indonesia case studies was spontaneous and influenced by socio-cultural factors, in the form of mutual co-operation and a specific type of *sayang*, which give the people a space to learn about the technical capabilities of making in the form of craftsmanship. Furthermore, craftsmanship spontaneously appeared when people were involved in the co-design process. Their technical skills in terms of construction were useful in providing technical input in the construction phase.

#### **7.2.4 Outcome Focused**

Co-design is an outcome-oriented process. The outcome is precisely to answer the problems faced by participants. The co-design process is not just an experimental endless exploration of design ideas (Bradwell and Marr, 2008), but places participants as central actors because the output produced is intended to solve their problems. In practice, this implies that the prototyping-evaluating-revision process will continue to run until the solution has been reached.

The three case studies of Indonesia show their focus on the actual outcomes. In the Jakarta case, the result was a house. All efforts and potential of the people were mobilised in the co-design process to realise the house. In the Solo case, as in Jakarta, the focus of the co-design process was to produce public facilities for residents, public

toilets and playground. In Malang, the bamboo church building was the outcome of the co-design process. The enthusiasm, resources of funds, energy, and time of the participants were gathered to realise the outcome. The whole process of co-design was oriented towards results because all parties involved had the same goal and reason for collaboration. Thus, it can be suggested that the catalyst factor, the shared purpose to collaborate, was a significant influence in keeping the co-design process in Indonesia focused on its outcome. The process from the beginning had a clear purpose. These objectives were disseminated to the participants when they were asked to engage.

Context	Characteristic	Influence of contextual factors
Indonesia	Focus on real problem of participants but prepared to fundamental social issues.	Catalyst Factors
UK	Focus on real problem of participants	Catalyst Factors

**Table 14: Comparison of outcome-focused**

However, despite the co-design process being focused on the outcomes, according to the initial objectives, the process had various side effects in each case study. In Jakarta, the side effect was the growing awareness of people to maintain the quality of their environment independently and collectively. The prototype house, as stated by one of the community leaders, has made most of the people care more about the cleanliness of their environment. They have become aware that by maintaining environmental quality, it will prove that they are worthy of being respected and trusted to continue living on the riverbanks. They wanted to eliminate the stigma toward them as being the cause of flooding, with their slum ways of life. So even though building awareness was not the objective outcome, the co-design process has been capable of producing such positive side effects.

In Malang, besides aiming to build a new church building, the co-designers were also trying to overcome internal conflicts in the community. Initially, the designers were not concerned with the conflict, since they thought that the community had their mechanism to solve it. However, when the project began, it affected the performance of the design process. Therefore, rather than ignoring it, the design team and church leaders agreed to try to resolve the conflict in line with the co-design process. Even though the conflict was not completely resolved, at least the co-design process was able to increase people's interaction and release tensions between the parties involved.

The result of the outcome-focused criterion from the UK case studies is different. It turns out that not all the case studies successfully managed the outcome-focused process. The case of Whittington Hospital produced the interior of an ambulatory care unit as the outcome. While the other two projects, although they did not result in concrete design artefacts, both produced proposals and recommendations for resolving participants' problems. However, there is an interesting finding that some participants were even expecting something beyond the outcome. Findings from the BTC project at Lancaster show that some participants felt that the project outcomes were unable to satisfy their high expectations of co-design. They hoped that the co-design process would at least produce visible markers (e.g. signage, map) on the site, rather than just exhibitions and recommendations. These findings indicate that for these participants, with more aspirations, the outcome-focused process failed.

In conclusion, the co-design process of Indonesia case studies focused on the outcome, while in the UK case studies, not all of them succeeded. However, all were trying to produce real solutions to the participants' problems. The catalyst factor, the reason or objectives to collaborate, influenced all case studies in choosing their

priority. The people in both contexts had the same purpose when they joined the co-design process. They wanted to contribute to solving their specific problem. A slight difference is that in Indonesia case studies, besides focusing on each outcome, the co-design process also dealt with side issues (e.g. environmental awareness, conflict resolution). This situation happened possibly due to the influence of Indonesian socio-cultural factors that are strictly related to the collective culture. In contrast, in the UK case studies, the process relatively focused on addressing each project's objectives. However, in a society where there is more awareness of rights, some people have more demands to enhance the outcome of the process.

### 7.3 Chapter Conclusion

This chapter compares co-design practices between case studies in Indonesia and the UK. The focus of comparison is the co-design methods, their effectiveness and contextual factors that influence this. The co-design process in both contexts follows a similar design method process: ideation, design development, prototyping, testing and evaluating. Even so, the influence of contextual factors makes designers experience some differences. In the initial stages, initiators of both contexts explain to all stakeholders about the general description and the main objectives of the project. This dissemination involved the community who were expected to be involved in the co-design process. However, in Indonesia cases studies, the initial meetings of the project were carried out informally, utilising local cultural and religious channels. This process took a long time with lots of informal, personal meetings with community members. In contrast, in the UK case studies, the meetings were organised through a formal approach by inviting the participants. The design team coordinated with the local government inviting all stakeholders, as the city council usually carries out the public consultation meeting mechanism.

At the ideation, the two contexts carried out the activity of formulating problems that must be solved. The main themes and specific objectives were established. In Indonesia case studies, the designers gave their dominant guidance to the process. Their role as facilitators was not truly effective due to their tendency to intervene. In contrast, participants in the UK case studies seem to have shared power more equally with the designer who effectively acted as a facilitator.

The main difference in the designer's role is evident in the design development stage. The Indonesian designers not only acted as design facilitators, but also participated in making the design decisions, by giving input, direction, and even being curators for evaluating the participants' proposals. The UK case studies designers acted as facilitators focusing on co-design process planning and were not actively involved in designing the solutions. Participants entirely carried out curatorial work.

In the following stage, prototyping and construction, the difference between the two contexts lies in the sequence of stages. The Indonesian cases, with their real-time co-design, resulted in the prototyping-construction-evaluation phases taking place simultaneously, and with a more significant participant role due to people's craftsmanship abilities. In the UK case studies, the sequence was more rigid, so the prototyping-testing-evaluating stages ran sequentially until the process was complete.

From the comparison of the co-design method between the two contexts, it can be concluded that there are differences in the roles of the design team. While the designers from the UK case studies acted as facilitators by preparing methods and tools to support participants, in Indonesia case studies, their role as facilitators was different in practice; designers were dominantly involved in the process of developing the solutions. In summary, contextual factors strongly influenced these differences.

It is possible to identify the influence of social context on the co-design process by examining each of the criteria of co-design effectiveness. In the decision-making process, both contexts were strongly influenced by political power factors. The regulation and political climate drove the decision-making to be dominated and led by the designer, in the case studies in Indonesia, whereas in the UK case studies, the same factors made the decision-making process more equal. In terms of collaboration criteria, both contexts show their effectiveness, even though the reasons for it are different: in Indonesia case studies, the socio-cultural factors of a collectivist society encourage people to collaborate as part of their social obligations, while in the UK case studies, the political climate factor in the form of rights awareness is the driver of collaboration.

In terms of the flexibility criteria, both contexts also show the same effectiveness. However, the co-design in Indonesia case studies was more spontaneous and influenced by the aforementioned socio-cultural factors. In contrast, in the UK case studies, flexibility is designed and influenced by co-design capabilities and resources.

Meanwhile, in the outcome-focused criteria, all three case studies in Indonesia were effective, while two of the UK projects ran effectively and one failed. The catalyst factor influenced all case studies, that is, the similarity of reasons and objectives for collaboration. There was little difference in terms of catalyst factor in either context even though, in Indonesia, the process also involved several side effects as previously discussed.

# 8 Co-design Framework for the Indonesia Context

This chapter responds to the second research question, how the contrast of co-design methods from both contexts would be best leveraged to build an alternative co-design method framework for Indonesia. To answer this question, the lessons learned from the comparison of co-design experiences in both contexts are identified. The focus of the investigation was to find out the underlying factors from the different co-design processes and the outcomes produced, to establish how this would be beneficial to build an alternative co-design framework suitable for the Indonesian context.

## 8.1 Lesson Learned

### 8.1.1 Imbalance of Power in the Decision-Making Process

Co-design has its roots in efforts to give users more space in deciding the design solution. This has led to the principle of equality between designers and users to produce decisions. However, from the experience from Indonesia case studies, the findings suggest that the contextual factors affect the power relations between designers and participants/users. Those factors contribute to the ineffectiveness of the

designer's role as facilitators. Designers tend to be more dominant than the participants in the decision-making process. Fortunately, the Indonesian case studies also provide a lesson on how to address these issues; designers take an informal approach involving local institutions to overcome these hierarchical relationships.

The three case studies in Indonesia provide an overview of informal approaches that are often carried out when the design team interacts with participants. As already discussed, this activity is influenced by socio-cultural factors and the political structure. An informal approach was essential to achieve more effectiveness in the decision-making process, even though the result was not satisfactory. In the perspective of social relations in Indonesia, people see designers as educated people (experts) so that they tend to be positioned at the top of the hierarchy. Consequently, people will try to obey and listen to the information conveyed by designers. This relationship has the potential to damage the principle of equality of designers and users in co-design. Therefore, an informal approach is useful to dismantle this hierarchical relationship. When the design team made personal visits to participants outside of the co-design schedule, they began to consider the designer as a friend, although they still admired their expertise. This change of relation model resulted in the people being more comfortable to interact. Furthermore, it was also noticed that during the following workshops, the relationship between them became more fluid, with more equal interactions, and this contributed to the effectiveness of the decision-making process.

Another important lesson from the practice in the Indonesian case studies is the involvement of local institutions during the co-design process. Unlike the UK case studies, with its formal and structured regulation, the model of community and

organisational management in Indonesia is still dominated by the role of local institutions through cultural and religious channels. Local institutions can be a driver of the activation of the participants' creative potential. Local institutions can be community associations (this type of organisation can be found in all the Indonesian case studies) and collective community work (e.g. in Malang and Solo where the people still practice mutual co-operation in their daily activities).

The involvement of local institutions automatically involves their leaders in the co-design organising process. Patronage patterns (subject to leadership) at varying levels are still practised in Indonesia. The involvement of local leaders plays a role in encouraging collaborative processes during co-design. Local leaders play a role in providing social and cultural legitimacy so that the entire community will support the co-design process.

However, involving local leaders is not without problems; it should not make the designers remain detached from participants and the community. The designers cannot leave the organising only to local leaders. They must maintain direct communication with community members. The case in Malang gave a lesson when organising was handed over to a church leader; what happened was internal community conflict. People were even more distant from the design team. Therefore, the involvement of local leaders must be carried out in the spirit to establish closer communication with community members.

In addition to the influence of socio-cultural factors, the decision-making process in Indonesia is also influenced by regulation factors. It is understood that the centralistic nature of development regulation in Indonesia hampered the co-design process. The government's position is very dominant, even in some situations it is said to be

absolute. Regarding this issue, lessons can be drawn from case studies in the UK. The existence of transparency and participation principles in local development planning in the UK are crucial. The principle of transparency means that a development plan must be widely and disseminated to all affected people, while the principle of participation means that citizens have a role to influence the development plan.

It is possible to identify that both principles were applied in co-design practices in the UK case studies, especially in Lancaster and Worthing. The application of this principle is a regulatory mandate. On a different level, the tradition of transparency in development information has long been carried out by UK local governments in the mechanism of consultation meetings. Although the consultation was criticised due to the absence of the principle of participation, this model of consultation, giving more power to citizens, could be used to encourage more bottom-up development regulation in Indonesia. To date, local governments in Indonesia run limited focus group discussion involving only certain groups. In the future, they could potentially carry out consultation meeting models with broader involvement of people.

As a summary, three lessons for improving the effectiveness of the decision-making process are identifiable:

- The importance of using an informal approach
- Measured involvement of local leaders
- Encouraging the transformation of participative regulation.

The three lessons are aimed at establishing a more balanced relationship between all parties involved in the co-design process to encourage decision-making processes to run more democratically, resulting in decisions that truly represent the voice and aspirations of co-design participants.

### **8.1.2 Maintaining Motivation to Collaborate**

Both contexts showed effective collaboration during the co-design process as identified by the high level of participation. However, in Indonesia, participation is more of a social obligation, so the designers needed to make extra efforts so that participants not only attended but genuinely contributed to the collaborative process. At the beginning of the process, there was a high spirit to collaborate among the participants, especially in Malang, even though there was also some initial scepticism about the collaboration process (for example in cases in Jakarta and Solo). After that, people quickly became involved in the collaborative process, due to the Indonesian collectivist ethos. This high potential for participation had to be maintained by ensuring that people had sufficient endurance during the co-design process. This is where one of the roles of local leaders is to encourage the endurance of the people.

In addition to maintaining participants' endurance, another critical thing was to encourage participants to actively express their ideas, voices and opinions in the design workshop. In these matters, it is possible to learn from UK participants, who had an awareness of the right to contribute. Strengthening awareness of rights in Indonesia is important to transform the nature of collaboration, from passive to more active, so that people actively speak out and take on the role of co-designers rather than just passively joining in and conducting the process as if it were only a duty. However, building awareness of rights is not merely the task of the designers; the involvement of community assistance (usually from NGOs) is essential. They already have strong relationships with people; thus, it is believed that they would be able to convey encouragement about the importance of rights awareness.

In addition to this issue, it is also possible to learn about the role of designers as facilitators, from the case studies in the UK. As a method that shifts the role of the user to that of co-designer, the role of the designer then becomes one of the facilitators of the process. The shift could be observed in the three case studies in the UK. Designers were more responsible for designing the processes, creating tools and activities to maximise the creative potential of participants. Unfortunately, the role of facilitators was not established in the process in the Indonesia context. The designers, at several stages, deliberately played an active role in determining design decisions (for example, in terms of curatorial participant design), regardless of participants' opinions.

Taking lessons from the UK case studies, designers in Indonesia need to strengthen their role as facilitators to make collaboration more effective, so participants will be activated and have a more significant role in design development. The collaboration in Indonesia, despite its high participation, was not accommodated by an adequate design activity, so the role of the participant was still inferior to the designer or group leader. Fortunately, participants in Indonesia have the potential for spontaneity due to their craftsmanship skill. This is a significant asset and one that is proposed to be highly beneficial to strengthen the role of facilitator for designers in Indonesia.

To achieve effective collaboration, it can be derived that from all the cases in Indonesia the high enthusiasm of participants in the co-design process had to be maintained given that social obligations, rather than awareness of their rights, drive their motivation. Furthermore, the participants' active role needs to be improved by increasing their awareness of the right to speak about public affairs as participants do in the UK case studies. In addition, another lesson from the UK case studies is the

need for Indonesian designers to strengthen their role as facilitators to make space for the participants' active involvement. In enhancing the role of facilitator, designers need to consider the potential of the craftsmanship of Indonesian people.

### **8.1.3 Maximising the Craftsmanship Potential**

Evidence of the craftsmanship skills of Indonesian people can be identified across all three case studies. The emergence of that expertise during the co-design was through the spontaneous actions of the participants that made a positive contribution to the design development process. These skills should be managed better because they are beneficial to strengthen the collaboration process and as a means for participants to speak out.

Therefore, craftsmanship should be included when developing a co-design method framework in Indonesia. The UK case studies provide clues as to how it might be practical to take advantage of this potential. To achieve flexibility, activities and tools were designed that allow participants to express themselves freely. Various media and methods were used so that participants with diverse backgrounds and abilities had more extensive choices for the way they delivered ideas. Co-design in Indonesia would benefit if it can exploit the potential of craftsmanship in the design of tools and workshop activities. For example, participants in Malang had knowledge and skills about bamboo joint-structure as well as bamboo preservation techniques. This expertise would have been wasted if the co-design process had not provided the proper activities for participants to express those skills.

The statement of a participant from Malang gives a useful indication. He mentioned his preference that "making is more suitable than discussion". That statement can be the basis of how co-design activities must be designed to accommodate the potential

of craftsmanship in Indonesia. In the UK case studies, the workshop activities involved conceptualising ideas, prototyping then evaluating. Perhaps the workshop process in Indonesia could directly use prototyping, so participants would be given space to convey their ideas directly, using their practical skills. The tendency to use this method emerged in the case of Jakarta, where participants, as prospective residents of the house, provided design ideas when the construction process was being carried out. By designing activities that allow participants to maximise their craftsmanship potential, the co-design process in Indonesia would be more collaborative, equal and dynamic. The flexibility of co-design also becomes more sustained without having to lose its spontaneous character.

#### **8.1.4 Real-World Solutions but Preparing to Deal with Fundamental Issue**

The co-design case studies in both contexts focused on real solutions to participants' problems. Participants in the UK consciously joined the collaboration to solve problems that they considered important, although it must be encouraged first at first. Similarly, in Indonesia, the co-design process aimed to produce highly specific products to solve participants' problems. Although in practice, other fundamental problems also had to be resolved. For example, issues such as environmental awareness in Jakarta, have a direct correlation with the existence of the example house. That awareness of protecting the environment will strengthen the narrative of resistance voiced through the establishment of the example house. So, even though it is not planned at the beginning of the co-design process, resolving these issues have added a positive impact on the community.

Experience from both contexts provides a lesson that the co-design process should be offering solutions to real problems. Besides, it should be flexible enough to also deal

with other problems that arise. Designers should prepare a co-design framework that allows side issues to be raised. Indeed, the experience of informal approaches in Indonesia and the expertise of designing interactive tools in the UK can be taken as an example of how to develop flexible co-design in Indonesia in the future.

## **8.2 Co-Design Framework for the Indonesian Context**

The following sub-sections elaborate on some critical points that can be used as a basis to establish an alternative framework of co-design in Indonesia based on lessons learned on the application of co-design in both contexts and considering the influence of the contextual factors in Indonesia.

### **8.2.1 Utilise Local Institutions (Organisations, Informal Leaders, or Common Practices)**

According to Etzioni (1964), local leadership involves formal and informal leaders. Formal leaders have legitimate power and legitimacy through an organisation, whereas informal leaders have personal authority and are not burdened with exact duties and responsibilities.

In the landscape of local leadership in Indonesia, especially in villages, formal leaders are elected by the state through a legal mechanism. They are responsible for implementing state governance in the village area (Government Ordinance no. 72. 2005 - Village Government). The community chooses informal leaders for their integrity, expertise, and popularity. They can be priests, clerics, tribal leaders, or cultural figures.

In the Indonesian case studies, the local leaders were mainly informal ones with sufficient power in influencing public issues within the community. Their role was

useful in the effort of organising the co-design process. According to Valera (cited in Ibrahim et al., 2014), the role of local leaders is broadly classified into two parts, namely as opinion leaders and as agents of development. The former can influence the attitudes or behaviour of the community members informally, and the latter can help the development program of the government to succeed, by influencing people, formulating priorities, connecting actors and also building the procedure.

In the Indonesian context, the roles of local leaders are as follows (Mahayana, 2013):

1. Motivator: encourages the local community to carry out positive activities, especially those for development in all sectors.
2. Facilitator: deals with various village problems and facilitates village development activities so that the process runs efficiently and smoothly; and acts as a bridge in communicating various development programs from the government, so the community can accept them.
3. Mobiliser: acts as a director or driver of activities related to development in a village. This role assures that development or programs implemented are directed and well organised.
4. Legitimato: in the social system in rural areas, especially among indigenous peoples, traditional leaders take the highest social position. In short, their words and actions are viewed as orders and rules for members of the surrounding community.

In various community empowerment programs in Indonesia, the role of local leaders has been recognised and often utilised. Ibrahim et al. (2014), in research on farmer group empowerment in West Java, found that the role of local leaders was prominent because of their contribution to increasing people's motivation. Moreover, they also

have a role in improving group capacity by facilitating community communication through group activities, group meetings and group discussions.

The three case studies in Indonesia show that the role of local leaders is essential. In the Jakarta case study, their dominant roles were as facilitator and motivator. Their efforts in raising the enthusiasm and trust of people towards the co-design process run by the AFS team was evident (see page 131). In Malang, local leaders play some roles. The role of mobiliser and legitimator were the most prominent. As an example, it was evident that at the beginning of the co-design process, people tended to follow the church leader. While in the case study in Solo, the role of the facilitator was the primary role carried out by community leaders. The local leader positioned himself as a bridge between the design team and the residents during the co-design process.

Taking into account the significance of the local leader's role, it is essential to consider their involvement when carrying out the co-design process in Indonesia. The formulation of their role needs to be established as one point of the co-design framework. So that they can be involved throughout the co-design stage, acting as mobilisers and motivators or in specific regions, as legitimators. The first two roles would be required to organise and appeal to people to participate in the co-design. In contrast, the role of legitimator would be needed in very hierarchical societies in which leaders' opinions or orders tend to be obeyed.

Furthermore, in the ideation and design development stage, local leaders can play a role as a mediator - a bridge between designers and people when there is a communication breakdown; and facilitator, to help provide rooms, meetings, or other material support. Overall, the involvement of local leaders will facilitate the collaboration process.

However, the involvement of these local leaders could have a possible negative effect, namely their or even hijacking of the collaboration process. They may play a role in representing the voice of the people even though, in some cases, it is their personal opinion. To overcome this, the designers need to establish and maintain a strong relationship with the participants and wider community members.

### **8.2.2 Building Relationships Through an Informal Approach to the Participants**

Indonesian collective culture is characterised by the existence of various collective activities carried out by community members (Mangundjaya, 2013), which sustain social cohesion. The designers also utilised these activities in the three case studies as the doors through which to engage with the people and shows the need to build intense relationships with community members in order to be able to carry out the co-design process.

Building relationships between the designers and participants is essential for several reasons. First, to reduce the hierarchical relationship between them, because that would hinder the dynamics of the subsequent co-design process. Second, the former authoritarian regime has left people believing that teams of experts or government officials have high intellectual capacity, and they should follow their direction (Pamuji et al., 2018). This understanding needs to be corrected to show that ordinary people also have a role. Building relationships with the participants should be carried out to tackle this view to enable them to be more confident in exploring their ideas.

Second, building a close relationship with participants also reduces the dominance of local leaders in determining the co-design direction. Participants would be more able to have the courage to express their opinions and creativity because they know that

their views are essential to achieve the solution to the problem. This would also result in a more democratic co-design process without leaving the power in the hands of local leaders.

To build a close relationship with the participants, lessons can be drawn from what the designers have established in the three case studies in Indonesia. They made many informal visits to the participants, apart from the ones regarding the formal agenda of the co-design process. These unofficial visits were made directly to the participants' homes as an effort to strengthen friendships. The collective culture of the Indonesian people means that friendship and kinship are highly valued. In addition, such visits diluted the formality of the relationship between participants and the designers.

From this experience, it is possible to build an informal approach model compatible with the co-design process in Indonesia. However, before this, it is important to understand the desired outcomes for establishing the relationship:

- to increase the people's trust in the designers and trust that the co-design process will eventually provide positive benefits to the community.
- to encourage participatory attitudes, the designers need to convey that they are not experts who will make their environmental conditions better. On the contrary, they should communicate that they will facilitate the people to work together to make their environment better. People's participation is vital to the process.

Building relationships with participants mainly occurs in the early stages of the co-design process. During the initial process, the designers and community facilitators could make informal visits to participants. There are many community meetings according to the type of group (e.g. men, women, young people) that can be utilised to build closeness with community members.

In the next stages (workshops and prototyping), the informal approach serves to examine whether the discussion or the result that took place during the previous workshop(s) truly reflected the participants' aspirations. The findings from Malang indicated that the aspirations of the people slightly differed between workshops and during informal visits at homes. This finding suggests that there is a chance to use informal meetings as a means to test the extent of participants' openness when involved in co-design workshops.

### **8.2.3 Design of Tools to Accommodate the Creative Potential and Spontaneity of Participants.**

One of the differences in the application of co-design in both case study contexts is the nature of its flexibility. In the UK, this was achieved through the design of activities and tools that enabled participants freedom in exploring their ideas. Whereas in Indonesia, it occurred through the spontaneity of all the actors involved in the co-design process. To improve the effectiveness of co-design in Indonesia, lessons can be learned from case studies in both contexts. Those in the UK provide lessons that suitable activities and tools design can increase the participation because of the choice and types of activities that match their interests, abilities and preferences. For example, in the BTC case, the design team prepared a workshop activity that allowed participation from various age groups: the elderly, adults, teenagers, and children. The workshop provided multiple tools (cards, 3D mock-ups, maps) so that all could have the opportunity to choose according to their abilities.

Tools design that intentionally aims to provide a more extensive choice for participants to contribute has not yet emerged in the case studies in Indonesia. The tools used are still limited to using standard stationery. However, with the help of maps and some visual images, participants were encouraged to draw or write down

their ideas, guided by the designers. However, this method provided less freedom for participants to explore their ideas, and those unfamiliar with the visual language will find it difficult to express their ideas. However, there are other ways rooted in the craftsmanship capabilities of the Indonesian people. In all three case studies, this craftsmanship led to the spontaneous actions of participants who could utilise the surrounding material to create tools so that the design process becomes more flexible.

The effectiveness of the flexibility in the co-design process in Indonesia can be improved by proposing efforts to combine the designed flexibility while at the same, the opportunity for participants to give input spontaneously to the ongoing process. To accommodate the potential of craftsmanship, designers need to consider using local materials in making tools, so that participants feel familiar and motivated to create their design ideas. In addition, learning from the case studies in the UK, designers can create tools that are not only in 2D media but also 3D.

#### **8.2.4 Designing the Stages of the Co-Design Method to Accommodate Real-Time Co-Design.**

Co-design methods in both contexts were carried out in the same sequence of stages: ideation, design, prototyping, evaluation, and production. In the UK case studies, the sequence was designed by the designers and then carried out sequentially during the co-design process. In contrast, in Indonesia, some stages were carried out simultaneously (e.g. Jakarta case study, see page 126).

The findings from the case studies in Indonesia, especially Jakarta, indicate that the practise was influenced by time factors as well as the spontaneous character of the participants. Considering these findings, a co-design method needs to be designed to have flexibility so that stages can be changed according to the dynamics of the

situation on the ground. Such a practice model will allow real-time co-design to take place.

This is important considering the character of participants in Indonesia who are more able and experienced in making products (prototyping). Participants should be given the freedom to evaluate, as well as revise the design that is being developed. This flexible activity model means the designers must be prepared with various inputs and changes to the product being developed. They also have to be open to accepting participants' ideas, which usually come from their local wisdom. As in the case in Malang, participants proposed the use of natural preservation methods as a complement to the chemical preservation introduced by the design team.

Considering that co-design methods could be very flexible, the designers should prepare a loose framework of stages but still be able to sustain the design process to achieve project objectives. Therefore, understanding the purpose of collaboration needs to be conveyed well to the participants at the beginning of the process. The designers need to map the context and analyse the participants' spontaneous potential. It could be that in one project, the designers use the classic design sequence, and in another, they could design a more flexible series of stages. This kind of framework model will provide opportunities for participants in Indonesia to maximise their creative potential and make the co-design process run more dynamically.

### **8.2.5 Encourage Participants to Voice their Ideas**

If the co-design process in the UK case studies is examined closely, there is an emphasis on giving participants space to express their ideas freely. The emphasis comes from the principles of co-design to shift the role of the user to that of co-

designer. They are seen as experts that can produce good ideas as well as the professional designers who have creative potential in solving problems.

Examination of the case studies in Indonesia shows that the role of the designer is still quite dominant (e.g. see page 169). Indeed, this is influenced by factors such as political power and social culture. Participants need to be encouraged to express their opinions. There should be a strong emphasis that they have an equal right to contribute as their creative potential is needed to realise the solution that fits their expectations. Their potential craftsmanship skills can also be emphasised to encourage them to be more actively involved. By involving the right type of local leaders, the designers should encourage the participants to be more active to speak out. Their role as facilitators needs to be maximised, for example, by presenting co-design workshop activities that can stimulate participants' creative potential.

Also, designers need to present co-design in a supportive atmosphere, meaning that participants do not feel intimidated or under pressure either by local leaders or the designers. Looking at the case examples in the UK, especially the BTC project (see chapter 6.3), the friendly atmosphere of the workshop, conducted in a public space, can be an example of how to present a workshop atmosphere that can stimulate the creative potential of participants. For the Indonesian context, the idea of conducting workshops directly at the project site (see chapter 5.3 case study in Malang) could be a useful reference. Running a workshop on the site provides an informal atmosphere of *gotong-royong* mutual co-operation activities familiar and preferable for participants with their craftsmanship skills. This atmosphere would help give them confidence in expressing their ideas because it would feel like their daily social activities.

### **8.2.6 Designers as Facilitators and Motivators.**

The co-design process departs from the desire to shift the role of the designer in determining design results. As a consequence, users become co-designers and designers become facilitators. However, findings of the three case studies in Indonesia, do not provide clear evidence of this. In almost all these cases, designers at a certain point become determinants of design decisions. In the case in Jakarta, the initial decision to build a two-storey house was the decision of the designers. However, eventually, it was changed to three storeys during the construction process. In the case study in Solo, the designers made the 3D models after the design workshop and changed some aspects of the design. In the case of Malang, from the beginning, the design team provided a lot of visual references on bamboo building design, which indirectly affected the participants' ideas. According to the designers, this was done in an attempt to make the design process progress. Specifically, for projects in Jakarta, it was also done due to limited time constraints.

Considering such trends, guidelines are needed that allow designers in Indonesia to be able to act as facilitators of the design process, rather than actively taking part in design efforts. However, attempts to change designers' role cannot ignore the fact that participants still need the confidence and motivation to speak freely.

Therefore, co-design development in Indonesia needs to consider the role of designers as facilitators as well as motivators. The first can be achieved through increasing the flexibility of activities and the quality of tool design and limiting their role in conducting design interventions; the second can be achieved by encouraging participants to be more active in contributing to the co-design process. The quality of designers as facilitators and motivators will produce truly participatory workshops.

Participants need the motivation to help them to explore ideas deeper, think outside the box, and maximise their aesthetic experience potential. As a motivator, designers also have to maintain the stamina of the participants during the co-design process. Participants' endurance is essential to not only overcome the length of the co-design process, but also when time is an issue (as in the Jakarta case), or when internal conflicts escalate, such as in Malang.

Also, the role of motivator is needed to build participants' confidence. For this reason, designers are expected to give an understanding that participants' proposals will affect the final design. Furthermore, the proposal must be truly managed and maintained until the decision process is carried out. Maintaining the design proposal is very useful to encourage participants' confidence. Thus, their creative potential can be maximised.

### **8.2.7 Focus on the Real Solution**

One of the co-design principles is to focus on everyday problems since there is a need to produce real solutions faced by society. This motivation has proved valuable in increasing participants' involvement as they feel that co-design benefits the improvement of their environment. In the Indonesian context, the focus on these everyday problems is vital to communicate because participants need to be convinced that this process is genuinely beneficial to them in solving their daily challenges. The case in Jakarta is an obvious example of how the co-design process dealt with a significant issue, land and housing. Moreover, the issue became more critical when the threat of the government eviction could happen anytime. The assertion that the co-design process would address the threat proved effective in encouraging participation in the collaboration process.

Therefore, one of the points that need attention is the emphasis that the co-design process is worth running. Participants should be encouraged to be actively involved in determining the priority of the problems. By directly being involved in setting priorities for problem-solving, participants are expected to be more attached to the co-design process. This is necessary for a long-term co-design process. Focusing on the outcome that has benefits for them will increase the endurance of participants and designers as well in carrying out the co-design process.

### **8.2.8 Preparing to Deal with Social Problems**

Although the co-design process focuses on providing real solutions to the problems faced by the community, the Indonesian context shows that it often has to overcome other things beyond design solutions. These findings suggest that the solution to the initial problem is sometimes not the only goal to be achieved. Examples of the Jakarta project show that in addition to trying to produce sample home designs, efforts were addressed to build the collective awareness of the community to manage their environment. By contrast, the case in Malang, besides aiming to produce a church building, the co-design process had also to try to overcome latent conflicts that among members of the church congregation.

Therefore, findings of the co-design process in Indonesia case studies give an understanding that designers must be prepared to deal with issues outside the project's main objectives, as was the case in the research of Reyes and Botero (2012). They tried to implement a participatory design toolkit in the urban environment of Bogota using characters from popular culture. One of the principles they set from their study was that "Equally or even more important than problem-solving, the purpose of the interventions is to mobilise the collective capabilities and create social and cultural

capital enrichment" (Reyes and Botero, 2012: 3). This study confirms that co-design can be a catalyst for strengthening the social capital of the community.

Indonesia case studies give an insight that with the strong influence of its collective culture, it is possible to boost the co-design as a means for strengthening social cohesion, mitigating conflict, or advocating community. In simple terms, co-design can be used as a mean for social change in a community. Therefore, designers need to prepare to deal with potential social issues as an indirect impact of co-design implementation. In addition, in the beginning, they need to map the possibility of social challenges and benefits of applying co-design to the community.

In particular, from the Malang case study, the designers had a valuable lesson in how potential conflict turned into open conflict because co-design has triggered it. Fortunately, the designers immediately realised and tried to understand the roots of the conflict by repeatedly making informal visits to the participants. Even though the potential conflict was mapped from the beginning (see chapter 5.3.3), the unwillingness of the designers to deal with it, because they considered it as an internal community issue, led to the obstruction of the co-design process. Therefore, learning from this experience, the designers need to map from the beginning if there is any potential for social problems, and explore strategies to address the issues. For example, they could draw upon the role of local institutions and local leaders. Local leaders could be excellent partners in mapping potential social issues at the beginning of the co-design process. Then, in the problem's formulation stage, participants need to be involved. Within this stage, all parties should discuss not only the objectives but also other related issues.

To conduct a co-design project with such broader objectives, the design team needs to involve experts in the specific fields required. In the case of Malang and Solo, sociologists were engaged in the co-design process. Such involvement can also be found in the UK case studies, especially in the BTC project, where the design team involved various experts, for example, a writer and landscape planner. The involvement of multidisciplinary experts depends on needs and context.

### **8.3 Chapter Conclusion**

This chapter has dealt with the second research question on how the different characteristics of co-design in two contexts may be utilised to develop an alternative co-design framework that fits the context in Indonesia. The comparison provides examples of how co-design effectiveness can be achieved. Through the examination of each effectiveness criteria, it is possible to identify beneficial lessons as the basis for designing a co-design framework in Indonesia.

In terms of decision-making criteria, the decision-making process in Indonesia tended to be dominated by the design teams. However, several principles could be applied to make the process more democratic. The designers in these case studies developed two strategies: they conducted an informal approach to build relationships with participants and also involved local community leaders in organising the co-design process, whereas, from the UK case studies, it was evident that the regulations play an important role to support the implementation of co-design.

Meanwhile, for collaborative criteria, the main focus is on how to maintain motivation to collaborate. The co-design case studies in the UK provide a lesson for designers on how to function as co-design facilitators. Facilitators play a role in designing activities and tools that enable participants to express their creative ideas in the collaborative

process. While the lessons from the Indonesian case studies is that the spontaneity of participants makes the collaboration process very flexible; this potential needs to be maintained and developed as it plays a significant role in influencing the design process.

This spontaneity, which is rooted in craftsmanship skills, can be an important form of capital for building flexible co-design methods. Indonesian designers might learn from the co-design process in the UK case studies about how to design tools and activities that accommodate the creative potential of participants. Those lessons could be applied in Indonesia, considering the potential for craftsmanship among the population. In terms of the priority of the process, the case studies in Indonesia provide a lesson about the side effect of the application of co-design in the community. Although co-design processes in both contexts have focused on results, the design team in Indonesia must be prepared to face the complexity of the social problems that occur during the co-design process.

The lessons learned from the effectiveness of co-design in both contexts are further elaborated to develop an alternative framework for Indonesia. The elaboration results in eight points of recommendations:

- 1) Employ local institutions and local leaders that have social strength in organising community activities.
- 2) Build informal relations with participants; the primary purpose of this is to encourage participants to express their ideas.
- 3) Design a toolkit to accommodate creative potential as well as the spontaneity of participants.

- 4) Create flexible co-design stages which will allow real-time co-design practice as a response to the spontaneity of participants.
- 5) Encourage the role of participants by making efforts to raise participants' contributions.
- 6) Designers not only have to be facilitators but also motivators. As facilitators, designers should reduce their power in making decisions, while as motivators, they should aim to maintain the participants' endurance during the process.
- 7) Focus on the real solution by involving participants at the stage when the problem is being formulated.
- 8) Keep the co-design focused on the outcome so that participants understand the objectives of their engagement.
- 9) Deal with social issues. The co-design process does not only deal with problem-solving but also social complexity.

These recommendations are one of the significant results of this research. They can be a guideline for the development of an alternative co-design framework in Indonesia that provides an appropriate response to the distinctiveness of the context. These guidelines at least comprehensively consider the objective conditions of the three parties involved in the co-design process: the participants (community), designers, and government (regulation).

# 9 Conclusion

This research set out with questions regarding the influence of different contexts on co-design practices. Co-design that is rooted in the tradition of participation in Western countries will undoubtedly face challenges when applied outside the West. The literature review on co-design research in two different contexts produced suggestions for modification and adaptation to the implementation of the co-design method. This study more deeply sought to investigate how the context as whole influences and shapes the characteristics of co-design practices. In particular, it took two contexts which were considered to have contrasting backgrounds, namely Indonesia and the UK. These background differences were mainly found in the socio-cultural factors, the political climate, and more specifically, the ecosystem of participatory design. In addition, this study also sought to build a co-design framework that is suitable for the context of Indonesia. The objectives of the study are summarised by formulating two research questions as follows:

- RQ 1. What would be a context-appropriate co-design framework for Indonesia, and how is this distinct from a UK context?

- RQ2. How do the distinctions affect the development of an alternative framework of co-design in the Indonesia context?

To answer the research questions above, a conceptual framework was first set out as a theoretical basis for guiding this research. This involved the setting out of contextual factors as instruments that were considered to influence the workings of the co-design practice. These factors were compiled by adopting two frameworks developed by the NNC and Committee on the HDGC. The contextual factors adopted and used in this study are political power factors, socio-cultural factors, resources factors, and catalyst factors. Next, co-design effectiveness criteria were set as a parameter of the success of co-design practices. The results of this assessment shape the characteristics of co-design in each context. To establish these criteria, the principles of co-design were adopted from several theoretical sources. The research then employed qualitative research techniques by carrying out a multiple case studies method. Six case studies, with three in each context, were investigated in this study. The three case studies in Indonesia are The Sample House projects in Jakarta, Bamboo Church project in Malang, and Public Facilities projects in Solo. Meanwhile, the three cases in the UK are the BTC Project in Lancaster, the Rough Sleeper Project in Worthing, and the redesign of the Ambulatory Care Unit project in Whittington Hospital, London. Various data collecting techniques were used. The primary technique used was interviews with various parties involved in the co-design process. In addition to interviews, observation techniques and documentary study were also used.

Below, the findings of this research are discussed, along with the analysis and conclusions obtained from each context. Comparisons of the two contexts converge in the conclusions of this study. This chapter ends by presenting contributions to

knowledge, limitation of the research, and the direction of future research development.

## **9.1 Contextual Influence on Co-Design**

The results of the field research were presented in chapters five and six, and the comparison of the two contexts was presented in chapter seven. The principal results of this research were the comparison of the two contexts which produced the co-design characteristics of both case study contexts. In this section, the characteristics of each context are summarised. This results from the evaluation of the effectiveness of co-design in each context.

The characteristics of the decision-making process in co-design practices in the UK case studies was that there was a relatively equal relationship between all stakeholders involved. Although, in the case of Whittington Hospital, the decision-making process was characterized by the dominance of the hospital management. The political climate factor, in the form of a Western democratic society, and regulatory factors that drove the decision-making process meant it was conducted in more equal power relations. In contrast, in the Indonesia case studies, there were unequal power relations. It was identified that designers and community leaders dominated the decision-making process. This situation was shaped by the political climate in Indonesia, where regulations did not support the efforts of the community to participate and also people who have no civic awareness of their right to be involved in public affairs. In addition, the characteristic of the co-design was also influenced by the Javanese culture, especially the hierarchical social structure of the community, and the tendency of the people to maintain harmony among the community.

The following characteristic was how collaboration occurred during the co-design process. In both contexts, collaboration was working effectively, characterised by the active role of all project stakeholders in participating in solving the problems. The difference between the two contexts was the motivation to be involved in the collaboration. In the UK, collaboration was encouraged by the awareness that their involvement was the right of citizens to influence environmental development planning. This awareness was shaped by a long history between the traditions of the Western democratic society and the regional development regulations, which require the involvement of local communities. This motivation resulted in active collaboration. However, in Indonesia, collaboration was driven by the assumption that participants' involvement was a form of individual social obligation as part of the community, and reflects the collectivist society, resulting in the collaboration being passive. It meant the encouragement was due to individuals' desire to get involved, but because of external factors, namely the interests of the community.

The flexibility criteria were defined as the ability of the co-design method to be an open framework, able to accommodate the creative potential of various groups of participants. The field research in both contexts found that flexibility was successfully applied. In the Indonesian case studies, it was achieved because participants have the ability of craftsmanship, from the habit of being involved in mutual assistance (*gotong-royong*) practices in their environment. Because of this ability, they flexibly conducted the co-design workshops by utilising resources from the surroundings. From this influence, it is suggested that the characteristic of flexibility in Indonesia's case studies is spontaneous flexibility.

Criteria for case studies	Indonesia		UK	
	Contextual factor	Characteristic	Contextual factor	Characteristic
Decision-making power	Political Structure Factor: political climate, residue of the authoritarian regime;  Regulation of development: centralistic  Socio-Culture Factor: Javanese philosophy	Led by designer	Political Structure Factor: political climate, embedded democracy in society;  Regulation: involvement of local citizens	Shifting of designer's role
Collaboration	Socio-cultural factor: collective culture	Motivation to participate: social obligation	Political Structure factor: awareness of citizens' rights	Motivation to participate: the right to determine themselves
Flexibility	Socio-cultural factor: collective action, craftsmanship	Spontaneous flexibility	Resources factor: human capital (the designer)	Designed flexibility
Outcomes-focused	Catalyst factor: the purpose of collaboration	Focus on real problem of participants, but prepared for other social side-effect issues	Catalyst factor: the purpose of collaboration	Focus on real problem of participants

**Table 15: Comparison of the characteristic of co-design in the two contexts**

Meanwhile, in the UK's case studies, co-design flexibility was delivered by designers. Their ability to design open and flexible co-design frameworks provided a wide range of types of participation. The methods and tools presented accommodated participants' creative potential. Thus, the flexibility that emerged in the UK's case studies was characterised as designed flexibility or deliberate flexibility

The last criterion reflects the principle of co-design as a process that must produce practical outcomes or real solutions to answer the problems faced by participants. This criterion refers to the ‘outcome-focused criterion’. All the Indonesian case studies were effective and focused on the real problems of participants but were also prepared for social side-effect issues. In contrast, the UK case studies only focused on solving the problems of participants. It was also revealed that the BTC project in Lancaster failed to achieve its outcome-focused criterion, while the others proved their effectiveness. However, the entire co-design process in both contexts sought to produce outcomes that had practical value to solve the problems, difficulties, or demands of the participants. Looking at all the cases in both contexts, it is possible to identify similarities in the factors that drive this criterion: a keen awareness that their reason to collaborate was to solve the real problems of their community, workplaces or cities. The purpose of the collaboration was a catalyst factor that was able to direct co-design to produce practical outcomes.

## **9.2 Recommendation for Framework of Co-Design in Indonesia**

The results of the comparison of co-design practices in the two contexts above produced useful findings for an attempt to build a co-design framework in Indonesia. The discussion on framework development was carried out in chapter 8. Before compiling the recommendations, a review of the findings of the co-design practice in both contexts was conducted. This was considered a useful lesson for the development of the co-design framework. The lesson-learning outcomes were then elaborated to produce recommendations for the co-design framework in Indonesia. These recommendations are as follows:

- **Utilise local institutions (organisation, informal leader, or common practices)**

Local institutions deserve to be involved in building a co-design framework in Indonesia. Their role can be divided into several stages of co-design. In the initial stage, local leaders can act as mobilisers, motivators, or legitimators.

While in the design and creating phase, the role of local leaders is more as mediators and facilitators. It should be noted that these local leaders should not be placed in too dominant positions. This concern needs to be addressed because of the hierarchical structure of Indonesian society. The participation process must not be hijacked by the personal agenda of local leaders, and the voices and ideas of community members need to be heard.

- **Building relationships through an informal approach to the participants**

Building relationships with participants need to be done in order to reduce hierarchical relations between participants and designers, due to the culture of respect for experts and to reduce the dominance of local leaders. As explained above, the involvement of local leaders often leads to excessive domination. Thus, to overcome this challenge, designers need to build a relationship with participants to maintain equality of relations between all parties in the co-design process. There are two expected outcomes from this activity. First is to build mutual trust between participants and designers. The second is to develop participatory behaviour, which is to encourage participants to be bolder and open to convey ideas. Both of these outputs are expected to lead to an increase in the role of participants in the collaboration process in co-design.

- **Designing tools to accommodate the creative potential and the spontaneity of participants.**

One potential among Indonesian participants is good craftsmanship skills, which shaped the spontaneous behaviour of participants when involved in design workshops. This potential needs to be channelled by providing proper workshop tools and activities or by participants utilising material from the surrounding context for making prototypes.

- **Designing the stages of the co-design method to accommodate real-time co-design.**

Participants in Indonesia are more familiar with ‘making’ or ‘practical’ activities, compared to designing activities. Therefore, it is necessary to build a flexible framework, which can change following the flow of collaboration activities. This framework means that the design stages do not need to be rigid, but instead can be adjusted to the dynamics of the workshop.

- **Encourage participants to voice their ideas**

Participants in Indonesian society which has a hierarchical culture tend to refrain from arguing. It is feared that it will bring debate and disrupt the harmony of the community. To overcome this challenge, in addition to the informal approach, designers need to create a positive workshop atmosphere that can encourage participants to discuss differences and help them to be willing and courageous in voicing their ideas.

- **Designers as facilitators and motivators.**

As a facilitator, designers play a role in delivering co-design methods and activities to serve the creative potential of participants. In the context of Indonesia, this role will encourage participants to influence the co-design process.

Meanwhile, the role of motivator helps in maintaining participants' stamina and endurance while involved in the co-design process that takes time, effort, funds, and emotions.

- **Focus on a real solution**

The demand for realising outcomes that answer the problems of participants is a principle that should be fulfilled. In the Indonesian context, these demands are becoming increasingly essential to achieving because of the complex issues of public affairs in Indonesia. Such problems require real solutions, which are not just abstractions of conceptual theories or ideas. Therefore, co-design in Indonesia needs to emphasise further its commitment to address the problem of participants by focusing on producing real solutions.

- **Preparing to deal with social problems**

Although it has been stressed that co-design must focus on solving participants' problems by providing real solutions, given the Indonesian context, with its social complexity, designers must also be prepared for the side effects of co-design implementation. The side effects are not always negative - for example, conflict, but can also be positive like political awareness, environmental awareness and others. The potential for these side effects needs to be synergised with efforts to achieve the main objectives of the project. Learning from the Jakarta case, for example, attempts to build the sample house increased people's awareness of environmental preservation. As a consequence, the design team should be composed of personnel from various disciplines.

## 9.3 Contributions

This research has at least contributed two things: first is the practical contribution to the implementation of co-design practices, especially in Indonesia. The second is the knowledge contribution to enrich the understanding of co-design theory, especially its relationship with the context

### 9.3.1 Practical Contributions

The results of this research could be beneficial for the efforts of co-design implementation, especially for public facilities projects. Although the research context is in the UK and Indonesia, this study can also be useful for the implementation of co-design practices in other countries that have similar contexts, especially in the Asian region.

For the Indonesian context, there are at least three parties who can benefit from the results of this study. First, the government, both central and regional. For the central government, the results can be utilised as one of the inputs for attempts to improve Musrenbang. Some complaints were that the failure of Musrenbang has led to the failure to provide power to local communities. Therefore, the government, together with the legislative body, can adopt the findings of this study, especially efforts to create collaboration and an equal decision-making process. The central government can also consider lessons from the case studies in the UK, on how urban development regulations that require the involvement of local communities are implemented. For local governments, the results of the study are useful, especially to convince them about how to organise a project involving the local community. Local governments can learn from the experiences in Jakarta and Solo, that the efforts of independent

citizens accompanied by architects and NGOs can improve the quality of the environment.

Second, for the realm of design and architecture practitioners, especially those who are concerned with efforts to involve citizens, the results of this study are useful as input in developing the co-design methods that they will apply in the field. Recommendations for framework co-design can be an initial step in the co-design applications that take account of the dynamics and wealth of the local context. Designers and architects can also get lessons from co-design strategies conducted in the UK, especially in their efforts to develop activities and tools to achieve the flexibility of co-design methods.

Furthermore, this research can also be practical for academics to utilise the results of this study as an entry point for the development of participatory design research in Indonesia. The results of the study can later become enrichment for curricula, specifically for participatory design materials taught to students.

### **9.3.2 Knowledge Contributions**

The results of this study have contributed to the development of participatory design theory, primarily how the design process is influenced by context. They will enrich the literature on the comparison of co-design practices in two contrasting contexts. The findings of this study, specifically about how co-design works in a hierarchical society in which people still have a memory of an authoritarian government, can contribute to the development of co-design theories and principles.

Another result of the study, the co-design framework for Indonesia, is not only beneficial for practical applications but also contributes to the development of social

design studies; especially the relationship between the socio-cultural background of the community and the co-design practices. Furthermore, the recommendation to utilise local institutions is a contribution that complements the studies' use of the potential of local culture when implementing co-design (Puri et al. 2004).

## 9.4 Future Work

The research presents two main findings: how the influence of different contexts produces different co-design characteristics; and how these differences are used to build a co-design framework in Indonesia. These results can be explored further through at least three areas of research. First, further investigation on each of the co-design effectiveness criteria, especially by considering the effects of different contextual factors, which are believed to be dynamic, changing as changes occur in society. Research on each criterion is necessary to respond to this. For example, this could involve the investigation of the influence of changes in the contemporary political landscape in Indonesia on power relations in the community, concerning the decision-making process in the practice of co-design.

Second, further research is required to try to implement the framework that has been compiled by this study. Tests on this framework can be done through action research by implementing co-design projects in the context of Indonesia. The action research would aim to examine the extent to which the framework produced from this study can improve the effectiveness of the co-design process. The research would also seek to show the strengths of the co-design framework and the obstacles faced by it. Finally, advanced research will be able to provide an evaluation of the framework that has been produced by this research.

Third, another research direction that can be developed is the development of co-design activities and tools that are appropriate to the context of Indonesia. One of the recommendations of this study is to develop a design tool and method that can accommodate the spontaneity of participants in Indonesia. Further studies of this area mainly focus on efforts to design tools and activities that respond to tangible and intangible potential in Indonesian society. The activities and tools can then be tested through action research examining the co-design framework.

## **9.5 Limitations**

Some limitations may have impacted on this study. First, the theoretical framework established contextual factors that influence the co-design effectiveness criteria. This study adopts particular co-design perspectives that are considered appropriate to address research objectives, to construct the theoretical framework. The implementation of the frameworks adopted is limited to the co-design project applicable in the respective case studies (see Chapters 5 and 6). Therefore, it does not reflect the co-design process across the UK or Indonesia. The generalizability of the frameworks adopted remains limited. However, the frameworks able to explore the complexity of co-design application in each case study.

Second, this research has implemented specific criteria as a framework to guide the case selection, intending to obtain a representative variation, at the same time, maintaining the similarities that have become the common thread. However, for Indonesia context, the case study limited only on Java island. This arguably only representatives of particular cultural background and neglected the diversity of Indonesian cultural spectrum. In future work, it may be possible to apply the framework to a more diverse cultural background.

The purposive sampling technique in determining participants always brings the limitation of representativeness of the sample. Although all attempts have been made to ensure the best possible sampling which can represent the phenomenon under investigation, there is still the chance that the data does not adequately represent the objective phenomena examined. Moreover, the difficulties in determining representative sampling both in terms of adequacy and conformity were also caused by the fact that the majority of the case studies have already been completed. This situation resulted in a challenge in finding participants who met the sampling criteria. To overcome this limitation, a more straightforward documentary study technique was conducted to obtain additional data.

Finally, there were constraints on translation. The interviews in the field research in Indonesia were mostly carried out in Indonesian, and partly in Javanese. These two languages certainly have many language expressions which are sometimes difficult to translate into English. Moreover, one of the themes of this research discussion is a culture that is rich in regional specific terms. In the future work, a studying Indonesian and Javanese cultural literature published in English needs to be done to overcome this obstacle, to try to find the equivalent of specific terms.

## **9.6 Last Thoughts**

This study explains the characteristics of co-design practices from different case studies in two social contexts. It not only explains the similarities and differences in co-design practices but also reveals how these different contexts affect the practice of co-design, which ultimately shapes their characteristics. Recommendations to structure an alternative co-design framework which is designed explicitly for

Indonesia are significant results in response to differences in the characteristic of co-design practice.

Considering the landscape of design practices in Indonesia, especially the design of public spaces, which increasingly includes the vital role of the community, this research is essential and relevant. The results of this study will bring full awareness to place the community as the centre of the design process of public space in Indonesia. The people's involvement is, indeed, expected to lead to increased quality and acceptability of the designs produced.

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# Appendices

## **Appendix 1: Key interview question for City Council officer (UK context)**

1. Explain the background of the project, who is the project initiator?
2. How was the Design Council's initial engagement?
3. Who is the initiator of the idea to engage the people through a co-design approach?
4. What is the response of the people when offered a co-design approach (peoples come to design)?
5. How does the enthusiasm of the people being participated in the participatory process, especially when involving in the design workshop?
6. What do you think are the constraints of the participant in carrying out this participatory process?
7. From the city council view, what is the biggest obstacle in carrying out this participatory design process?
8. How significant is the role of the city council in determining the direction of the policy during this process?
9. How was the power relation between participants and designers in the co-design workshops, did the participants have equal position compared to the designer team?
10. Was the designer still dominant in determining the design decisions?
11. How big did the participants contribute to determining the final design outcome?
12. Do you think the workshop was able to push the creative potential of the participants?
13. Western society, in some literature, said to be quite an individualist, do you agree? are these arise or influential during the design process?
14. From the report, I see there is a quite good collective value that grows among the people so that they agree to participate. What do you think about it?
15. Democracy said to be one of the pillars of Western society. This is why public participation in public interest issue well developed. What is your opinion on it, in regard grows the rough sleeper's project?
16. Do you think that public participation has been accepted as the common norm or value in the urban development process in the British Society?
17. What do you think the main contributions of the people to this project?
18. After the process was completed, how do the people view the results of the projects?
19. What are the people inputs to the development design process that involves citizens in the future?
20. What are the people expect to the government when conducting the development process, do they want always to be involved in the development process of their environment?
21. How do you think about the future of the development model by involving public participation?

## **Appendix 2: Key interview question for the resident (Indonesia context)**

1. Explain the background of the project, who is the project initiator?
2. How do residents respond when offered a participatory approach (residents participate in designing)?
3. How enthusiasm of the community towards the participatory process that is to be carried out?
4. Is there a negotiating space for citizens to be involved in designing/modifying the design methods that have been previously designed?
5. Indonesia people are said to have collectivist culture, for example, the spirit of gotong-royong. Does it really seem to have contributed to the course of the participatory process? Or did everything come about because of incentives?
6. What is the biggest obstacle in carrying out this participatory design process?
7. What are the barriers of the participating community in carrying out this participatory process?
8. Are there cultural barriers (e.g. reluctance, psychological barriers) from participants in their participation in the design process?
9. What is the power relation between the participant and the designer in the participatory design process that is taking place? Are the participants quite aligned compared to the designer team?
10. How do residents' perception of the designer team during the design process?
11. Did the participants participate in designing tools in the design workshop?
12. Are there any technical obstacles/understanding of how to use the tools when conducting participatory processes?
13. How much did the participants contribute to determining the final outcome of the design?
14. In your opinion, what is the most visible form of community contribution in this project?
15. After the project was finished, how the attitude of the community towards the results?
16. In the future, what is the community expectation to the development planning involving the people?
17. What are the expectations of citizens towards the government in carrying out the development process? Do they want always to be involved in the development process in the environment?

## Appendix 3: Consent Form

### CONSENT FORM



Project Title: **Geographical Context Influence on Co-Design Practice Between Indonesia and the UK Context**

Name of Researchers: **Andi Setiawan**

Email: **a.setiawan1@lancaster.ac.uk**

**Please tick each box**

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily
2. I understand that my participation is voluntary and that I am free to withdraw at any time during my participation in this study and within 4 weeks after I took part in the study, without giving any reason. If I withdraw within [4 weeks] of taking part in the study my data will be removed. If I am involved in focus groups and then withdraw my data will remain part of the study.  
PLEASE NOTE: Withdrawing from a focus group can be difficult and if your study involves focus groups you may want to add the following: I understand that as part the focus group I will take part in, my data is part of the ongoing conversation and cannot be destroyed. I understand that the researcher will try to disregard my views when analysing the focus group data, but I am aware that this will not always be possible.
3. If I am participating in the focus group I understand that any information disclosed within the focus group remains confidential to the group, and I will not discuss the focus group with or in front of anyone who was not involved unless I have the relevant person's express permission.
4. I understand that any information given by me may be used in future reports, academic articles, publications or presentations by the researcher/s, but my personal information will not be included and I will not be identifiable.
5. I understand that my name/my organisation's name will not appear in any reports, articles or presentation without my consent.
6. I understand that any interviews or focus groups will be audio-recorded and transcribed and that data will be protected on encrypted devices and kept secure.
7. I understand that data will be kept according to University guidelines for a minimum of 10 years after the end of the study.
8. I agree to take part in the above study.

Name of Participant \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

**I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.**

Signature of Researcher /person taking the consent \_\_\_\_\_ Date \_\_\_\_\_ Day/month/year

**One copy of this form will be given to the participant and the original kept in the files of the researcher at Lancaster University**

## Appendix 4: Participant Information Sheet



### Participant information sheet

I am a PhD student at Lancaster University, and I would like to invite you to take part in a research study about geographical context influence in application of co-design in different contexts.

Please take time to read the following information carefully before you decide whether or not you wish to take part.

#### What is the study about?

This study aims to understand the influence of geographical context in the implementation of co-design practice in two different contexts, between UK and Indonesia.

#### Why have I been invited?

I have approached you because you have experience in organizing and designing a co-design project that involves community participation or been involved as participants in the co-design workshop or is deemed to have expertise on the issue of co-design. I would be very grateful if you would agree to take part in this study.

#### What will I be asked to do if I take part?

If you decided to take part, this would involve the following:

You will be interviewed for approximately 45 minutes. The place and time of the interview will adjust your schedule.

#### What are the possible benefits from taking part?

If you take part in this study, your insights will contribute to our understanding of what and how culture of the participants affects the implementation of the co-design project.

#### Do I have to take part?

No. It's completely up to you to decide whether or not you take part. Your participation is voluntary.

#### What if I change my mind?

If you change your mind, you are free to withdraw at any time during your participation in this study. If you want to withdraw, please let me know, and I will extract any data you contributed to the study and destroy it. Data means the information, views, ideas, etc. that you and other participants will have shared with me. However, it is difficult and often impossible to take out data from one specific participant when this has already been anonymised or pooled together with other people's data. Therefore, you can only withdraw up to 4 weeks after taking part in the study.

#### What are the possible disadvantages and risks of taking part?

In general, there are no disadvantages for involving in this interview, your disadvantages may only for spent about 45 minutes for the interview.

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**Will my data be identifiable?**

After the interview only I, the researcher conducting this study will have access to the data you share with me. The only other person who will have access to the data is a professional transcriber who will listen to the recordings and produce a written record of what you and others have said. The transcriber will sign a confidentiality agreement.

I will keep all personal information about you (e.g. your name and other information about you that can identify you) confidential, that is I will not share it with others. I will anonymise any audio recordings and hard copies of any data. This means that I remove any personal information.

**How will my data be stored?**

Your data will be stored in encrypted files (that is no-one other than me, the researcher will be able to access them) and on password-protected computers.

**How will we use the information you have shared with us and what will happen to the results of the research study?**

I will use the data you have shared with only in the following ways:

I will use it for academic purposes only. This will include my PhD thesis and other publications, for example journal articles. I may also present the results of my study at academic conferences.

When writing up the findings from this study, I would like to reproduce some of the views and ideas you shared with me. When doing so, I will only use anonymised quotes (e.g. from our interview with you), so that although I will use your exact words, you cannot be identified in our publications.

**Expenses and payments?**

You should explain if any expenses (for example travel, meals, child-care, compensation for loss of earning etc.) are available. You should consider whether any gifts or vouchers which you intent as a thank-you should be detailed in the information sheet.

**Who has reviewed the project?**

This study has been reviewed and approved by the Faculty of Arts and Social Sciences and Lancaster Management School's Research Ethics Committee.

**What if I have a question or concern?**

If you have any queries or if you are unhappy with anything that happens concerning your participation in the study, please contact myself

Andi Setiawan

[a.setiawan1@lancaster.ac.uk](mailto:a.setiawan1@lancaster.ac.uk)

07401853140

**Or you can contact my supervisor**

Professor Nick Dunn

Chair of Urban Design

Tel: +44 (0) 1524 510793

<http://imagination.lancaster.ac.uk/>

**Thank you for considering your participation in this project.**

v27-6-16 (19-9-16)