



# FACILITATING COMMUNITY PARTICIPATION THROUGH CROWDSOURCING IN URBAN PLANNING PROCESSES: AN EXPLORATORY STUDY

Lindelwa SINXADI<sup>1</sup>

<sup>1</sup>Department of Information Technology, Central University of Technology, Free State, South Africa

Email: [Tobam@cut.ac.za](mailto:Tobam@cut.ac.za)

## ABSTRACT

Fostering community participation by planners in South African municipalities poses a challenge during planning processes. Different levels of public apathy have been observed, and they continue to undermine the quest of municipalities to provide sustainable neighbourhoods. Also, value conflicts from different urban stakeholders resulting from this apathy can be ameliorated through improved participation of the communities in the planning processes. In bridging this gap, the paper seeks to explore different Crowdsourcing techniques to be employed in Mangaung to enable urban stakeholders' participation in planning projects. As such, crowdsourcing, as a new web-based business model, is inclusive in the 4<sup>th</sup> Industrial Revolution and can be used as the best solution for community participation in planning projects. Based on the foregoing, this paper employs a case study research design and a coterie of techniques: semi-structured interviews and document reviews for data elicitation. Interviewees comprise of purposively recruited town planning and other municipal officials involved in planning projects. The emergent data will be analysed thematically. Expectedly, the findings hold immense implications for planning practitioners as well as other professionals and policymakers working within the urban planning and socio-economic development praxes in South African Municipalities.

**Keywords:** Community participation, Crowdsourcing, Problem-solving, Value conflicts

## 1. INTRODUCTION

Facilitating community participation in municipalities poses a challenge for planners. As such, due to ineffective communication between the urban stakeholders and non-involvement of community members in planning projects, planners have difficulty achieving the key objectives of planning, namely, creation of sustainable neighbourhoods. Community participation is a significant element in achieving sustainable development and is viewed as a process of a group of procedures aimed at the consultation, involvement and rendering information to the community for them to take part in decision making (Alexander, 2008; Mahjabeen, Shrestha and Dee, 2009; Rowe and Frewer, 2000). Also, it forms part of the democratic process as it involves the community in the planning process in order to achieve the key objectives of planning. Ertiö (2015) acknowledges the democratic respect for citizen's preferences but also indicates that the public apathy cause challenges in community participation. These challenges include the time and costs of the process of community participation. In addition, Innes and Booher (2004) allude that planners do not conduct the process of community participation in an effective way. Despite the challenges encountered using the traditional approach of community participation, it still continues to underpin the

contemporary approach of community participation. The corrective measure for this shortcoming was the implementation of communicative planning theory which substituted the rational planning theory. This came with new methods in planning which introduced promotion on the interaction of planners and the community (Ertiö, 2015). Experts and non-experts engage in creative problem-solving processes in planning. In this process, collaboration and inclusion of non-experts, namely, community members, get to provide new knowledge and contribute new perspectives to the planning process. They are also bound to rediscover creative solutions. Effective community participation involves ICT driven techniques such as consultation, giving report and visioning. There is an increasing interest in using innovative online problem-solving techniques in engaging different urban stakeholders in planning projects. Brabham (2009) emphasise that planners are faced with challenges on how to implement community participation in planning projects. As such, a crowdsourcing business model, which is a Web-based, distributed problem-solving and productive model for business is also suitable for community participation process in planning projects. Howe (2006) define crowdsourcing as a new web-based business model that harnesses the creative solutions of a distributed network of individuals through what amounts to an open call for proposals. Different crowdsourcing techniques can be employed in fostering community participation in planning projects.

To achieve its objective, the study answers two research questions, namely; What are the probable factors affecting its successful implementation in urban planning projects? And, what are the key planning challenges affecting community participation process in Margaung? The rest of the paper is structured as follows: a theoretical perspective based on the concept of community participation; crowdsourcing in community participation; justification of research methodology deployed; presentation and discussion of findings section, and the conclusion.

## **2. THEORETICAL PERSPECTIVE**

In this section, the extant literature concerning the fostering of community participation process through crowdsourcing by planners in the urban context and contributions thereof to the concept of creating sustainable communities is reviewed.

### **2.1 Defining community participation in urban planning**

Community participation has recently become a debated thought in planning and is defined differently by various scholars. It is found at the core of communicative planning theory in decision-making process where different urban stakeholders are involved. Community participation is seen as a process that is central to planning as it promotes democracy, justice and sustainability. It plays a significant role in achieving sustainable development (Alexander, 2008; Mahjabeen et al., 2009). It involves consultation, stakeholder involvement and information sharing conceptualisation, implementation, monitoring and evaluation in planning projects. This direct involvement pertains to planning, governance and development aspects at the grassroots level (Mafukidze and Hoosen, 2009). This implies that the direct engagement of the community by the planners in planning and implementation is vital. Better communication and effective community participation will increase cooperation among the planners and the community. This can be achieved through empowerment and mutual understanding and trust in the participation process. The needs and the values of the community must be taken into account and must form an integral part of decision-making (Ismail and Said, 2015). Filho et al. (2019:679) indicated that planning for sustainable development requires a vision which focuses on changing the development to be better, and a strategy for the vision must be developed. According to the Guide on public participation in the public service (RSA, Department of Public Service and Administration, 2014), community participation is beneficial to all citizens in that:

- It plays a role in the enhancement of the quality and legitimacy of decisions taken by different stakeholders in planning processes.
- It prohibits conflict between stakeholders, which can lead to protests at the municipal level.
- It allows different stakeholders an opportunity to voice their concerns in issues affecting their well-being.
- It assists stakeholders to attain skills that include active listening, problem-solving and creative thinking that they can use in other areas of their lives.
- It permits openness and responsibility and promotes a higher quality of democracy in South Africa.
- It boosts trust and confidence for all the decisions taken by the government, including different programmes.

To achieve this, all the urban stakeholders involved in planning projects must work as a team in order to reach a common goal of understanding the significance of community participation.

Based on the pioneering work of Arnstein (1969), the “Ladder of Participation” consisting of different levels of participation was developed. These levels of participation are a result of social and political turmoil and critiques on how planners and policymakers handled community participation. The “Ladder of Participation” is categorised into non-participation (therapy and manipulation which is associated with blueprint planning), degree of tokenism (placation, consultation and informing which is associated to synoptic planning) and degree of citizen power (citizen control, delegated power and partnership associated with pluralistic planning). The planner and the community members are involved in all the levels of participation. Under the non-participation level, the community is restricted to form part of the decision-making process, but a planner is given an opportunity to educate the community. Mahjabeen et al. (2009) restate that those in power attempt to educate the community but they become inactive in decision making. Furthermore, the level of the degree of tokenism stems from informing, consultation and placation. The community is given information and are granted an opportunity to raise their voice, but they have no power and participation is restricted (Arnstein, 1969). Consultation is dominant in community participation as it is used as a tool to gather information from the community regarding the proposals of the programmes to be considered. Community members can advise during the consultation but denied participation during decision-making (Lane, 2005; Mahjabeen et al., 2009). Arnstein (1969) further alludes that partnership, delegated power and citizen power form part of the level of the degree of citizen power. At this level, the community is fully engaged in participation and decision-making processes. This level is significant in planning processes as community members are made to understand all the planning projects processes. This promotes collaboration amongst the community members, planners and ward councillors. Complete participation of the community helps different stakeholder in planning to analyse and give solutions to challenges faced within urban areas. From the foregoing, a good working relationship among the planners and other urban stakeholders involved in planning projects is established, and this creates a proper way which is more responsive to the needs of the community (Shuib, Hashim and Nasir, 2015; Ismail and Said, 2015; Aitken, 2010). Towards improving the community participation process, Wamsler (2016) adds that implementation of crowdsourcing in planning community participation serves as an innovative planning solution that will enhance communication and collaboration between the urban stakeholders involved in planning projects.

## **2.2 Connecting the dots between crowdsourcing and community participation in urban planning**

### *2.2.1 Understanding Crowdsourcing in community participation*

The term “crowdsourcing” was primarily developed in the business field but has emerged to be applied in various fields. It was first coined by Jeff Howe in June 2006, in his article “The Rise of Crowdsourcing” and a blog was also launched, namely; “Crowdsourcing: Tracking the Rise of the Amateur” (Brabham, 2013). Crowdsourcing is described as a new Web-based business model that draws a network of individuals to participate in an open call for proposal for creative solutions. It refers to the utilisation of different technologies with the aim of gathering information from different stakeholders to solve problems. Brabham (2013: xix) defines crowdsourcing as “an online, distributed problem-solving and production model that leverages the collective intelligence of online communities to serve specific organisational goals. Online communities, also called crowds, are given the opportunity to respond to crowdsourcing activities promoted by the organisation, and they are motivated to respond for a variety of reasons”. Brabham (2009) demonstrated that crowdsourcing could be employed in community participation in public policy processes. It has been employed in various disciplines such as medicine, art, journalism, finance. It has also been used in urban planning in the form of engaging community members regarding the township developments in the neighbourhoods (Nguyen et al., 2016). Continuing, Brabham (2013) indicates crowdsourcing is not possible for all the processes but emphasise that the conditions under which it can be used can be technical and conceptual. Technically, the internet and other new technologies can be used as methods to engage in a participatory culture. These give access to new space for creative endeavours, information-sharing, active interaction and business. Conceptually, crowdsourcing relates to the problem-solving and innovative processes where the crowd is involved in interacting. As a problem-solver, crowdsourcing enables the organisation to discuss the problem online in order to get innovative ideas from the crowd. Under crowdsourcing, there is user innovation and open innovation. In urban planning, the crowdsourcing involves the planners and the community members involved in planning projects. Peng et al. (2015) and Nguyen et al (2016) add that crowdsourcing is an effective way of solving challenges by involving stakeholders’ contributions. Participants are able to collaborate online in order to produce a solution to the challenge encounters. The community is able to engage in any discussions online and can proposed solution, this exercise can be used to engage the community members in discussions regarding the development of the sustainable neighbourhoods.

According to Hossain and Kauranen (2014), community participation forms the integral part of urban planning, whereas crowdsourcing is applicable to urban planning projects. Crowdsourcing allows the community to be engaged in innovative ideas and problem-solving. Connecting the dots, community participation used through crowdsourcing, involves large numbers of people and it permits an open dialogue between the community and the decision-makers. Examples of crowdsourcing via community participation includes the Obama administration where the community get involved in the number of community affairs. Crowdsourcing replaces the old traditional ways such as questionnaires and public hearings because they are time-consuming and costly for the municipality (Liao, 2019; Hossain and Kauranen, 2015). Crowdsourcing via community participation is simple, cost-effective and generalised because it mostly engages the community via information gathering through social media. Crowdsourcing performed through online participation tools allows the community to engage in problem solving and give feedback without any higher costs (Mueller et al, 2018). A widespread of technologies such as the Internet, mobile phones and urban planning apps for planning projects have been used for community participation. In addition, crowdsourcing is appropriate in community participation for urban planning

projects as it brings all the urban stakeholders affected by the development project (Brabham, 2009; Haltofova, 2018).

### *2.2.2 How do we crowdsource community participation in planning projects?*

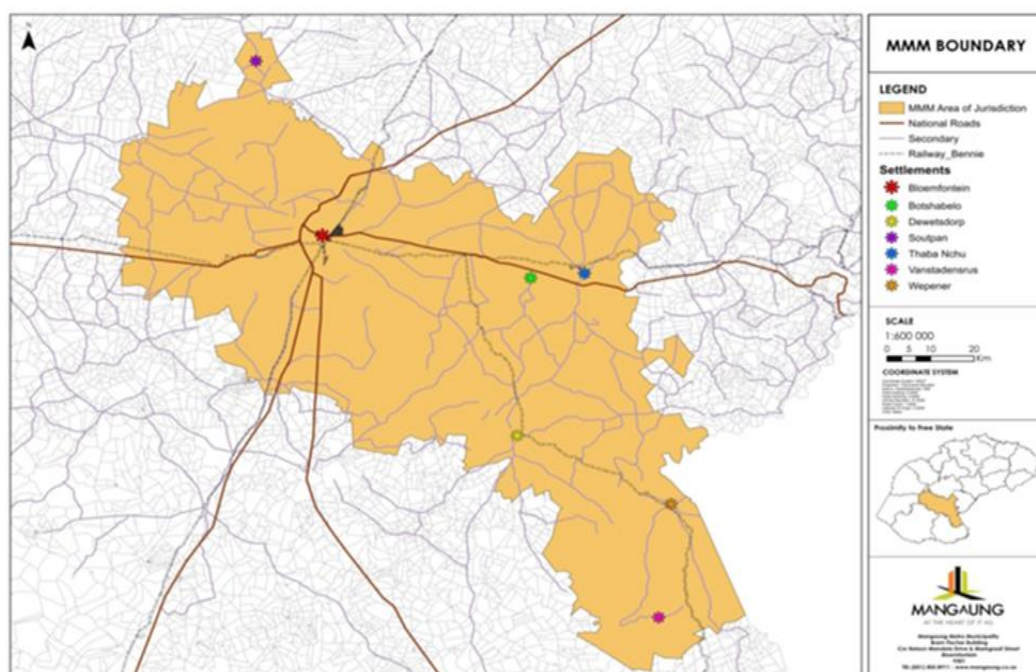
Community engagement and gathering information are two sides of the same coin in urban planning. Non-participation of the community in planning projects lead to ineffectiveness of community participation process and challenges in proper implementation for development plans (Liao et al., 2019). Brabham (2009) alludes that planners face challenges on how to implement community participation in planning projects. A crowdsourcing model, which is a Web-based, distributed problem-solving and productive model for business, is also suitable for community participation in planning projects. Community participation forms part of the democratic process as it involves the community in planning process in ensuring that they form part of the creation of sustainable communities. It involves different urban stakeholders, that is, experts and non-experts to engage in creating problem-solving process of planning. In this process, collaboration and inclusion of non-experts, which in this case is the community, get the opportunity to provide new knowledge and contribute to new perspectives to the planning process. Community members are also bound to rediscover creative solutions to planning projects. In planning projects, different urban stakeholders are involved, and their engagement is important.

Stakeholders are described as individuals who have an interest or are influenced by a certain undertaking. Stakeholders are classified as (i) those who affect the project; (ii) those who are affected by the projects; and (iii) those who are interested in the project (Walker, Borne and Rowlinson, 2008). From the urban planning perspective, Campbell (2016) alludes that urban stakeholders refer to a group of individuals with different backgrounds, roles and expertise. They also represent different aspects of urban complexity. In continuance, Campbell (2016) indicates two groups of urban stakeholders in urban planning processes. One group of stakeholders is involved in the delivery of the project and involve experts such as urban planners, project managers, developers, investors, environmentalists and human settlement practitioners. Another group of stakeholders may be directly or indirectly affected by the planning process. This group of stakeholders include community members who are non-experts. Researchers and the potential users of future projects also form part of the urban stakeholders. All the different urban stakeholders share a common interest in the creation of communities as they are involved in planning projects. Notably, the different urban stakeholders have different values or perceptions of urban land where the development projects are to be implemented. These are influenced by how they engage in the existing spatial patterns within the urban context and this leads to value conflicts regarding the planning projects (Mathur, Price, Austin and Moobela, 2007; Carmona, De Magalhães and Edwards, 2002).

How then do we crowdsource community participation in planning projects? Brabham (2013) states that crowdsourcing takes place when the organisation has a task to perform, when the community voluntarily perform the given task online and when there is a mutual benefit for the organisation and the online community. Each initiative of crowdsourcing in community participation focus on the basic components, namely; the organisation that benefits from the crowd, directly or indirectly; participants involved in crowdsourcing; and the crowdsourcing platform that links the organisation and the crowd. In this case, the organisation is the local government, participants refer to the community members who are affected by the projects, and the platform is the crowdsourcing technology to be employed (Schenk and Guittard, 2011; Zhao and Zhu, 2014; and Aitamurto, Landemore and Saldivar Galli, 2017).

### 2.3 Community participation in Mangaung

For many years, community participation has been a challenge in Mangaung Metropolitan Municipality (MMM), Free State in South Africa, for both the planner and the community members (Fig 1). Fostering of community participation by planning in the municipality poses a challenge in planning processes. As such, the municipality is faced with different levels of public apathy which continues to undermine the quest of the municipality to create sustainable neighbourhoods. For instance, in Mangaung townships, most urban public open spaces are encroached for residential purposes, and this is a result of ineffective community participation processes. This has affected the spatial patterns of urban land use. In addition, the municipality does not have robust frameworks for mainstreaming planning, implementation, education, empowerment and effective communication to ensure improved levels of community participation. Human, Marais and Botes (2009) state that community participation is the issue of compliance and procedure during the Integrated Development Planning (IDP) process. Mangaung has a policy of community participation which is only operational annually during IDP process. With planning projects such as township establishments or rezoning applications, the municipality outsources the projects to planning consultants. As such, community participation is viewed as an event, not a process that helps build good relations between the municipality and planners. In some planning projects, only the ward councillors and ward committee members receive education or consult with the planners regarding planning applications. The level of representation is minimal, and few voices are heard. Policy documents and literature suggest that procedural guidelines for community participation should be utilised properly. Also, creative and effective ways for community participation should be employed, and the methods on how the community inputs should be structured to strengthen the planning process are crucial (Constitution, RSA, 1996; Municipal Systems Act, RSA, 2000; Human et al., 2009). Therefore, the municipality needs to improve the level of community participation process for urban planning project, and this can be ameliorated through the medium of Web, that is, the crowdsourcing model.



**Figure 1.** Map of Mangaung Metropolitan Municipality, Free State in South Africa (MMM IDP: 2017/18)

### 3. RESEARCH METHODOLOGY

The study seeks to explore different crowdsourcing techniques that can be successfully employed in the Mangaung Metropolitan Municipality, Free State Province of South Africa, in enabling the urban stakeholders to participate in planning projects. A qualitative case study research design was adopted in this study. A case study research design allows the researcher to explore a contemporary bounded system through detailed, in-depth data collection (Creswell and Poth, 2018). The choice of case study research design availed the researcher with an opportunity to deploy a plethora of techniques for data elicitation. In this instance, the researchers collected data from different stakeholders using semi-structured interviews, personal observations and document reviews. It is imperative to mention herein that the study is still ongoing, and the researcher proposed a framework to be used by planners in implementing community participation effectively. The proposed framework for the study was validated by the planners in Bloemfontein, both from private and public institutions. Semi-structured interviews, as a data collection technique, is based on similar and not identical questions being asked to the same sample size (Bernard and Ryan, 2010). Table 1 below illustrates the demographics of the interviewees who participated in framework validation.

**Table 1.** Interviewee demographics

Organisation and division	Position	Gender
Town and Regional Planning (MMM)	Town Planner 1	Female
	Town Planner 2	Male
	Town Planner 3	Male
Human Settlement (MMM)	Acting General Manager	Male
Town planning consultants	Professional planner 1	Male
	Professional planner 2	Male
	Professional planner 3	Male
	Professional planner 4	Female
	Candidate planner 1	Female
	Candidate planner 2	Male
	Candidate planner 3	Male

Source: Authors' fieldwork (2020)

In this case, individual semi-structured interviews were conducted with purposively recruited town planning professionals from both the private and public sector. A total of eleven (11) interviewees gave permission for the interview and the validation of the proposed framework for effective implementation of community participation. The questions posed for data collection focused on gaining knowledge regarding the level of collaboration among the different urban stakeholders, the level of representativeness of the population and the nature of the community participation process. The interviews and discussions were recorded using a voice recorder with the consent of the interviewees and subsequently transcribed. The interview protocol for the framework validation was also distributed amongst the planners. Relying on predetermined themes, the accruing data were analysed by identifying excerpts from the transcripts which were aligned with predetermined themes.

#### 4. FINDINGS AND DISCUSSION

Findings emanating from the study are discussed according to predetermined themes resulting from the study's guiding research question: What are the probable factors affecting its successful implementation in urban planning projects? And, what are the key planning challenges affecting community participation process in Mangaung? The two selected themes for the discussions are (1) Probable factors influencing successful implementation of community participation in planning projects; and (2) Absence of robust frameworks for improved levels of community participation.

##### 4.1 Theme 1: Probable factors influencing successful implementation of community participation in planning projects

###### 4.1.1 *Extent of community participation*

The Batho Pele Principles (RSA, 1997) indicate that the community should be consulted about the planning aspects affecting their livelihoods. Municipalities must build partnerships with the communities and be transparent. The voice of the community must be heard. The question remains: Who are the participants of community participation and how are they selected? Are their voices heard? The Batho Pele Principles (RSA, 1997) further states that the consultation of the community members in planning projects aspects has an impact on their sustainable livelihoods. The municipalities are therefore expected to be transparent, and it is crucial that the voice of the community is heard. Lalicic and Önder (2018) view community members as urban stakeholders to be involved in all planning projects. This is motivated by their own knowledge and experience from their environment. In addition, the level of representation of the community is crucial, especially during the initial stages of the planning projects. This can curb the incidence of challenges faced by both the planner and the community. Delitheou et al. (2019) emphasise that the engagement of the community is crucial as they show a willingness to participate in planning projects. The community participation, through the crowdsourcing process, assist the community in presenting their ideas regarding the projects at hand. According to the interviewees, for most of the planning projects, especially the upgrading of informal settlement upgrading projects, only the ward councillors and the ward committee members are involved. One of the interviews indicated that most of the planning projects of MMM are outsourced and to town planning consultants who then handle community participation. One of the consultants interviewed mentioned that the incorporation of the community is kept minimal or none at all. Mention was made that the planners sometimes fear the community objections. Therefore, they try to minimise the interaction. From the documentary analysis, community participation is mostly done during the Integrated Development Plan (IDP) review, and this leads to the minimal representation of the urban stakeholders involved in planning projects. The community disengage from the planning process because of lack of interest and knowledge. There is a lack of proper education regarding the processes undertaken in planning projects. Gathering from the foregoing information, no proper consultation is done, and there are no proper guidelines or frameworks used in engaging the community in the development application processes. Konsti-Laakso and Rantala (2018) emphasise the importance of engaging the community and use of transparent processes for engagement of all urban stakeholders. In this way, the planner can achieve the key objectives of planning, namely, creation of sustainable neighbourhoods.

###### 4.1.2 *Nature of the community participation process*

The nature of community participation relies on the nature of the organisation and mobilisation at the grassroots level. Considering the communicative planning theory, community participation is inclusive of different urban stakeholders who must form part of



decision-making processes. Community members have the right to form part of decision-making in planning projects, and they are bound to bring forth better solutions (Wilson, Hannington and Stephen, 2015; Lalicic and Önder, 2018) Community participation promotes democracy, justice and sustainability, consensus building and information sharing among the stakeholders. Community participation serves as a guide in promoting the engagement of the community in governance (Mafukidze and Hoosen, 2009). The Municipal Systems Act of 2000 (RSA, 2000) enforces the culture of community participation in municipalities. This is regarded as the platform for the community to engage in the affairs of the municipality. The South African government documented policies that guide community participation, and these include the Constitution of 1996, Municipal Systems Act of 2000, Municipal Structures Act of 1998, Municipal Finance Management Act of 2003 and the Intergovernmental Relations Framework Act of 2005. SPLUMA (RSA, 2013), an Act that is related to spatial planning and land use management also emphasise that community participation is crucial. In this instance, community participation relates to good administration as the development principle. Good administration states that all policies, legislation and all-planning processes must inform and empower the community. Also, it promotes the coordination of all spheres of government so that there is an integrated approach to spatial planning and land use management. Good administration promotes transparency in community participation, and it is also inclusive on the preparations and amendment of the spatial plans, land use schemes and the procedures undertaken in development applications (SPLUMA, 2013).

In the MMM planning projects, the interviewees indicated that the municipality has a policy on community participation which provides the procedure for effective participation. The main challenge is that community participation remains the issue of compliance when it comes to other projects undertaken by the municipality. It is further stated that most planning projects are outsourced to the consultants who are sometimes not familiar with the area. Even though these policy documents provide procedural guidelines for community participation, the literature suggested that guidelines should include mechanisms to be used for community participation, creative ways for effective community participation which will suit the nature of the municipalities, and ways on how the community inputs should be structured in order to strengthen the planning process (Human et al., 2009). In addition, to improve the level of community participation, different innovative techniques such as crowdsourcing can be implemented by the municipality.

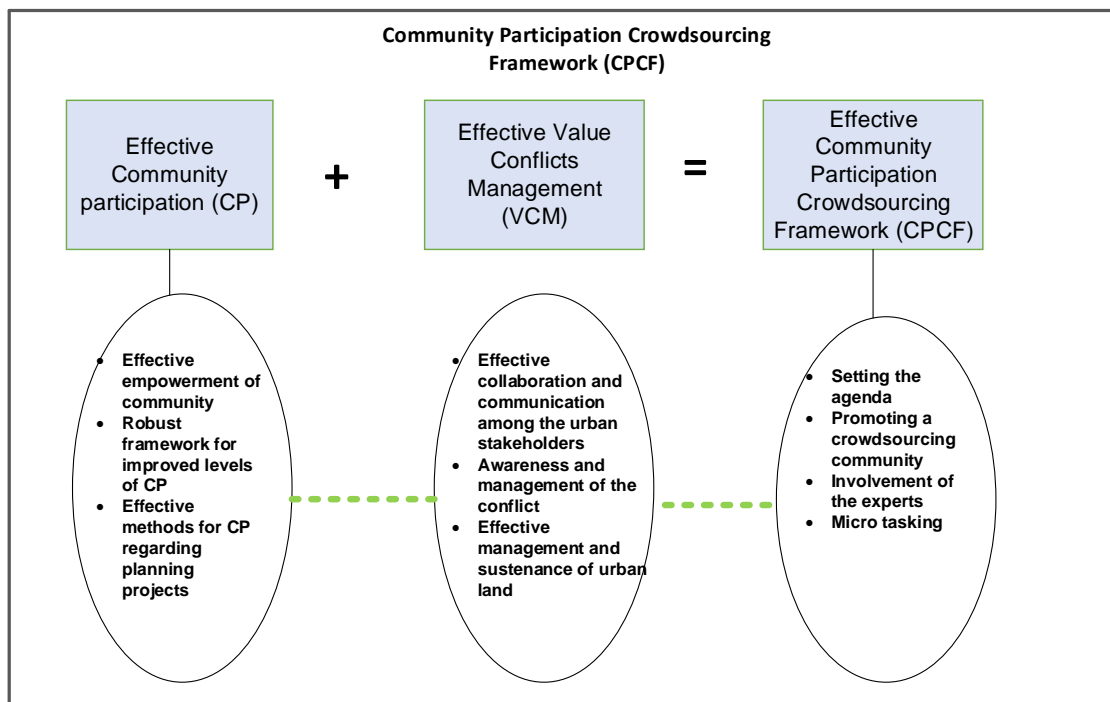
#### **4.2 Theme 2: Absence of robust frameworks for improved levels of community participation**

In the planning domain, community members form part of the planning processes and decision-making. SPLUMA (RSA, 2013), which is related to spatial planning and land use management promote community participation as a form of empowerment for the community members. Hassan, Hefnawi and Refaie (2011) proposed the following strategies that can be used in the participation process, both at the international and national level: (i) implementing small projects that will be provided during the preparatory phase of the project; (ii) formulating budgeting workshops which will assist the citizens with better opportunities for accessing the services, this can be done through the strategy formulation phase; (iii) conducting workshops that will enhance the learning capacity of the participants; and (iv) sustaining communication channels by allocating more time and resources for all stakeholders. These strategies will enhance transparency, and partnership between stakeholders and decision-making can be implemented with team effort (Hassan et al., 2011). From the interviews, in most cases, community participation is not done, community members are only informed of the development. One of the interviewees indicated that this impacts negatively because educational awareness is not done for the community. Public notices, in terms of the advertising the land use application, are used, but they do not mean anything to the community. The by-laws of the municipality include different activities for

community participation, but it is not ideal, especially in developments taking place at the township. No proper consultation is done for planning projects, and there are no proper guidelines of robust frameworks that are used in engaging the community in the development application processes. Observing the challenge for effective community participation in the municipality due to lack of guidelines or framework for conducting the process in planning project, the author proposed a framework, namely, Community Participation Crowdsourcing Framework (CPCF) which was given to the planners for validation and they rendered their inputs and recommendations. The CPCF is illustrated in Figure 2 below.

*4.2.1 Proposed Conceptual Framework – CPCF*

Howe (2008) alludes that crowdsourcing includes an umbrella of approaches, and it is important to focus on the basic strategies when choosing a suitable model to apply it. This can include the “who”, “what” and “how” aspects, hence the proposed framework. The CPCF is a proposed framework that includes community participation, value conflicts of different urban stakeholders involved in planning projects and crowdsourcing. Effective community participation and value conflict management can lead to effective community participation crowdsourcing. Aspects under this framework are recommended for use by planning professionals and other practitioners that are involved in planning projects.



**Figure 2: Proposed Conceptual Framework**  
Author’s construct (2020)

*4.2.2 Application of the Proposed Conceptual Framework*

The CPCF is developed for the planning practitioners based on the optimal levels of community participation in planning projects. Due to ineffective community participation and different value conflicts of different urban stakeholders for planning projects, it becomes difficult for the urban planner to achieve the key objectives of planning, that is, creation of sustainable neighbourhoods. Understandably so, focusing on the application of the

framework, there are implications and limitations as the framework might not be implemented immediately, but rather to integrate the framework with the Capability Maturity Model that has been used in carrying out projects in different disciplines such as engineering and construction, amongst a few. The idea of connecting community participation and crowdsourcing in planning projects is to decentralise decision-making where the community is involved in assisting in solving problems, generate ideas and data and have their voice heard. Crowdsourcing represents a more inclusive form of governance as it incorporated different urban stakeholders. When the community members are involved in planning projects through crowdsourcing, new opportunities for urban planners are created. Furthermore, the credibility of the use of crowdsourcing in urban planning projects is crucial because inaccurate information can impact negatively on the projects. The methods or techniques to be used for effective crowdsourcing process includes agenda setting, encouraging the community to be involved in decision making, the involvement of the experts and micro-tasking. Setting the agenda in crowdsourcing process, the community must prioritise their challenges, and this will help them to be engaged in what they are interested in and will enhance participation. Their ongoing engagement will, therefore encourage the crowdsourcing community as the community will be working on what interests them. At this stage, the urban planner would have gained the trust of the community, and this can extend to the engagement of more people. In addition, an urban planner must be ready to respond quickly to the questions asked and provide feedback. This will therefore encourage the participation on the platform. With micro-tasking, large tasks are divided into small tasks, Wikipedia can be utilised to add information to create a database of information.

#### *4.2.3 Validation of the framework*

An interview protocol designed by the researcher was sent by email to the eleven (11) research participants. The protocol outlined the relationship between community participation, value conflict management and crowdsourcing. The participants were requested to indicate if these factors are imperative for effective community participation through crowdsourcing in planning projects. Also, the participants were required to make a contribution based on their responses, including the recommendations. Planning practitioners from the public and private sector institutions were the selected urban stakeholders for framework validation. Selection of the participants was based on the experience, expertise, roles and responsibilities in land use management applications. From the responses, all participants agreed that the three concepts of CPCF are imperative for effective community participation through crowdsourcing in planning projects. For effective implementation of the framework, the respondents rendered the following contributions:

- (i) The introduction of a framework specifically for community participation would be valuable for the planning field, especially one that deliberates on empowering participants and other stakeholders to decide on issues to be addressed as well as giving them decision making power.
- (ii) The community choices, decision-making power and proper implementation of the decisions taken can promote participation in planning projects.
- (iii) Sense of ownership within the community is crucial. It establishes the satisfactory level of the participant. Evaluation of the urban stakeholder satisfaction levels in relation to the CP process must be taken into consideration.
- (iv) Review of legislation to promote accountability and management. The framework must be applied as a planning tool instead of serving as compliance in planning projects.
- (v) The involvement of all urban stakeholders involved in the planning will unlock the citizen's creativity and use of power to solve problems encountered in land-use projects.

- (vi) For successful implementation, communities must be trained on the process of crowdsourcing. Access to resources for implementation or engagement of the community must be taken into account.
- (vii) The effective use of the framework will allow flexibility and break up the routine of traditional ways of CP.
- (viii) In implementing the framework, a strong working relationship amongst all the urban stakeholders must be promoted, and the evidence of expanded networks plays a crucial role in planning.

## 5. CONCLUSION AND RECOMMENDATION

Community participation and crowdsourcing can be implemented in planning projects. These processes involve the different urban stakeholders who are experts and non-experts in urban planning. The study sets out to explore different Crowdsourcing techniques to be employed in Margaung to enable urban stakeholders' participation in planning projects. Again, the focus is on the effective implementation of the proposed framework (CPCF) by different urban stakeholders in planning projects. The framework was validated by professional planners from both private and public sector institutions. The findings confirmed that the planners understand the proposed framework and its application during the CP processes. However, they rendered contributions to the framework, which will assist both the planner and the community. From their inputs, it was suggested that a strong working relationship between all the urban stakeholders would ensure effective implementation of the framework. Emphasis was the involvement of the community in decision-making and ensuring that there is an implementation based on the decisions taken with the community. Legislation has to be reviewed to avoid compliance by planners. It is expected that the study's findings hold immense implications for planning practitioners as well as other professionals and policymakers working within the urban planning and socio-economic development praxes both within the province and beyond.

## 6. REFERENCES

- Aitamurto, T., Landemore, H., and Saldivar Galli, J. (2017). Unmasking the crowd: participants' motivation factors, expectations, and profile in a crowdsourced law reform. *Information, Communication and Society*, 20(8), 1239–1260.
- Aitken, M. (2010). A three-dimensional view of public participation in Scottish land use planning: Empowerment or social control? *Planning Theory*. University of Edinburgh. UK. Sage.
- Alexander, E. (2008). Public participation in planning – A multidimensional model: The case of Israel. *Planning Theory and Practice*, 9(1), 57-80.
- Arnstein, S.R. (1969). A ladder of citizen participation. *Journal of the American institute of Planners*, 35(4), 216-224.
- Bernard, H. R., Ryan, G. W. (2010). *Analysing qualitative data: Systematic approaches*. California. SAGE Publications. Incorporated.
- Brabham, D.C. (2009). Crowdsourcing the public participation process for the planning projects. *Planning Theory*. 8(3), 242-262.
- Brabham, D. C. (2013). *Using Crowdsourcing in Government*. IBM Center for the Business of Government.
- Campbell, L. (2016). Stepping back: understanding cities and their systems. In: ALNAP Working Paper. ALNAP/ODI, London.
- Carmona, M., De Magalhães, C., Edwards, M. (2002). Stakeholder views on value and urban design. *J. Urban Design*. 7(2), 145–169.

- Creswell, J.W., Poth, C.N. (2018). *Qualitative Inquiry and Research Design: Choosing among the Five Approaches* (4th ed). Thousand Oaks, CA: Sage.
- Delitheou, V. Bakogiannis, E and Kyriakidis, C. (2019). Urban planning: integrating smart applications to promote community engagement. *Heliyon*. 5, 1-8. e01672.
- Ertiö, T. (2015). Participatory Apps for urban planning – Space for improvement. *Planning Practice and Research*. 30(3).
- Filho, W.L., Skanavis, C., Kounani, A., Brandli, L.L., Shiel, C., Do Paco, A., Pace P., Mifsud, M., Beynaghi, A., Price, E., Salvia, A.L., Will, M. and Shula, K. (2019). The role of planning in implementing sustainable development in a higher education context. *Journal of Cleaner Production*, 235:678-687.
- Haltofova, B. (2018). Using Crowdsourcing to support civic engagement in strategic urban development planning: A Case of Ostrava. Czech Republic. *Journal of Competitiveness*. 10 (1), 85-103.
- Hassan, G.F., Hefnawi, A.E. and Refaie, M.E. (2011). Efficiency of participation in planning. *World Pumps*, 50(2), 203-212.
- Hossain, M. and Kauranen, I. (2015). Crowdsourcing: A comprehensive literature review. *Strategic Outsourcing: An International Journal*. 8(1), 2-22.
- Howe, J. (2008). *Crowdsourcing: How the power of the crowd is driving the future of the business*. New York: Crown.
- Human, F., Marais, L. and Botes, L. (2009). Missing the boat? Community participation in the integrated development planning process in the Free State, South Africa. *Journal for Development Support*, 1,1-32.
- Innes, J.E and Booher, D. (2004). Reframing public participation: strategies for the 21st century. *Planning Theory and Practice*, 5(4), 419-436.
- Ismail, W.A.W and Said, I. (2015). Integrating the community in urban design and planning of public spaces: A review in Malaysian cities. *Procedia – Social and Behavioural Sciences*, 168:357-364.
- Konsti-Laakso, S. and Rantaal, T. (2018). Managing community engagement: A process model for urban planning. *European Journal of Operational Research*, 268: 1040-1049.
- Lalicic, L. and Önder, I. (2018). Residents' involvement in urban tourism planning: Opportunities from the smart city perspective. *Sustainability*, 10(1852),1-16. doi:10.3390/su10061852.
- Lane, M. (2005). Public participation in Planning: an intellectual history. *Australian Geographer*. 36: 283-299.
- Liao, P., Wan, Y., Tang,P., Wu, C., Hu, y. and Zhang, S. (2019). Applying crowdsourcing techniques in urban planning: A bibliometric analysi of research and practice prospects. *Cities*, 94, 33-43.
- Mafukidze, J.K. and Hoosen, F. (2009). Housing shortages in South Africa: A discussion of the after-effects of community participation in housing provision in Diepkloof. *Urban Forum*. 20:379-396.
- Mahjabeen, Z., Shrestha, K.K. and Dee, J.A. (2009). Rethinking community participation in urban planning: The role of disadvantaged groups in Sydney Metropolitan Strategy. *Australasian Journal of Regional Studies*, 15(1), 45-63.
- Mangaung Metropolitan Municipality (2017). *Integrated Development Plan 2017/18*. Bloemfontein
- Mathur, V.N., Price, A.D.F, Austin, S.A., and Moobela, C. (2007). Defining, identifying and mapping stakeholders in the assessment of urban sustainability. In: *International Conference on Whole Life Urban Sustainability and Its Assessment*, Glasgow.
- Mueller, J., Lu, H., Chirkin, A., Klein, B., and Schmitt, G. (2018). Citizen design science: A strategy for crowd-creative urban design. *Cities*, 72, 181-188.
- Nguyen, C., Tahmasbi, N., de Vreede, T., de Vreede, G. J., Oh, O., and Reiter-Palmon, R. (2016). A Definition of Community Crowdsourcing Engagement and Application. In

- Blurring the Boundaries Through Digital Innovation. Springer International Publishing. 283-296.
- Peng, J., Zhu, Y., Shu, W., Wu, M.Y. (2016). When data contributors meet multiple crowdsourcers: Bilateral competition in mobile crowdsourcing. *Computer Networks*. 95:1-14.
- RSA (Republic of South Africa) (1996). Constitution of the Republic of South Africa. Cape Town: Government Gazette.
- RSA (Republic of South Africa) (2000). Municipal Systems Act, Act 32 of 2000.
- RSA (Republic of South Africa) (2013). Spatial Planning and Land Use Management Act, Act 16 of 2013. Department of Rural Development and Land Reform, Pretoria.
- RSA (Republic of South Africa) (2014). Guide on public participation in the public service. Department of Public Service and Administration. Pretoria.
- Schenk, E., and Guittard, C. (2011). Towards a characterisation of crowdsourcing practices. *Journal of Innovation Economics and Management*, 0(1), 93–107. <http://dx.doi.org/10.3917/jie.007.0093>.
- Shuib, K.B., Hashim, H and Nasir, N.A.M. (2015). Community Participation Strategies in Planning for Urban Parks. *Procedia – Social and Behavioural Sciences*. 168: 311-320.
- UN-Habitat. (2015). Capacity-building-in-new-urban-agenda-HABITAT-III Nairobi.
- Walker, D.H.T., Bourne, L., and Rowlinson, S.M. (2008).: Stakeholders and the supply chain. In: Walker, D.H.T., Bourne, L., and Rowlinson, S.M. (eds.) *Procurement Systems: A Cross Industry Project Management Perspective*. Taylor and Francis, Oxford/New York.
- Wamsler, C. (2016). From Risk Governance to City–Citizen Collaboration: Capitalising on individual adaptation to climate change. *Environmental Policy and Governance*, 26(3), 184– 204.
- Wilson, K., Hannington, S. and Stephen, M. (2015). The Role of community participation in planning processes of emerging urban centres. A study of Paidha town in Northern Uganda. *International Refereed Journal of Engineering and Science (IRJES)*, 4(6):61-71.
- Zhao, Y., and Zhu, Q. (2014). Evaluation on crowdsourcing research: Current status and future direction. *Information Systems Frontiers*, 16(3), 417–434.