Collaborative planning for Surabaya Smart City 2020 Program during the pandemic

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Abstract. There have been many criticisms against the concept of smart city development, which only emphasizes technology. Implementing a smart city requires the involvement of a complex social sphere. Therefore, it cannot be separated from its smart citizens. Meanwhile, technology is the only tool in a smart city. Smart city development then shifts the planning paradigm to become more participative, creative, innovative, and collaborative. Smart citizens freely open up network space, establish communication, and collaborate with stakeholders to find the best solution for the problems in their settlements, including in the urban kampong. The researchers found the collaborative planning process of urban kampong development in the Surabaya Smart City (SSC) program. This kampong improvement program was initiated by the Surabaya City Government in 2019 and continues in 2020 despite the pandemic. After going through the selection and judging stages, Sambi Arum Kampong received the best kampong title in the program. This study aimed to determine how the collaborative planning process took place in the Sambi Arum Kampong during the pandemic. The researchers collected the data through in-depth interviews and literature reviews, which was then analyzed qualitatively using the deductive content-analysis method. This study explains that we can achieve collaborative smart city planning during a pandemic through flexible local institutional design and communication technology.

1. Introduction

The smart city concept was born along with global technological developments, which can then be used in planning, providing, and monitoring city infrastructures [1,2]. However, the definition of a smart city as a digital city [3] became increasingly popular when a multinational company in the field of technology and communication infrastructure (ICTs), IBM, in 2009—in collaboration with the 100 Smart Cities forum—was involved in 2,000 smart city projects and had 6,000 customers worldwide with profits reaching $3 billion [4]. The same was undertaken by other ICT companies, such as Cisco and a large Japanese company, Fujitsu, in developing smart cities in South Korea, China, and India [5].

The implementation of a smart city, which inclines towards technology-driven methods, was then criticized as a form of a capitalist project, aiming only as an urban marketing/branding that eliminates the democratic decision-making processes, i.e., the actual involvement and participation of the city community [6,7]. However, a smart city is more than just technology. It is a city with reason because of the human brains contained that strive and are intelligent in answering questions related to the city's dynamics and problems [8]. Thus, smart city development can only be successful if there is a contribution from the city community through participatory governance that is conscious, independent,
and voluntary [9,10]. At the same time, technology is a scientific development of the community or social innovation and creativity without neglecting the local culture [4,8,11].

A smart city cannot be separated from its smart society as the most valuable resource [8,12,13]. According to Mulligan [14], a smart city begins with building a smart community first through training and discussion forums. It is not only about the role of new technology, but also about the role of society in the economy, politics, and open corporations. City governments must involve local communities by providing political and institutional leadership to create smart city archetypes that vary according to city identity and resources [11]. The combination of open democratic innovation by the community with the support, coordination, and monitoring by the city government is considered by Letaifa [11] as a form of co-creation. Therefore, achieving this requires a consensus that runs well and effectively between the government, planning agencies, and the community in a collaborative planning process [7,15,16].

Collaborative planning was introduced by Healey [17] as a form of community involvement in joint decision-making. Collaborative planning takes place in a dynamic network called “DIAD” (Diversity Interdependence Authentic Dialogue) [18]. The participants involved must be diverse, knowledgeable, competent, and affected by the outcomes decided in this process. Thus, an authentic dialogue process contains reciprocity, relationship, learning, and creativity [18]. However, it is not easy to have authentic dialogue in collaborative planning. “Government transformation” and “social innovation” are needed by making changes in institutional governance that are inclusive and socially fair (institutionalist) [19,20,21]. The success of this "social movement" will also not be separated from the social capital owned itself (resources, knowledge, incentives, and history of cooperation) as well as leadership factors that facilitate direct meetings and dialogue [22,23,24].

According to Permana [25], collaborative planning as a government process needs to be practiced gradually and sustainably by involving the dimensions of actors, institutions, and ambiance (interactive practice). Calderon and Westin [26] added that collaborative planning is an interaction between institutions (norms, rules, and routines) and agencies (understanding, values, resources, and relationships). However, collaborative planning is not just through direct conversation (face to face). Moreover, today’s technology has become common and not exclusive to improving collaborative planning quality [27]. Therefore, both the government and planning actors need to adapt to technology and changes in institutional governance in collaborative planning, including in the current Indonesian government [28].

Surabaya Smart City (SSC) is the latest innovation from a series of Kampong Improvement Programs (KIP) conducted by the Surabaya City Government since the colonial era [29]. SSC is not just a Kampong environment management competition. Through KIP, the government has consistently improved the concept from a simple infrastructure provision model to a comprehensive community organizing model, carrying out repair work with community participation [30]. It is included in the SSC, which was first launched in 2019 and will continue in 2020. The Surabaya City Government builds a smart city by involving the community to be responsible for the environment in which they live. During the SSC 2020 implementation in the pandemic, from 1,360 kampongs that participated in this program, Sambi Arum Kampong managed to achieve the highest total score and won the best kampong. Therefore, this study aimed to examine how collaborative planning in SSC took place in the case study of Sambi Arum Kampong during the pandemic. Then, the result can provide a best practice for implementing smart cities in other Indonesian cities, employing a method that is more human-driven than technology-driven.

2. Methods
The research was conducted on the SSC 2020 in Sambi Arum Kampong as a single-case holistic study. The characteristics of this research focus on explaining the “how” and “why” of this collaborative planning [31]. The researchers adopted a qualitative, deductive, content-analysis method. The deductive approach was used when the analysis structure is operationalized based on prior knowledge (literature review), and the purpose of this research is to test theories [32]. The literature review categories analyzed
in this study were actors (understanding, values, resources, and relationships), institutions (norms, rules, and routines), and ambience (interactive practice).

2.1. Data Collecting and Sampling
Primary data collection was through interviews with key figures. The questions in this interview were open-ended and semi-structured to open up many opportunities to explore as much information as possible from the sources. The determination of the sample was made by purposive sampling. The selected sample consisted of the most representative or most knowledgeable participants regarding the research topic [33]. The involved figures in this study were the Head of RW (local leader of neighborhood association), Head of RT (local leader of household association), Cadre (civil leader), and Kampong Facilitator.

2.2. Data Analyzing and Reporting
The collected raw data was then refined and determined, resulting in analysis units. Next, the researchers examined the meaning of the content more deeply adhering to the stages of condensing, coding, categorizing, and interpreting data [33,34,35]. The analysis report is in the form of a concept map describing the case study's phenomena [32]. The researchers also made descriptions by displaying quotations from several participants and image documentation to help confirm the connection between the results and the data held [33].

3. Results and Discussion
Sambi Arum Kampong is included in the administrative area of RW 06, Sambikerep Sub-district, Sambikerep District, in the western part of Surabaya. Every RW (Rukun Warga; neighborhood association) that participated in SSC 2020 was required to propose 2 RT (Rukun Tetangga; household association) areas as kampong representatives. Sambi Arum Kampong itself was represented by the RT 05 and 08 areas. Sambi Arum Kampong is a public housing complex that was built in the early '80s. The pattern of settlement space is in the form of a regular grid according to the type of house, block, and area. The average type of house is between types 21 to 54, of which there have been area developments. Each RT area has a reasonably neat but dense pattern of rows of houses with a kampong road that is 3 meters wide.

![Figure 1. Sambi Arum Kampong map](image)

The locations of RT 05 and 08 are not next to each other (Fig. 1). However, the physical, social, economic, and cultural characteristics of the two kamponds are not much different. Along with the development of time and urbanization, Sambi Arum Kampong has a more diverse social life, starting from the lower economic level to the well-off economic level, from backgrounds in private employment,
entrepreneurs, employees, civil servants, to retirees. In fact, in the RW 06 area, several worshipping facilities can be found, including mosques, churches, and temples, which increasingly show plurality and social tolerance among the people.

3.1. Actors
The key actors involved in the SSC 2020 collaborative planning ecosystem in Sambi Arum Kampong show diversity and interdependence (Fig. 2) [36]. But interestingly, the DKRTH (Sanitary and Green Open Space Office of Surabaya City), as the leading sector implementing SSC 2020 from the Surabaya City Government, did not go directly to the field. Instead, the Sub-district Coordinator and Kampong Facilitator assist them as the implementation partners. They are not government employees and do not receive remuneration, rather, individuals with passion and knowledge in environmental and social activities. The Sub-district Coordinator's role was to coordinate with the Camat of Sambikerep District. In contrast, the Kampong Facilitator coordinates with the Lurah of Sambikerep (Head of Sambikerep Sub-District).

![Figure 2](image-url)

**Figure 2. Relationships between key actors**

The Kampong Facilitator has a strategic role because they coordinate with the Lurah, the heads of RT/RW (local leader), and the RT 05 and 08 Sambi Arum Kampong community. Kampong facilitators played a role as an extension of the city government to align the program's vision and mission and prepare initial conditions at the micro-level of the community, including socio-culture, knowledge, relations, and governance [11,22].

At the beginning of implementation, the understanding of the local government and the community about SSC 2020 was relatively low. The reason was that SSC 2020 has only been implemented for the second time since this program was first initiated in 2019. However, the knowledge and understanding of smart cities began to seep through the discussions and promotions held by the Kampong Facilitator. The heads of RT/RW, cadres, and community leaders also explored smart cities through internet browsing to undertake comparative studies with the SSC 2019 Kampons. Afterward, they translated their findings into a language that is easier for their residents to understand, thereby allowing congruent perception toward SSC 2020 among Kampong residents. One example is the production of an automatic solar-powered disinfectant sprayer created by the creativity of the residents of RT 08 [8,11].
“So yes, we try to figure it out. What is behind the smart city? I think the ‘smart’ is an innovation breakthrough to get something new” (An interview with a community leader)

The SSC 2020 program has six assessment categories: environmental management, health protocols, sustainable food yards, independent families, economic growth, and citizen participation. Therefore, each actor is aware that they cannot accomplish the categories alone without allowing the active participation of citizens [9,10]. This includes the Camat, Lurah, Head of RW/RT, as the local government and local leaders who facilitate community empowerment through workshops, training, and networking [23,24]. Local leaders also instill the values of "gotong royong" (mutual help) and "kerja bakti" (community service), which are still very closely related to the socio-cultural life of the people of the Kampong of Surabaya [30]. In addition, they involved all levels and groups of society to be responsible for their residential environment.

“Great power, sir. It's not possible just by administrators. The cooperation starts with the PKK (Family Welfare Movement), ladies and gentlemen. Even though my old father is all in, the children help fetch them (trash), sometimes throwing out the waste. We hope that there will be regeneration”. (An interview with a local leader)

This collaborative planning resource comes from each actor who plays his/her role well. The local government provides political support, funding to the expansion of cooperation networks. Kampong Facilitators provide knowledge and information support. Meanwhile, the community contributes more energy, time, and local wisdom. All of them display reciprocal relationships that are mutually beneficial to one another [18].

“Smart Sambikerep is amazing. For me, (the) people are smart. Both young people and the elderly want to be involved to develop further. Moreover, SSC is a demand. They don't want to move at all, but they want to do it and learn to try. Extraordinary”. (An interview with a Kampong Facilitator)

3.2. Institution
The norm regulates the institutional sustainability of the SSC 2020 collaborative planning in Sambi Arum Kampong. The researchers could not find evidence of official legal rules, MoU, or formal written decree for any collective agreements resulting from the dialogue. Firstly, the mutual agreement included all RTs, other than RT 05 and 08, to provide material and non-material support for the sustainability of SSC 2020 in RT 05 and 08. Second, the invitees who were not present at a meeting must respect, accept, and implement the decisions agreed upon at the meeting. These findings are different from Ansell and Gash [22], stating that the collaborative process requires a formal written decree or MoU to ensure the building of trust and commitment between actors.

![Figure 3. A community meeting in collaborative planning](image)

The SSC 2020 collaborative planning routine in Sambi Arum Kampong utilized the existing community-based institutions, such as RW, RT, PKK (Family Welfare Movement), Karang Taruna.
(youths group), and Dasa Wisma (elderlies group) administrators, with the monitoring, coordination, and support from the Lurah, Camat and Kampong Facilitators. They then formed a local committee consisting of representatives from these institutions to suit each category of the SSC 2020 program (environment, health protocols, sustainable food yards, independent families, economy). There was no written agreement on the committee's formation so that the institution was fluid and flexible. This local committee served to think, innovate, make decisions, and implement them [19,20,25].

“The connection continued, the Lurah went to the RW, the RW continued to the facilitators. We discussed it together, and we have cadres, like the cadre for COVID, there is Imam, for the environmental cadre Denis, I hand him over. Cadres for such as solar power for COVID, such as the automatic sprayer, there is Agus. The name is already there. And for the waste bank compost, it's me, Heru, the cadre composter. And for UMKM, it is held by Iin”. (An interview with a local leader)

SSC 2020 was held during the pandemic. Therefore, the strategy for implementing the SSC 2020 collaborative planning in Sambi Arum Kampong must also pay attention to the health protocol regulations by the Surabaya City Government. Meetings were held with a limited number of invitees, namely the chairman, cadres, community leaders, or their representatives (Fig. 3). Furthermore, the ensuing discussions and communication by utilizing Whatsapp group chat already existed among the community [27]. This communication proved helpful in addition to communicating quickly, and it also reduces the risk of direct contact during the pandemic.

“So, for the Surabaya Smart City, there are groups already, WA (WhatsApp chat) groups, both ladies and gentlemen. .... Yes, we expect from the group to convey anything that needs to be prepared to go to Surabaya Smart City like that. Then, we have a group, but it's limited. We take the administrators. There are administrators, and then for all residents, there are specifically for mothers and gentlemen”. (An interview with a local leader)

3.3. Ambience (Interactive Practice)
The pandemic forced several interactive practices between actors and institutions to utilize virtual communication technology and social media. An example is a virtual workshop by DKRTH that resorted to Zoom meetings (Fig. 4a). The workshop was carried out in stages by DKRTH to be a forum for discussing with SSC 2020 participants the knowledge of kampong environmental management. The city-level government also adopted this interactive practice to equalize perceptions about the vision and mission, information updates, and report on the implementation of SSC 2020 in the field.

![Interactive activities](image_url)

The Kampong facilitators collaborated with the Lurah and the Camat as the local government, who then became the representative for DKRTH (Surabaya City Government) for the community (Fig. 4b). Interactive practices were conducted virtually via Zoom or Whatsapp social media and balanced
with visits and direct communication (face to face) with the community actors. The direct, interactive practice in the field presented a tremendous psychological impact on the community actors. They feel cared for, valued, supported, and heard. This communication followed the basis for the emergence of collaborative planning theory by Healey [17], in which collaborative planning is not just a participatory manipulation of the community, but a condition where the community is in the same position and rights as the other actors for the collaborative decision-making process.

"Comfortable... he (Lurah) has high support, sir, "Come on! when will Sambikerep win again! We haven't won in many years. How many decades have we never won first place?".... Continue to support. Excited until Camat also meets him at the RT. He keeps going around. Then, from the Sub-District Facilitator, his name is Mr. Taud, he is a teacher. If from the Kampong Facilitator, her name is Mrs. Eka". (An interview with a local leader)

4. Conclusion
Smart cities do need smart citizens. A smart city needs to include collaborative planning because it includes a learning process, empowerment, and creativity to educate the community. Collaborative processes do not always require written regulatory documents to ensure the commitment between actors. In the social context of communities, such as Sambi Arum Kampong, socio-cultural values and norms acted as unwritten rules mutually agreed upon by actors. This flexible local institutional design can adapt to changing situations and uncertain conditions. Finally, collaborative planning needs to adapt to changing times. Interactive practice that takes place can employ communication technology upon which the collaborative planning actors themselves can master. However, face-to-face interactive practice can have a psychological impact, especially for the community actors. However, technology can be an alternative for difficult conditions, such as during the current pandemic.

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