INTERNATIONAL JOURNAL OF SUSTAINABLE CONSTRUCTION ENGINEERING AND TECHNOLOGY
VOL. 12 NO. 5 (2021) 279-285

IJSCET

http://publisher.uthm.edu.my/ojs/index.php/ijscet

ISSN : 2180-3242 e-ISSN : 2600-7959

International Journal of Sustainable Construction Engineering and Technology

Improving Early Stakeholder Engagement Process: An Empirical Study of Rapid Transit Railway of Malaysian Project

Har Einur Azrin Baharuddin[1*], Nurul Sakina Mokhtar Azizi[2], Imelda Piri[3]

[1]Faculty of Architecture, Planning and Surveying
Universiti Teknologi MARA, Shah Alam, 40450, MALAYSIA

[2]School of Housing, Building and Planning,
Universiti Sains Malaysia, 40450, MALAYSIA

[3]Department of Construction and Quantity Surveying, Otago Polytechnic, 1010, NEW ZEALAND

*Corresponding Author

DOI: https://doi.org/10.30880/ijscet.2021.12.05.028
Received 19 October 2021; Accepted 31 December 2021; Available online 31 December 2021

Abstract: Stakeholders in infrastructure projects should be steadily engaged starting from the earliest stage of the project i.e pre construction, until completion of the project. Stakeholder which directly and indirectly engaged in a large infrastructure projects, has different desires, interests, rights, and also can be voiceful. The main purpose of engaging of with the stakeholder is to promote fairness and trustworthy both to the external and internal stakeholder because as individuals and groups who are excluded from the decision-making processes are unlikely not to have their needs and preferences reflected in the outcome. The purpose of the paper aims to focus on improvement on the process of stakeholder engagement in Malaysian railway case study focusing on planning stage. This paper applies a qualitative research methodology based on semi-structured interviews and observation from a single case study of a mass rapid transit railway project in Malaysia. Empirical study from the case study will lead to establish lesson learned that could improve the stakeholder engagement scheme in infrastructure projects. The findings explained the sequence by showing the improvement of stakeholder engagement processes that need to be done during the pre-construction process. The suitable engagement process involves internal preparation and alignment, consulting, monitoring and planning. Albeit engagement process is a difficult to manage, it requires courage and humility when dealing with the public and community.

Keywords: Stakeholder, engagement process, rapid transit railway project

1. Introduction

Mega projects, large or mega infrastructure projects, large scale or massive civil engineering infrastructure project have been widely described as multibillion dollar project built for public benefits and comfort. Rahim et al. (2017) characterised public infrastructure as transport projects, utility projects and social service projects. The projects govern by the government and usually delivered by the private sector. Characterised as uncertain, complex, politically-sensitive and involving a large number of partner (Clegg et al.,2002) and requires significant investment and involving stakeholders in delivering a project (Flyvbjerg;2014). Infrastructure projects require the involvement of and create interest in the eyes

*Corresponding author: hareinur@uitm.edu.my

of various stakeholders (Vuorinen and Martinsuo, 2019). Setting up an integrated project from different organisations' skills and background, designs and construct in some instance, not only build, but also operate the facility (Marrewijk et al., 2008). Infrastructure projects brings a significant impact on stakeholders both externally and internally.

Involvement of the internal stakeholder should start from design ideas through consultation to making stakeholders fully responsible for the design of components, systems, processes, or services they will supply (Aapaoja, 2014). Technically, the more complex the developed project is, the earlier the stakeholder should be involved. The roles and responsibilities of the stakeholders can be affected based on the level and period of the stakeholder involvement. Thus, stakeholder with very little responsibility for the project can be involved at a later stage of the project (Monczka et al. 2000). Engaging the stakeholder, community and public as early as the project starts could minimise the possibility of poor project performance. Previous studies show that neglecting the stakeholders' expectation or interest in large infrastructure construction projects can generate stakeholder action against the projects (Lui et al., 2018; Marrewijk, 2008). Lack of effective engagement at the earlier stage of planning give an undesirable impact to the whole project life cycle and performance of projects (Bahadorestani et al., 2020). Hence, having a fair process of the engagement is important to the project owner to establish a good rapport with the stakeholders. Thus, this paper investigates on the improvement that can be made through the engagement process to improve project and community outcome of the stakeholder engagement in infrastructure projects.

2. Stakeholder Engagement Practices

Most of the massive infrastructure projects constructed are in highly challenging and complex, thus involve multiple stakeholders with various interests, objectives, power and background (Cornick and Mather, 1999; Aaltonen, 2010; Liu et al.,2018). This results in different processes of stakeholder engagement in construction projects depending on the size, type and complexity of the project. Project managers with a proper stakeholder engagement skill could facilitates stakeholder management and engagement process by considering their interest in view of the project values and capture a different form of knowledge through social learning (Bahadorestani et al., 2020). Engagement methods for infrastructure projects include individual meetings which involve one-to-one meetings to group meetings involving wider participants. For instance, during early inform stage involve phone calls, newsletters, media and emails. Methods during inform stage are normally a one-sided form of communication. In contrast, consultation involve two-sided communication. The method of engagement chosen will be different depending on the level of stakeholder participation required. The process of stakeholder engagement has been discussed by previous scholar in different sector. Karlsen (2002) described the engagement process in six steps. The engagement steps commence from initial planning, identification of the stakeholder, analysis of the stakeholder involved, frequent communication, action taken and following-up. Young (2006) proposed with three stages involving identifying stakeholder, gathering information and analysing influences of stakeholders. Walker (2008) discusses the process of identifying stakeholders to prioritising stakeholders, visualising and mapping stakeholders, engaging them and lastly monitoring effectiveness of communications. Also, suggested by Bolts (2011) included identifying the purpose of the project, and then mapping the stakeholders who are going to be engaged, choosing a suitable method to engage and lastly developing performance measures. From the processes it is necessary to recognise issue of the stakeholders' who affected with the project. Identifying issues earlier could change the way of external stakeholders' action towards the project (Baharuddin et al., 2017).

2.1 Parties Involved

Winch (2007) classified stakeholders into three: project stakeholders, internal stakeholders and external stakeholders. Project stakeholders are those from the client organisation. Internal stakeholders are stakeholders in legal contract with the client. External stakeholders have a direct interest in the project includes public and private actors. Project and external stakeholders have the most influence on a project (Dix, 2010). Ward and Chapman (2008) pointed out that stakeholders are a main source of uncertainty in large construction projects where stakeholder entities, their claims and interrelationships at every project phase create project uncertainties. For instance, local and regional stakeholders are concerned with the influence of construction activities on their daily routine activities and life style and can use political relationships to affect outcomes (Ernzen et al., 2001; El-Gohary, 2006). Current studies furtherly identified the stakeholders of a construction project which impacted from the project environments such as government, local community and public media other than project owner, consultant, contractor, suppliers (Xue et al., 2020). The quality of a construction is also largely dependent on the appropriate performance management of diverse stakeholders, especially contractors and consultants (Sui Pheng and Ke-Wei, 1996).

3. Methodology

This study adopts a single case study of a Malaysia mega projects of rapid transit railway, merely to understand the stakeholder and the process, thus, to answer the question of 'What are the process used for the improvement of stakeholder engagement for a large infrastructure railway projects in Malaysia?'. The case study employed a qualitative method of

data collection, by way of semi-structured interviews involved internal and external stakeholders, including a non-government agency, business owner, land owner, traders, community groups and public transport user. The purpose of the interviews was to obtain the participants' perceptions of the stakeholder engagement process in infrastructure projects, as well as the challenges and problems encountered during the engagement process of the railway project. The focus of these interviews was to elicit feedback from the stakeholders on how satisfied they are with the engagement process undertaken as well on improvements that could be made by the project client in embracing a good practice of stakeholder engagement. A prepared list of questions was used as a tools for face-to-face discussion. The interviews typically lasted 45minutes to one hour. They were recorded and then transcribed. The data analysis procedure involved converting raw narrative data from interview notes and audiotapes into partially processed data which were then coded. The data were maintained in a database in NVivo10 – a qualitative data analysis tools. The tool used to conduct descriptive, interpretive and pattern coding, and to interrogate the data and report findings. Key steps in the stakeholder engagement process were then developed from the coding process.

The eight (8) interviewees included a balanced those who supported and opposed the project scheme. The interviewees were identified and arranged by the project owner which is MRT Corp. personnel. The mixture of professional key stakeholder, internal and external stakeholder provide extremely reliable and quality data on the research topic. Interviewees selected were concerned with understanding the drivers of stakeholder engagement, process and factors affecting stakeholder engagement implementation in Malaysia. Supported by Fellows ad Liu (2012), relatively small sample sizes can be acceptable, based on the notion that smaller numbers of respondents with adequate understanding of the subject matter are more suitable than larger samples with limited knowledge. Through this connection, the researcher then had the opportunities to meet and access to the stakeholder databases.

A profile of the interviewees can be found in Table 1. Initial discussions prior to the formal interview ensured that those selected were appropriate to represent the views of their respective groups, agencies or the community.

Table 1 - Profile of interviewees

Case studies	Stakeholder Code	Affiliation	Concern	Interest
Mass rapid transit railway, Malaysia	SM_A	Stakeholder Director	Representative of the Project Owner	Regular customer, new trading area
	SM_B	Project Manager	Representative of the Project Owner	Railway track, access to resident
	SM_C	Business Owner	Support in part	Relocation, acquisition
	SM_D	Community representative of High end residential area	Support in full	Demolition of historical building
	SM_E	Land owner representative of old trading area	Opposed in part	Land acquisition, new houses
	SM_F	Shop owner representative of old historical building	Opposed in full	Demolition of historical building
	SM_G	Community representative of affected housing area	Support in part	Land acquisition, new houses
	SM_H	Public transport user	Support in full	Railways

4. Findings and Discussion

The case study was a mega infrastructure project in Klang Valley covers 51 kilometres railway building an integrated urban mass rapid transit system for greater connectivity within population and local public. Estimated to cost over USD11.9 billion, the urban railways is an entry point project aims to increase public transport usage from 18 per cent to 40 per cent by 2020 (MRT,2012). During the under-review period, more than 60 engagement sessions have been taken place. During the planning stage, the project owner was announcing of the upcoming railways project as well as to brief

them on the work plans and scheduled to be carried out at the affected area. The engagement session conducted serve as forum for concern to be raised and the stakeholder meeting at the affected residential area, shop buildings and historical building. Seventy percent of the effected residents and business owners are supporting the project. Thirty percent whose businesses and land affected confronting with issues such as land acquisition which the project close proximity to their house. An extensive and continuous effort has been done to promoting the project to the public. Campaigns and programmes taking place at the early phase of the planning project advocate reasons on the needs of urban rail system in the city. This is important to educate stakeholders and the publics as the main critical component in engagement is communication. No standard method of engagement process for this railway project for the infrastructure project in Malaysia. Based on the findings, process of engaging stakeholder at the early planning phase of infrastructure project should involve a) internal early preparation and alignment; b) consulting by responding and implementing; c) monitoring, evaluating and documenting; and d) planning as stated in figure 1.

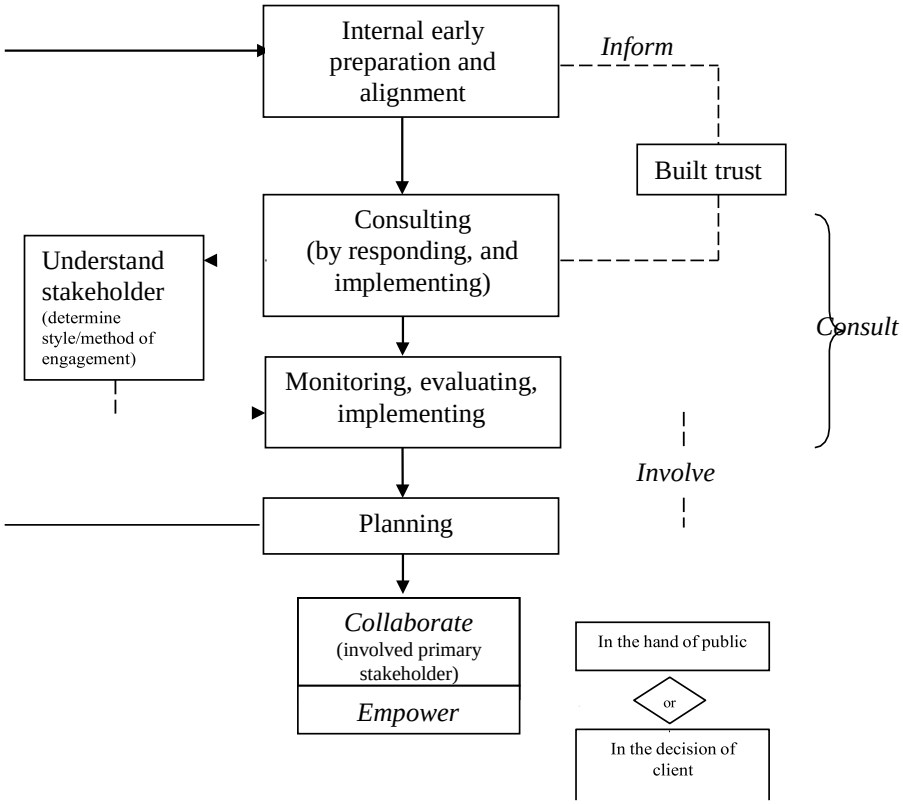

Fig. 1 - Process of stakeholder engagement at the early stage of infrastructure project

4.1 Internal Early Preparation and Alignment

Promoting early stakeholder engagement requires a considerable effort and time commitment. The internal preparation such as identifying the affected stakeholder for the project at the planning phase would likely reduce the risk of the project. The alignment and consideration of the stakeholder involved should be continuous and widely covered. For instance, according to the interviewees SMA and SMB the railway project remarks their affected stakeholder as near as six (6) meter from the railway track. The project owner adopted a standard practice that any community living or operating a business adjacent to the railway alignment and be potentially impacted by the construction must be kept informed of construction activities. The interviewees SMD and SMG agreed that they were well informed on the engagement and approached by the project owner before the project start through social media such as Twitter and posted notice. The earlier engagement period ran for 10 weeks include mail drops, number of open days and face-to-face meetings with stakeholders. By aligning and mapping the stakeholder could delineate the possible stakeholder involved and public those affected. The procedure of identifying the affected stakeholder should be certainly documented as a reference before acquisition can be made. As supported by Chinyio & Akintoye (2008) engagement of the stakeholder should embrace communication, involvement and developing stakeholder's integration. The roles and responsibilities of the stakeholders can have an impact on the level and time of involvement, and hence stakeholder with very little responsibility for the project can be involved at later stage of the project (Monczka et al. 2000). The infrastructure project

had to deal with various group of stakeholders, due to the nature of the project along its route of 51km. Awareness campaigns involving the public and the community is one of the approachable methods in engaging stakeholder earlier. Furthermore, stakeholders are likely to approachable by the project client through individual to structured group meeting, forum, workshop and special interest group meeting. To summarise the process of internal preparation and alignment at the planning stage of the railway project is shown in Figure 2:

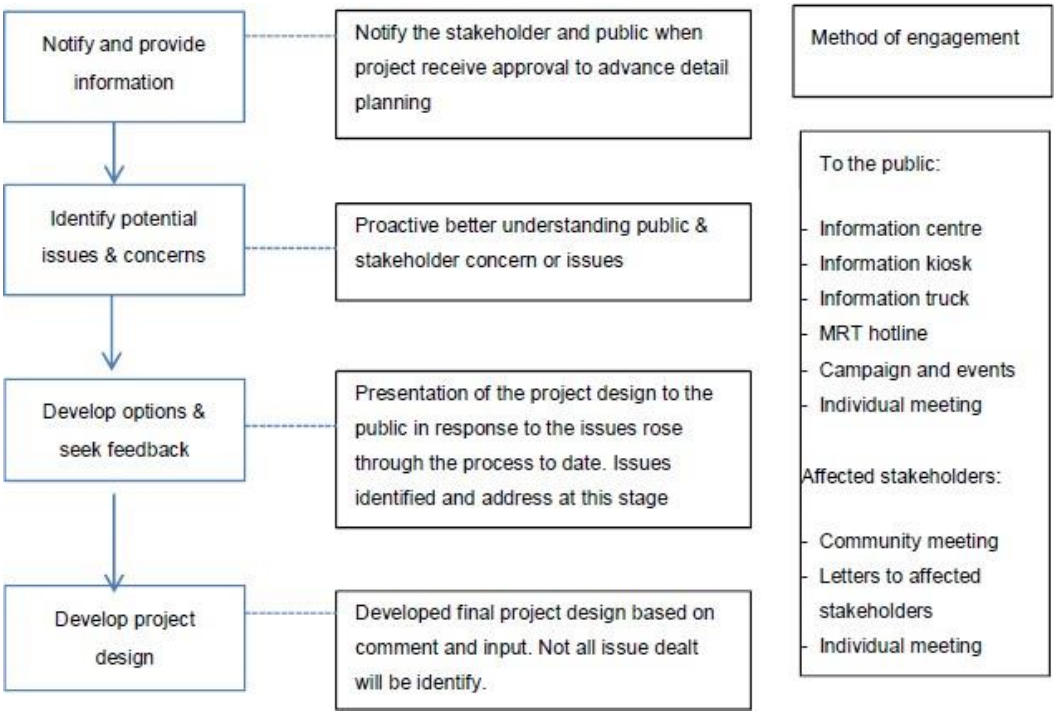

Fig. 2 - Process of initial preparation and alignment of stakeholder engagement

4.2 Consulting by Responding and Implementing

Albeit stakeholders are generally aware on the project, most of the external stakeholder felt that they were not consulted. Business trader of a railways project who's affected with the land acquisition voiced that they were given one month to evacuate and nothing about compensation quantified. SME and SMF represented the other opposed stakeholders which claimed that the previous project agency was not taken their consideration and complaint seriously back in 2010 when the project about to launch. Until new project structure formed in 2012 where the project asset owner takes over the engagement process. The rapid transit railway project consults the stakeholder by engaging them in open forum and stakeholder meeting. According to SMA, over 60 sessions of stakeholder meeting from various background of stakeholder and town hall gathering were set as channel for the communities to raise issues and give feedback so that the project owner can take the appropriate action to mitigate such inconvenience. Other method that the project owner of the agency consults through media, project website, call free phone line, open days and public meetings. Project owner aware that the stakeholder should be handling with diligence and trusteeship. Stakeholder in construction who have an interest in the project could legitimize the development if they allowed to cooperate and work together while trying to eliminate the power gap among the stakeholders (Storvang and Clarke, 2014). Therefore, delivery information and collaboration could enhance the exchange of knowledge among stakeholders and minimise stakeholder opposition through better stakeholder involvement (Deegan & Parkin, 2011), thus, might influence on the decision-making process. Therefore, project owner needs to build a continuous communicating platform during construction which helps to maintain a good relationship between project team and stakeholders.

4.3 Monitoring, Evaluating and Documenting

Closed monitoring and fast feedback meet the stakeholders' need. A closed monitoring practice and constant engagement with stakeholders has enabled the project owner of the urban railway project to resolve several critical issues. According to SMA and SMB during the period under review, the project owner managed to sign Mutual Agreements with the owners of all except one property at the historical building area, enabling them to coexist above the tunnel of the project. Stakeholders are aware and closely connected with the project through information centre, information kiosk, and information truck and hotline free call. Moreover, social media i.e Twitter, Instagram and Facebook has been used by the project owner and the stakeholder as a two-way communication channel and update on the project progress. The railway project has been used an extensive system call Compliant Management system (CMS) as a call centre where any

complaint can be made regarding the construction of the project and relevant activities affected to the stakeholder. Such systems will response to the complaint or any issues within 24 hours. According to the stakeholder some of the cases sometimes can be settled within two or three days. Others issues such land acquisition will directly channel to stakeholder management division of project owner's office. Monthly progress report, annual progress report and quarterly bulletin reported on the progress published to ensure what is happening at the current phase. This is aligned to Karlsen (2002) as following-up the success factors and activities introduced. In addition, Walker (2008) stated that monitoring could be carried out through regular meetings of stakeholder review. Thus, it is important to the project owner to have a standard database and enter all the stakeholders who reported or commented on the project. This will make it easy for the project owner to track the record.

4.4 Planning

Although there is stakeholder engagement and communication plan, the affected stakeholder told to be said that the project owner sometimes overlooks on the issues arose by the community from consultation during previous meeting. As for the railway project, the stakeholder suggests that more transparent engagement approach should be implemented. Most of the stakeholder involves to the project agree that the project should be transparent and effected community should be well informed (SMC, SMD, SME, SMF, SMG). One of the stakeholders were questioning the capability of the project owner in dealing with land acquisition of the business shop area. The landowner said that their properties were not included during the three-month public display of the railway project, while some of them had yet to receive official notices. Engagement process by planning stakeholder according to power and interest group, can produce a better scenario of how communication and relationships between stakeholders has affected the project and its implementation (Olander and Landin, 2005). Engaging with stakeholders without crating stakeholder fatigue given the significant planning process to the community of the project had been through. Well planned program and given space to stakeholder getting involved in construction is a key to achieving project success (Storvang and Clarke, 2014). Preparation to the group meeting, well informed the community and public, well assisted in stakeholder discussion regarding the proposed design, and continuous consultation program should be applied during the planning process of engagement.

5. Conclusion and Recommendation

This paper has focused on an improvement of engagement process in a mass rapid railway infrastructure project. Engaging stakeholders in large scale projects can be complicated and lengthy process. Thus, the engagement should start at the early preparation stage of the project. This paper conclude that the improvements can be made by initiating a proper internal early preparation process for the whole project by using appropriate tools, build a continuous communication platform, developed a standard database and continuous consultation program during planning process. Consequently, all of this is believed to be big influence in the decision-making process. The benefit of understanding the stakeholders leads to better outcomes as their need and interest can be used to develop solutions to project challenges. This study has its limitation as the empirical study was conducted for a mega-infrastructure railway project in Malaysia. Therefore, findings may reflect the stakeholder engagement process in this region. In future, similar studies will be been carried out in other project to validate and compare with the finding in this paper.

Acknowlegement

This research was supported by the Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Shah Alam, Malaysia.

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