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The rising stars of social innovations: How do local governments facilitate citizen initiatives to thrive? The case of waste management in Brussels and Hong Kong

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Abstract

Waste management is an important issue in cities. The achievement of a zero-waste future relies on the collective actions of individual households. Indeed, citizens are initiating social innovations in waste management in their communities. However, citizen initiatives (CIs) encounter strategic and operational barriers in the process of social innovation. They often seek support from local governments to overcome these barriers. These initiatives need a "facilitative" local government that is responsive and enables the initiatives to thrive without too much interference from them. Yet, there is a lack of conceptual and empirical understanding of such a new facilitative role of local governments. Furthermore, we do not know whether and how this facilitative role differs between different types of CIs and between different policy contexts. Based on 24 in-depth interviews with CIs and government officials, this study explores the various facilitative practices offered by the Brussels and Hong Kong local governments, explains patterns of facilitative practices between different types of CIs, and clarifies how divergence in policy contexts influences what, why, and how much the local government can facilitate CIs. This study finds that common facilitative practices include financial and administrative assistance, but certain barriers requiring actions from the government and other actors remain unresolved. Local governments need to review their facilitative role to provide more effective support to CIs as new agents of sustainable urban development at the community level.

KEYWORDS
citizen initiatives, facilitative role, local government, social innovation, waste management

1 | INTRODUCTION

The emergence of wicked environmental problems such as climate change and resource scarcity calls for collaboration between multiple stakeholders from different levels and sectors of society, including citizens (Bekkers et al., 2014). Former British Prime Minister David Cameron paid particular attention to citizens' role in solving wicked societal problems and proposed the concept of "Big Society" in his manifest (Cameron, 2010). It emphasises the idea of community empowerment, social entrepreneurship and liberalism, encouraging citizens to take an active role in managing their communities. Sharing the responsibility of public service provision with citizens is also seen as a solution to financial constraints in the public budget. It also avoids problems to appoint market operators on quality control, coverage, and coordination (Healey, 2015).

Meanwhile, citizens are motivated to steer changes in their community. Self-organised informal citizen initiatives (CIs) often arise from

dissatisfaction with governments' actions (Edelenbos & van Meekerk, 2011). They seek alternative solutions to the current institutional arrangements to better address social challenges (Bekkers et al., 2014). CIs mobilise resources to drive social innovation independent of the local authorities, and have their power and freedom to act outside of the existing public service system for the collective benefits of the communities. The processes and interventions of CIs are described as social innovations (Mulgan et al., 2007; Seyfang & Haxeltine, 2012). CIs are observed to play a role in various environmental issues such as renewable energy, community green space development, and urban waste management, to name a few (Mattijssen et al., 2018; Mees et al., 2019; van der Schoor & Scholtens, 2015). CIs take on some responsibilities for the provision of environmental services that were previously exclusively provided by public authorities. While some scholars have criticised the delegation of responsibility to citizens in public service provision as a neoliberal governance strategy due to budget cuts and as false promises to co-produce public services with citizens (e.g., Kleinhans, 2017; Lister, 2015), others perceive it as the empowerment of citizens and realisation of participatory democracy (e.g., Bakker et al., 2012; Edelenbos & van Meekerk, 2011).

CIs are not isolated actors in social innovation. They seek new relationships with local governments to overcome strategic and operational barriers, which cannot be solved by themselves (Jakobsen & Andersen, 2013). For instance, a lack of financial resources and management skills may limit the capacity of CIs to grow (Mulgan et al., 2007). The emergence of CIs has gained attention from scholars in the past decade. Some scholars study the characteristics of CIs, how they pursue social innovation and which barriers they have encountered (Mattijssen et al., 2018; Middlemiss & Parrish, 2010; Seyfang & Haxeltine, 2012). Bekkers et al. (2014) made a theoretical sketch of the enabling conditions for self-organisation and the changing role of governments in support of CIs. So far, only a few scholarly works have discussed the facilitative practices of local governments in support of such initiatives. For instance, Bakker et al. (2012) combined various theoretical settings to analyse how local governments can facilitate CIs through providing networks and process management. Igalla et al. (2020) proved that government support has a significant positive influence on the performances of CIs, but a further elaboration on facilitative practices offered by the government was absent. Government facilitation is believed to be beneficial for achieving CIs goals (Bekkers et al., 2014; Healey, 2015), but little is known about how local governments facilitate CIs on the ground. Moreover, existing literature has discussed the facilitative role of local governments generically, but it has not yet put sufficient emphasis on how such role might be influenced by different barriers encountered by CIs that use different approaches in social innovation. It is necessary to classify types of CIs for two reasons. First, CIs aiming at achieving different social outputs may not use the same approach. Thus, they encounter different sets of barriers in various phases of innovation and hence require different facilitation from the local government. Second, it allows a systematic study on the facilitative role of local governments, which is fundamental for developing theories on this topic in the future.

Mees et al. (2019) developed the ladder of government participation in CIs, distinguishing different roles of local governments, including the facilitative role, and corresponding practices. They suggested a further scholarly investigation into specific roles that local governments take on in relation to specific CIs, and into how such facilitative roles may change over time depending on the need and pace of CIs that they support. Igalla et al. (2020) argued that government support can be vital in certain phases of CIs and called for further research on how government support relates to characteristics of CIs. This article enriches empirical research on CIs and facilitative practices of local governments to support CIs and sheds some lights on how to facilitate CIs more strategically.

This paper aims to explore the facilitative practices of local governments for different types of CIs for waste management in two distinct policy contexts: Brussels and Hong Kong. Waste management is a common challenge for every local government. A World Bank report estimated over 2.01 billion tonnes of Municipal Solid Waste (MSW) were produced in 2016 and warned that it is expected to grow to 3.40 billion tonnes in 2050 as the population doubles (Kaza et al., 2018). Improper waste management poses threats to public health and the environment, which can be costly to society and the economy (UNEP, 2016). As citizens are household waste producers, the reduction of waste and the achievement of a zero-waste future relies heavily on the partnership with communities and individual households for collective action (Robbins & Rowe, 2002). CIs demonstrate great potential in initiating and implementing waste management innovations from the bottom up. In contrast to a top-down approach, CIs are capable of developing innovations according to the characteristics of the community, which allows them to respond better to the local situation and interests of the community (Hoppe et al., 2015). CIs working on waste management cover a wide variety of waste types using different approaches, such as the sharing of goods, repairing of broken items, and awareness-raising campaigns (Angelidou & Psaltoglou, 2017).

This study proceeds as follow. Section 2 presents the conceptual framework, which defines and classifies CIs, as well as gives an overview of facilitative practices offered by local governments derived from a review of different studies. Section 3 describes the methodology. Section 4 demonstrates different facilitative practices offered to CIs by the two local governments and clarifies the similarities and differences in relation to different types of CIs and differences in policy contexts. The study ends with a discussion and a critical reflection on the facilitative role of the local government.

2 | CONCEPTUAL FRAMEWORK

2.1 | CI as an actor of social innovation

CIs are self-organised community-based social innovations that aim to strengthen local communities (Schartinger et al., 2019). Although the action arena is at the local level, CIs do not limit their scope to specific local problems. Global societal problems such as environmental pollution and climate change are often addressed (; Schartinger

et al., 2019). Citizens' engagement is rooted in the sense of community stewardship that goes beyond personal interest (Krasny & Tidball, 2012). In this study, a CI is defined as a self-organised body composed of a coalition of citizens and social interest groups that carry out their social innovations for the common good. The concept of social innovation can be understood by breaking it into two parts: "Social" refers to the output or outcome that the innovation wants to produce. In contrast to business innovation, social innovation is motivated by social well-being rather than profit maximisation (BEPA, 2011; Mulgan et al., 2007). "Innovation" refers to both the process and the output dimensions. The essence of innovation is to think and do differently from the existing practices, and to design alternative solutions that are more efficient, effective, and sustainable (Brown & Osborne, 2013; Phills et al., 2008). Innovation can be both physical and non-materialistic, such as products, services, principles, and models (BEPA, 2011; Davies et al., 2012). To accumulate social capital for social innovation, relevant stakeholders from different backgrounds who are involved in the development and the adoption of innovation become co-creators, calling for new configurations of organisations and relationships to tackle social issues (Schartinger et al., 2019; Voorberg & Bekkers, 2018).

Our starting point is that different types of CIs encounter different barriers and thus require different kinds of facilitative practices of the local government. Likewise, we assume that facilitative practices of local governments will not only differ according to the type of CI but also according to the phase of social innovation (Ansell & Gash, 2007; Healey, 2015). Recent studies have proposed different typologies of social innovation. For instance, differentiating social innovation by the societal domain that drives the innovation and the degree of interaction with broader society (Schartinger et al., 2019); and by the relationship between CIs and government bodies (Edelenbos et al., 2018). This study borrows the three-type classification from the Bureau of European Policy Advisers (BEPA) report because of its universal applicability (see Figure 1). BEPA was a former Directorate-General of the European Commission, preparing the EU for future challenges and opportunities (European Political Strategy Centre, 2019). Its classification is suitable for analysing social innovations from different backgrounds (schools, citizens, businesses, or government) and different levels (community, local, regional, or global) (BEPA, 2011). A flexible borderline between different sectors and scales is important because social innovation emphasises the change in roles and relationships among various actors. Besides, each type of social innovation provides a distinctive type of social output, which potentially leads to a variation of facilitative practices needed from the government. Moreover, as the typology from BEPA (2011) is not tailor-made for a specific social issue, it is applicable to study social innovation in waste management.

Type A initiatives aim at meeting social needs that are neglected or insufficiently provided by the state or the market. The definition of "social" here is meeting the need of the vulnerable groups in society. This type of initiative does not seek financial gain, and even if there is a profit, the principle is to re-invest in achieving their missions. For example, *Food Grace* is a Hong Kong CI that collects leftover food from stores and redistributes it to low-income families. Type B initiatives tackle social challenges by creating economic value to social well-being, redirecting the market towards society. Solving social problems becomes an economic opportunity, generating productivity and economic value for the society. For example, *Vert dĺris* from Brussels produces compost from organic waste and sells locally grown crops and compost to households and restaurants. Lastly, type C initiatives aim at reshaping society by changing the organisation of institutions and the relationships of actors. They promote change in fundamental values, organisational structures, and division of responsibilities, which steer society to a more participatory one. For example, *WORMS asbl* from Brussels offers composting coaching and training workshops for individual citizens and CIs, which takes over the responsibility of the local governmental institute and empowers others to innovate.

Regarding social innovation phases, the four-phase model from Mulgan et al. (2007) is adopted (see Figure 1). Although there are studies that distinguish even more phases (e.g., Murray et al., 2010), distinction into four phases is regarded as sufficiently detailed and parsimonious to capture differences in facilitative practices. Social innovation begins from spotting a social problem. Social innovators identify potential solutions and adjust them in the light of experiences (phase 1). Then, a few promising ideas are developed further as prototypes. These prototypes are tested and improved until a working solution is found (phase 2). Next, the working solution is promoted in society and scaled up (phase 3). The momentum of social innovation is continued after it has become the new mainstream solution for a social problem (phase 4).

The purpose of classifying CIs is for the analytical ability to distinguish ideal types. CIs may want to generate more than one type of social output in a real-life context. Similarly, overlap of innovation phases may exist. In this study, CIs are grouped by the dominant type of social output they want to produce and the innovation phase they identified themselves with during the interview.

2.2 | Facilitative practices of the local government

To better respond to the social challenges at the local level, many scholars suggested governmental officials to adopt a facilitative political leadership, which promotes interaction and communication among different actors, including the public (Bussu & Bartels, 2014; Bussu & Galanti, 2018; Ford & Green, 2012). In this study, facilitative practices of local governments refer to actions that support social innovations by CIs. This section summarises empirical observations and theoretical arguments from the literature on the facilitative practices of local governments across different contexts. We identified five main categories of facilitative practices in the emerging literature: (i) financial assistance; (ii) technical assistance; (iii) capacity building; (iv) networking; and (v) flexibility in rules and procedures.

Financial assistance was defined as one of the most important factors to enable social innovation by The Economist Intelligence Unit (The Economist, 2013). Public funding is spent on high-risk innovations in priority areas (Mulgan et al., 2007). Other than funding

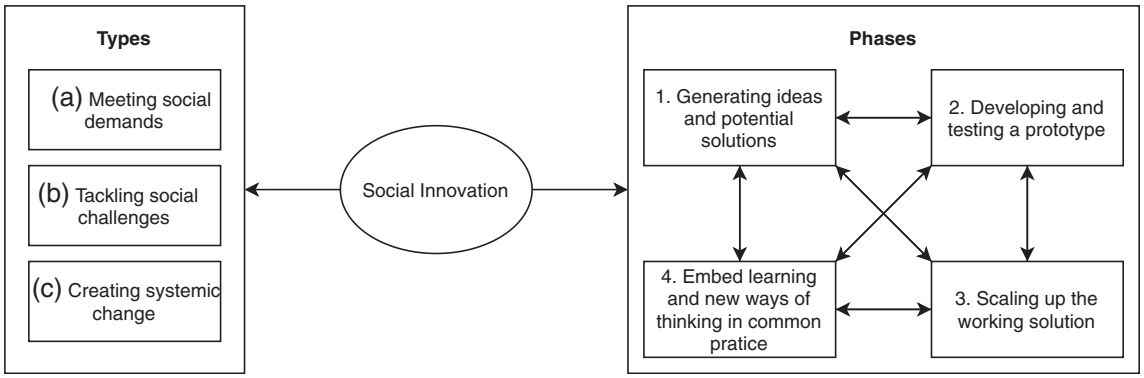

FIGURE 1 Overview of the three types and four phases of social innovation used for this study, inspired by BEPA (2011) and Mulgan et al. (2007)

innovation directly, intermediary bodies such as innovation incubators and accelerators for developing social innovation projects are financially supported too (Mulgan et al., 2007).

Technical assistance refers to providing expertise, knowledge, technology, and tools (Bekkers et al., 2013; Wang et al., 2014). As many environmental issues are technical in nature, local public administrators can facilitate the development and implementation of community sustainability practices by acquiring technical support from professionals (Wang et al., 2014). Bekkers et al. (2013) added that the advancement of Information and Communication Technology (ICT) allows the government to facilitate information exchange and mobilise knowledge for innovation among different actors.

Facilitation of *capacity building* refers to supporting organisations to build, maintain, and evaluate the skills and resources to reach their goals (Oluwaseyi & Author, 2018). Scholars suggested that social innovation can be accelerated by building capacity within the government, CIs, and the public. For instance, the government can increase its capacity for social innovation by familiarising itself with social innovation processes and building trust among other stakeholders (Ansell & Gash, 2007). It can help CIs by sharing skills that enhance their performance and durability (Healey, 2015). Lastly, the government can increase public acceptance of social innovation by nourishing social entrepreneurship alongside traditional school subjects (BEPA, 2011).

The government can facilitate the *networking* of CIs with different actors, such as experts, the business sector, government officials, and other CIs (Hoppe et al., 2015). Enlarging the network of CIs not only enables the sharing and dissemination of knowledge and experience but also provides opportunities for actors to collaborate and pool resources, which can strengthen the collective capacity to drive social innovation (Bekkers et al., 2013; BEPA, 2011).

Social innovation can be promoted if *relevant policies are integrated* at different levels of government, as this can maximise the efficiency, impact, and acceptance of an innovation (BEPA, 2011). When an initiative needs support from the higher-level government, procedures can be over complicated for non-experts, thereby discouraging social innovation at a lower level (van der Schoor & Scholtens, 2015). Therefore, when social innovation is well integrated into a government's policy coordination, it can offer more *flexibility in rules and procedures* to CIs.

In facilitative leadership literature, government officials can facilitate partnership with CIs by *accepting and valuing opinions*. Previous research found that public inputs are weakly linked to internal policy changes because policymakers may fear losing control and power to citizens (Bovaird & Loeffler, 2012; Edelenbos, 2005). Partnership implies a non-hierarchical and innovative approach to collaboration, and leaders need to be open-minded to new ways of thinking and to empathise differences among different actors (Ford & Green, 2012). Facilitative leaders can foster change within the government by promoting an idea, by gathering political support, and by reducing resistance to change (Bekkers et al., 2013).

In sum, Table 1 below is used to inform and structure our analysis of which kinds of facilitative practices are offered by local governments to reduce or remove the barriers of CIs.

3 | METHOD

To obtain an in-depth exploration of the facilitative practices of local governments for CIs in waste management, this study used an embedded multiple case study design (Yin, 2009). In total, 13 CIs were selected as case units in the two cities of Brussels and Hong Kong. These 13 CIs cover all types and phases of social innovation (see Appendix 1). Such a comparative design enabled us to analyse and compare the facilitative practices of local governments in two very distinct policy contexts. The logic of a "most different" comparative design was followed (Burnham, Lutz, Grant, & Layton-Henry, 2008; Pickvance, 2001) to explore similarities and differences in facilitative practices under different circumstances and test the generalizability of findings.

The two cities of Brussels and Hong Kong were selected for their differences in policy contexts. Their environmental policies and views on CIs are very different. The mode of environmental governance in Brussels is more decentralised and interactive. It gives citizens more responsibility to govern the environment and encourages them to start new initiatives in their communities (Brussels Environment, 2018). Cooperation among different governmental departments on waste management is observed (Brussels Environment, 2016). In contrast, environmental policies in Hong

TABLE 1 Overview of main barriers and facilitative practices from the literature

Facilitative practices of the government	Financial assistance (Mulgan et al., 2007; The Economist, 2013) Technical assistance (Bekkers et al., 2013; Wang et al., 2014) Capacity building of: • The government (Ansell & Gash, 2007; BEPA, 2011) • CIs (Healey, 2015) • The society (BEPA, 2011) Networking support (Bekkers et al., 2013; BEPA, 2011; Hoppe et al., 2015) Flexibility in rules and procedures (BEPA, 2011; van der Schoor & Scholtens, 2015) Accept and value opinions (Bekkers et al., 2013; Bovaird & Loeffler, 2012; Ford & Green, 2012)

Kong are delivered in a top-down manner. Most policies are initiated and steered by the local government, and citizens' role is to follow these regulations and policies (Environment Bureau, 2013). CIs are subsidised to educate and mobilise citizens to participate in waste prevention. Furthermore, waste management policy is coordinated solely by the Environmental Protection Department. Cooperation with other governmental departments is rare. The differences in the policy contexts of these two local governments are assumed to influence the form and degree of facilitative practices offered to CIs. They may provide explanations for potential differences in facilitative practices. Nevertheless, the cities are similar in that they both have an urgent waste problem, both offer facilitation programs for CIs, and both have the autonomy to decide upon and execute environmental policies independent from their national governments. These similarities ensure that both governments are equally capable, from a legislative perspective, to facilitate CIs in waste management. For a more extensive description of the two policy contexts, see Appendix 2.

The 13 CIs were selected for their coverage of the three types and four social innovation phases (see Section 2.1). More experienced CIs were chosen because they are more likely to have gone through different innovation phases. Hence, they can add value to our study. These CIs were found from databases of facilitation programs offered by the two local governments. Two of the same three types of CIs were studied in each city. Lastly, the selected CIs must have received or intended to receive facilitation from local governments, to ensure that they have a clear understanding of the facilitative role of local governments.

Twenty-three face-to-face interviews (and one written response) and content analysis of 86 relevant policy documents were the primary data collection methods. Respondents of CIs were the founders or project leaders. They were highly involved in their initiatives and experienced in designing and implementing social innovation in their communities. We also interviewed government officials as the representatives of various government departments that offer facilitative programs to CIs. These government officials were contact points for CIs. Fifteen interview invitations were sent (seven from Brussels and eight from Hong Kong). Ten government officials were successfully interviewed, and one provided a written response. Table 2 summarises the total number of interviews conducted. Appendices 1 and 3 show the lists of CIs and government officials interviewed, respectively. Relevant policy documents such as websites of governments, application guides to facilitation programs, and evaluation reports were reviewed for detailed content analysis (Appendix 4).

TABLE 2 Number of interviews conducted ($n = 24$)

Location	CIs	Government officials
Brussels	6	7
Hong Kong	7	4[a]

[a]1 respondent provided a written response.

Interviews were semi-structured. CIs were asked about three main questions: (i) barriers encountered; (ii) facilitation received from the local government; (iii) what the missing facilitative practices are. For government officials, only the latter two main questions are relevant. The analytical framework (Table 1) was used as a heuristic tool after the interviewee answered all open questions, to ensure that all the barriers encountered by CIs and all the facilitative practices offered by the government from the literature review were discussed. An interview summary was presented orally to the interviewee for consent to ensure an accurate interview interpretation. The interviews were transcribed and analysed in NVivo. Each interview forms a case node according to the affiliation of the interviewee. Each of the barriers encountered by CIs and facilitative practices offered by local governments was coded as a node. All nodes were reviewed, sorted, and combined through axial coding, which allows the generalisation of ideas and avoids nodes being too specific to the cases. Memos were written throughout the data analysis to record observations and ideas to help interpret the data.

4 | RESULTS

4.1 | Facilitative practices

Local governments usually offer facilitative practices through project calls. These project calls were organised annually, and only selected CIs are eligible to receive different kinds of facilitation. There were different themes for each project call, such as tackling food waste, circular economy, and mobility. CIs need to submit project proposals containing information like project content, budget, and time planning to apply for these facilitative programs. After examining the proposal by internal and external juries, the government offers facilitative practices to support the project for a fixed time frame. In Hong Kong, CIs that had previous experience with social innovation or organising community events were preferred. Other than funding CIs directly, some government departments partner with experienced NGOs (intermediaries) to provide facilitation to CIs. Intermediaries are knowledgeable, experienced, and credible NGOs in the social innovation field (SIE Fund, 2019). These intermediaries have their structures

TABLE 3 Facilitative practices offered to different types of CIs

	Type A	Type B	Type C
Financial assistance	- Directly provided to CIs	- Indirectly provided to CIs through reduced rent and advise for external financial sources (Brussels) - Directly provided to CIs (Hong Kong)	- Directly provided to CIs
Administrative assistance	- Application documents and guidelines were available online. Inquiry emails and hotlines were provided.		
Technical assistance	- None	- Knowledge and skill transfer	- None
Capacity building	- Experience-sharing workshop with other CIs	- Tailor-made coaching and training - Provision of legal advice (Hong Kong).	- Experience-sharing workshop with other CIs
Networking support	- Increase CIs' visibility to the public through government's social media and website - Provide contact information of relevant projects and government departments - Annual Zero-waste fair to showcase innovation projects (Brussels)	- Connect CIs with business actors - Provide contact information of relevant projects and government departments	- Increase CIs' visibility to the public through government's social media and website - Provide contact information of relevant projects and government departments - Annual Zero-waste fair to showcase innovation projects (Brussels)
Flexibilities in rules	- Small deviation of the project from the original plan is allowed		
Accept and value opinions	- Opinions from CIs were collected in the evaluation of project calls by frontline government officials - Opinions may not be forwarded to and accepted by higher-level officials		

independent of the local government. Some governmental departments offered financial support to intermediaries to provide facilitation to CIs.

An overview of the facilitative practices for the different types of CIs is provided in Table 3. An overview of the facilitative practices of the two cities of Brussels and Hong Kong is provided in Table 4. In the following paragraphs, each category of facilitative practice is discussed in more detail.

Financial assistance is a common facilitative practice offered to all types of CIs (see Table 3). The value of a grant ranged from €6000 to 35,000 and HKD 541,704 to 2,691,406 (equivalent to €61,927–307,681) per project in Brussels and Hong Kong, respectively (see Table 4). Usually, money is given in several instalments. When a CI achieved certain goals (milestones) as agreed within the project call, it would receive an instalment. Therefore, CIs may have to pay for expenditure before getting a reimbursement. Some project calls in Brussels gave a sum of money to CIs at once, and they needed to return the unspent money at the end of their projects. Most of the funding schemes supported innovation in phases 2 and 3. In Brussels, financial support for type B initiatives was offered indirectly through reduced rent for office space or by giving suggestions to external funding sources.Technical assistance such as knowledge and skill transfer was mainly offered to type B initiatives. In Brussels, government officials were well-equipped with the technical knowledge of the green economy. Coaching and training workshops were organised, in which government officials assessed the needs of CIs and gave tailor-made advice on the design and implementation of the project (see Table 4). Whereas in Hong Kong, knowledge transfer and legal advice were provided by intermediaries or external experts. The funding schemes paid intermediaries to develop programs for enhancing the technical skills of participating CIs. In addition, the content of facilitative practices changed per innovation phase. For example, at the beginning of a type B innovation, government officials advised CIs on business plans and external funding sources. In the latter phase of the innovation, they provided strategic support, such as identifying the key actors who can scale up the innovation.

When interviewing government officials that facilitate type A and C initiatives, many have identified administrative assistance as a major form of technical support. Therefore, we examined it as a separate category of facilitative practice to provide more clarification. Inquiry emails and hotlines are examples of administrative assistance provided to support CIs in the application procedure. There were application guidelines containing the background of the project call and selection criteria. Report templates were also available for CIs to follow, reducing their workload on reporting project progress.

Capacity building was offered to type A and C initiatives to a small extent. Some project calls connected CIs with other organisations working on similar topics by holding experience-sharing

TABLE 4 Facilitative practices offered by Brussels and Hong Kong

	Brussels	Hong Kong
Financial assistance	- The value of a grant ranged from €6000–35,000 - Provided in several instalments - Some project calls provided money at once and required CIs to return the unspent money	- The value of a grant ranged from €61,927–307,681 - Provided in several instalments
Administrative assistance	- Application documents and guidelines were available online. Inquiry email and hotline were provided.	
Technical assistance	- Provided by government officials - Knowledge and skills especially related to a circular economy	- Provided by intermediaries - Knowledge and skills related to social enterprises.
Capacity building	- Experience-sharing workshop with other CIs	
Networking support	- Created an ecosystem with actors working in sustainable economy and relevant government departments for type B initiatives. - Increase CIs' visibility through government website and social media - Annual Zero-waste fair to showcase innovation projects - Provide contact information of relevant projects and government departments.	- To type B initiatives through intermediaries - Provide contact information of relevant projects and government departments
Flexibility in rules	- Small deviation of the project from the original plan is allowed.	
Accept and value opinions	- Frontline government officials collected opinions from CIs during regular project evaluation meetings.	- Opinions were formally collected through irregular inspection of the funding schemes by the Audit Commission

workshops. Only one project call in Brussels offered team building and work division workshops to type A initiatives.

Networking support was provided extensively to type B initiatives. In Brussels, an ecosystem with actors working on a sustainable economy was created by governmental institutes, allowing CIs to establish a network with business actors in the region more directly. Whereas in Hong Kong, CIs can receive networking support through intermediaries. They introduced CIs to partnering companies, providing opportunities for collaboration. Intermediaries created social enterprise mapping applications and websites for the public and business actors to easily access products or services of type B initiatives. For type A and C initiatives, networking support was offered more indirectly. In Brussels, the visibility of CIs and their innovation to the public were enhanced by advertising their activities on the social media of the local authorities and by organising an annual Zero-Waste fair to showcase successful innovation projects. Only one funding scheme in Hong Kong had a formal networking platform connecting CIs with actors across sectors. In both cities, the contact information of relevant projects and governmental departments were provided. However, local governments did not actively assist in connecting type A and C initiatives to other actors.

Flexibility in rules was provided to a limited extent. For example, a small deviation of the project from the original plan is allowed if it is agreed upon by higher-level officials instead of immediately terminating the project. However, such flexibility was limited because frontline officials must follow the rules. They did not have the authority to decide what degree of change was acceptable. When there was a considerable change from the original plan, it must be approved officially by higher-level officials.All government officials claimed to accept and value opinions from CIs. Some project calls in Brussels even researched how to improve public programmes. Frontline government officials had close relationships with CIs, as they attended regular meetings with CIs to evaluate the project. In Hong Kong, evaluation of funding schemes was done formally through the Audit Commission. This is a governmental department providing independent audit services in the public sector. The Audit Commission would collect feedback from CIs and give suggestions to various funding schemes irregularly. However, CIs and government officials in both cities had doubts if opinions were passed on to higher-level officials. One interviewee from the Brussels government said that her supervisor was not always open to opinions from CIs because he disagreed that CIs understood the complexity in the government. Furthermore, the officials who followed the project often changed on an annual basis; this created worries from CIs that the knowledge and opinions generated from the project would not be carried on to new government officials.

To conclude, apart from the common facilitative practice of financial assistance, various facilitative practices were available to different types of CIs. Type B initiatives received technical assistance exclusively and received more substantial capacity building and networking support than type A and C initiatives. In the end, the facilitative practices did not change significantly over time across the different innovation phases, except for the technical advice offered to type B initiatives.

4.2 | Facilitative practices in relation to the barriers of the different CIs

Section 4.1 and Table 3 show that local governments provided different facilitative practices to different types of CIs. We will now explain

TABLE 5 Barriers faced by different types of CIs in different innovation phases

	Phase 1	Phase 2	Phase 3	Phase 4
Type A	None	- Lack of financial resources - Lack of space - Heavy administrative load to apply for government facilitation - Lack of supportive legislation - Mistrust from field actors	- Lack of financial resources - Lack of human resources - Heavy administrative load to apply for government facilitation - Lack of supportive legislation	- Lack of social willingness to change - Difficult to empower service receivers - Difficult to find a long-term solution to the social problem
Type B	- Lack of experience - Uncertainties	- Lack of social willingness to change - Difficulty to engage business actors - Difficult to find a profitable innovation	- Regulatory constraints - Lack of financial resources - Heavy administrative load to apply for government facilitation	None
Type C	None	- Regulatory constraints - Mistrust from field actors	- Lack of human resources - Lack of societal willingness to change - Lack of financial resources - Lack of supportive legislation	- Lack of active engagement with the government

this by analysing the barriers that these CIs encountered. Since each type of CI encountered different barriers during their innovation, they may require a distinct form of facilitation. Table 5 shows the barriers encountered by different types of CI in various innovation phases. This section matches the different facilitative practices offered with the barriers of CIs. The purpose here is not to assess or evaluate whether these facilitative practices have actually removed the barriers of CIs, but to explain the patterns observed in the facilitative roles of local governments.

Financial and administrative assistance are common facilitative practices of both local governments for all types of CIs (see Table 3). This is logical because a lack of financial resources is the common barrier among different CIs in phase 2 (testing pilots) and 3 (scaling-up) (see Table 5). Rents and salaries were high and unaffordable, especially for non-profit making type A and C initiatives. Even for type B initiatives that generate revenue, more capital was needed to spread and scale up their innovations. CIs also need common space in the neighbourhood to develop and execute their projects. Moreover, they were short in human resources because their salary was not attractive to hire staff, making them dependent on volunteers. Some initiatives expressed that the commitment from volunteers was low, so they could not take the availability of volunteers for granted. Some CIs stressed that it was difficult to access governmental funds because the competition among other initiatives was intense and required heavy administrative load and project management skills to fill in related documents and reports. Some CIs remarked that processing administrative work required by local governments cost half of their working time. Thus, CIs can benefit from administrative assistance from the local governments.

Technical assistance, capacity building, and networking support were mainly offered to type B initiatives. Type B initiatives had a different set of barriers compared to type A and C initiatives. They needed to find business models that achieve both social objectives and business sustainability (Center for Entrepreneurship, 2014). Thus, they had to acquire both social and business entrepreneurial skills to start and develop innovations. One of the type B initiatives said it had no experience to start a social enterprise, so in phase 1 much effort was put in understanding and complying with rules in the business sector. A lack of experience in the business field led to uncertainties in the development of the innovation. Ideas for prototypes were continuously changing due to new information received. After finding a working solution, it was difficult to transform the innovation into a profitable one in phase 2. Therefore, type B initiatives benefitted from business-oriented skills and knowledge transfer and capacity building programmes offered. In addition, type B initiatives lacked networking opportunities with business actors. CIs learnt business skills and sought collaboration through connecting with business actors. For example, CIs arranged waste collection and sold new items made from waste to companies, closing the loop for a circular economy.

Flexibility in rules and acceptance of opinions from CIs were also offered to very limited extent, which seems to be insufficient to remove barriers such as the lack of supportive legislation and policies. For example, the regulation on organic waste in Brussels did not distinguish between animal waste and kitchen waste. Organic waste was considered dangerous, so CIs were not allowed to take the organic waste out of the waste stream for other purposes such as community composting, thereby limiting innovation in organic waste management. In Hong Kong, food donors hesitate to give away leftover food to CIs as no legislation exempts them from their responsibility when food receivers are harmed unexpectedly after consuming the food. Solving these barriers require more flexibility in rules and acceptance of opinions to trigger changes at higher government levels.

Some barriers appear to remain unresolved by local governments. For example, networking support to type A and C initiatives was minimal, because the local governments did not actively serve as a linking pin between the initiative and other actors. Only one funding scheme in Hong Kong had a formal networking platform connecting CIs with actors across sectors. Moreover, many CIs identified that the willingness to adopt social innovations in society is low. Innovation projects on waste management promote new ideas like sharing items instead

of buying, and fixing broken items instead of replacing them with new ones, which challenges the usual way of thinking or behaving. Not all citizens are sympathetic to these ideas immediately. Take the *Food Friend Action* project from *People Service Centre* as an example. It collects leftover food from local markets and redistributes it to low-income families. People did not trust that leftover food was safe to consume, so the participation rate was low. The lack of social willingness to change was a barrier to CIs in phase 2 and 3. Lastly, various types of facilitative practices were available throughout the funding period. There were hardly any patterns in each type of facilitation offered by local governments among different innovation phases, except for the fact that the content of technical assistance to type B initiatives changed as mentioned in Section 4.1.

4.3 | Facilitative practices in relation to different policy contexts

Although facilitative practices offered by the two local governments share many similarities (see Table 4), differences are manifested in the details regarding what, why, and how much they were provided. Both CIs and government officials in Hong Kong identified financial assistance as the main (in most cases, the only) facilitation provided. Often, submission of reports is the only way of communication between the local government and CIs after receiving the fund. In contrast, the facilitative practices from the Brussels' government were more diverse and comprehensive. This can be explained by the differences in the expected role of CIs in public policy. In the 5th regional waste plan, the Brussels' government "*encourage(d) and support(ed) individual and collective initiatives of citizens who want to put into practice the changes towards sustainability*" (Brussels Environment, 2018, p. 58). The Smart City policy also pointed out that the local government encouraged its citizens and other actors to develop new urban dynamics through imagining new modes of organisation and producing new urban services (Government of Brussels, 2019). Both policies recognise that CIs provide local knowledge and new ideas, and therefore the local government is encouraged to develop facilitation to CIs. However, in Hong Kong, the Blueprint for Sustainable Use of Resources acknowledged the existence of CIs for waste management without showing any intention to learn from CIs, or to integrate their work into the regional waste plan (Environment Bureau, 2013). Thus, the purpose of offering facilitation to CIs in Hong Kong is not to support social innovation on the systemic level but to pay for a changing lifestyle and to promote new policy (i.e., waste charge) at the community level. The relationship between the Brussels government and CIs is more horizontal, while the relationship between the Hong Kong government and CIs is more vertical. Since the Brussels government gives CIs a role in waste management policy and has a closer relationship with them, this may explain why the Brussels government is more willing to invest and offer a more diverse set of facilitation to CIs than that in Hong Kong. This study shows that the expected role of CIs in public policy influences policy strategies to facilitate CIs, affecting "what" is offered to them.

Both cities offered a unique set of facilitative practices to type B initiatives (see Table 3). Yet, the rationales of the two cities to offer facilitation to type B initiatives are different. The Brussels government positioned itself as an innovative and pioneering European Region on public policy to support a circular economy (Brussels Environment, 2016). The Regional Program for Circular Economy (PREC) was jointly coordinated by the environment, economic, and innovation institutes of the Brussels government. Various governmental institutes devoted expertise to explore new business models with CIs and companies to transit into a circular economy. In Hong Kong, the new waste blueprint for 2023–2035 mentioned the concept of circular economy for the first time (Environment Bureau, 2021). This blueprint promotes an industrial-scale circular economy with China instead of nourishing local-level innovation as is the case in Brussels.

Moreover, type B initiatives were identified simply as social enterprises without a specific role for waste management in the city. Intermediaries took the facilitative role by offering facilitation such as sharing field experience, knowledge, and networks. Nevertheless, the Hong Kong government does not have a similar expertise or network to help CIs innovate specifically on waste management or circular economy as in Brussels. Thus, differences in policy contexts influence "why" certain facilitative practices are offered.

Although both local governments offer networking support, the Brussels government has more connection within governmental departments and other actors in waste management. It can provide more policy motivation and incentives for different actors to seek innovative solutions and thus to assist CIs. The Brussels Regional Waste Plan gave different governmental institutes a clear direction on how they can take part in the waste management strategy. The PREC, which organises project calls for circular economy innovations, is an example of inter-departmental collaboration on waste management. The PREC was driven by three regional ministries and coordinated with 13 partner administrations (Brussels Environment, 2016). Collaboration among various governmental departments on waste management was not observed in Hong Kong. It was the responsibility of CIs to convince different governmental departments to collaborate with them. Regarding waste management by the business sector, the Brussels government has stricter regulations than the Hong Kong government. For example, in Brussels, the Producer Responsibility Scheme (PRS) applied to five types of products, which accounted for 10% of the waste stream (Government of Brussels, 2016). Since producers are liable for a high cost for the waste treatment, they have a high incentive to seek alternative solutions to reduce waste production. In Hong Kong, only two types of products were regulated under the PRS, and only companies selling waste electrical waste and electronic equipment (WEEE) were required to pay for the recycling costs (Environmental Protection Department, 2019). The Hong Kong government often perceived to be hesitant to implement environmental policies because of the pressure from the business sector (Tsang et al., 2009). Moreover, there was no waste charge in Hong Kong. Participating in recycling programmes is merely voluntary, and direct disposal is a simple solution to the waste problem. The lack of government incentives has lowered the private sector's motivation to

take environmental responsibility (Cheng & So, 2015), leading to a lower demand for social innovation to reduce waste. Therefore, differences in the two policy contexts also influence "how much" support the local government can orchestrate and offer to CIs.

5 | DISCUSSION

This study has demonstrated that facilitative practices offered by local governments differ according to the type of CIs (see Table 3), as was already assumed in the introduction. Type B initiatives need a distinctive set of facilitative practices because their innovations have both financial and social dimensions. Assistance in building a strong business model, provision of institutional support such as start-up capital and office space below market price, and facilitation of supportive relationships with key players were observed in our case studies, all of which are crucial to the durability of community entrepreneurs (van Meerkerk et al., 2018).

Financial assistance is a common facilitative practice in both cities. This is especially essential for non-profit oriented initiatives (Types A & C). The two local governments provided non-financial facilitative practices like coaching and networking support as well. The Hong Kong government partnered with intermediaries to expand the range of facilitative practices for CIs, which can be inspiring for other local governments even when the resources and knowledge to support CIs are limited. The role of intermediaries has been proven to increase the effectiveness of social innovation of CIs by maintaining the network with other initiatives and actors (Hargreaves et al., 2013), by facilitating diffusion and adoption of the innovation in society and the government (Hartley, 2008), and by facilitating communication between CIs and the authority (Davies et al., 2012). Therefore, non-financial related facilitative practices deserve more attention from both the local government and from scholars, to explore their potential and effectiveness in fulfilling the facilitative role of the local government.Even though existing literature has identified potential barriers encountered by social innovation initiatives in various innovation phases (BEPA, 2011; Murray et al., 2010), this study found that CIs generally did not find phases 1 and 4 challenging. CIs have a rich knowledge of the local situation, making them more capable of generating innovative ideas than the local government. Furthermore, as ideas are still developing, CIs barely have proof to show that their ideas work. Thus, it is difficult to catch the attention of the local government, not to mention putting resources into CIs at a starting phase. When social innovations enter phases 2 and 3, barriers encountered exceed the capacity of CIs, so they must reach out to external actors like public authorities for facilitation. In phase 4, CIs are experienced in finding resources and establishing networks, so facilitation from the government is not essential. However, this study found that the types of facilitative practices provided by local governments did not change across innovation phases. Therefore, local governments can invest in research on social innovation by CIs to collect data for developing strategic support that fits the barriers in each phase, thereby reducing costs from offering unnecessary facilitation and providing resources more accurately to the needs of CIs simultaneously.

Although local governments offer facilitative practices to CIs, this study shows that governmental support cannot ease all barriers that CIs encountered (see Section 4.2). CIs should not depend solely on governmental funds because their continuities are not guaranteed. They need to re-submit the application for funding to receive a range of facilitation after a period (usually 6 months to 1 year). Case studies from the United Kingdom and Ecuador proved that small-scale CIs suffered from governmental budget cuts, so some CIs saw governmental funds as "unreliable" (Healey, 2015; Johnson, 2009). Thus, governments should develop new ways to mobilise financial resources for social innovation. In addition, unsolved barriers such as mistrust from business actors and the public require changing values and behaviors. Therefore, it is essential to engage different actors in social innovations to increase their willingness to participate. For example, government officials can help CIs to build trust with other actors by bridging different values and interests (Bussu & Galanti, 2018). Local governments can also enhance the participation of marginalised groups in the community by devoting time and resources (Ansell & Gash, 2007). Lee-Geiller and Kütting (2021) suggest that individual citizens are more motivated to make behavioral changes in waste minimisation if their roles are demanded in policy, for instance, by adopting a garbage fee system.

An important reason for local governments not to invest in CIs is risk aversion. For example, funding schemes in Hong Kong gave priority to CIs that are experienced and have high project management capacities in the selection process. Hence, new CIs are less likely to get any facilitation. Supporting social innovation by CIs is "risk-taking" because trial and error are part of the innovation process (Brown & Osborne, 2013). Accountability, as an important political consideration for decision making in the institutional arena, contradicts the experimental nature of social innovation. To further reduce risk, many rules and procedures are created before gaining access to government's resources. This study revealed that administrative work such as reports on progress and expenditure required by the government had cost half of the working time of CIs to process, thereby significantly reducing their efficiencies. The lack of flexibility in rules may lower citizens' motivation to initiate social innovations or to seek facilitation from the local government, as they are unlikely to be helped (Bakker et al., 2012). Moreover, practitioners are often frustrated by the lack of flexibility and willingness to bend the rules within their own municipal government (Mees et al., 2019). Since administrative assistance was expressed as a major form of technical assistance by government officials, this study analysed it separately. While existing literature identified excessive administrative work as a barrier to foster citizens' actions, this study refines the literature by adding administrative assistance as a facilitative practice to CIs. Local governments can reflect on their organisational structure and simplify administrative procedures to increase their capacities to facilitate CIs.

This study found it important to recognise and integrate the contribution of CIs in public policy. Innovation in waste management that promotes radical change requires formal channels in the decision-

making process to challenge the status-quo practice (Pollans, 2017). The Brussels government, which regards CIs as partners for mutual learning in waste management policy, showed a closer relationship with CIs and more interest in learning from them when compared to the Hong Kong government. The literature on social innovation in the public sector has discussed various ways of citizen empowerment (Bakker et al., 2012; Davies et al., 2012), but assigning a role to CIs in public policy design and delivery as a means of citizen empowerment is a new idea, which can be an interesting topic for future research. Finally, we would like to bring up some potential drawbacks that may arise from facilitating CIs. As CIs are self-organised, they are not elected bodies in the communities. The representativeness and legitimacy of such initiatives are questionable (Healey, 2015). Moreover, initiatives that are started by more passionate and skilled citizens are more likely to gain support from local governments (Mees et al., 2019). The needs of less well-off citizens may be neglected due to low coverage of CIs in deprived neighbourhoods. CIs tend to be over-represented in better-off neighbourhoods, and this may exacerbate existing inequalities in society (Healey, 2015; Mees et al., 2019). Both Healey (2015) and Mees et al. (2019) suggest that the local government should take on an additional role by coordinating and overseeing the performance of CIs and redistributing benefits to reduce inequality among them. However, the CI representatives interviewed in this study expressed that this requires a high sensitivity of the local government because they do not want the authority to intervene and eventually take control over their innovations.

6 | CONCLUSION

This study has explored which kind of facilitative practices are offered by local governments to three different types of CIs in waste management in Brussels and Hong Kong. It confirms that local governments play an important role in providing facilitative practices to CIs. Financial assistance, administrative assistance, and acceptance of opinions are commonly offered to all types of CIs by both local governments. Flexibility and networking support are available to a limited extent. Networking opportunities with business actors, a capacity building program, and technical knowledge sharing are exclusively offered to CIs that create economic value to social output (type B initiatives). Our analysis finds that patterns of facilitative practices offered per type of CI can be explained by the different barriers that they encountered. However, there are hardly any differences in facilitation offered by local governments among different innovation phases. In addition, barriers such as the lack of supportive legislation/policies and the lack of societal willingness to adopt social innovations remain unresolved in both cities. This implies that facilitative practices should not focus only on CIs, but also orchestrate actions from other actors such as the local government itself, the business sector, and the general public.

Although there are similarities in facilitative practices offered in the two cities, differences in policy contexts influence what, why, and how much facilitative practices are offered. For example, the Brussels regional waste plan affirms CIs as important contributors to local waste management. The local government has a higher risk acceptance towards social innovations than the Hong Kong government, which gives the Brussels government more interest to deepen and broaden "what" to offer to CIs. Besides, the Brussels government supports type B initiatives because it seeks new business models for a circular economy from CIs. By contrast, the Hong Kong government perceives type B initiatives as social enterprises and facilitates them according to social enterprise policies. It shows that the variation in policy can influence "why" facilitative practices are offered. Lastly, the Brussels government has more intra-governmental collaboration and stricter waste management regulation for the business sector than the Hong Kong government, which encourages different governmental departments and business actors to support social innovations. Thus, more resources are pooled for waste management by CIs, affecting "how much" facilitative practices are provided.

Further research on the facilitative role of local governments in other policy contexts and other environmental issues can bring insights from this study forward and test their generalizability. Moreover, the policy context is only one of the factors accounting for the differences observed in the two local governments. Further research can be done to explore whether other factors such as the wider economic context and cultural differences can explain the findings. These ideas for future research can help develop a conceptual framework for facilitating social innovations by CIs in environmental governance, as guidance for local governments to develop strategies in this field.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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