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# Collaborative Governance for Decision Making on Smart Cities Initiatives

*Research in Progress Paper*

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## Abstract

Smart city (SC) initiatives have been implemented around the world as a way to improve life in cities. Some areas, such as smart governance, are considered vital for SC implementation. However, several factors influence the decision-making process related to city initiatives. The historical factors (colonialism and dependence), the ideas that what ICT companies say are good and enough to the cities (sociotechnical imaginary), and the search by decision-makers and stakeholders for legitimacy by simply reproducing practices from other cities (institutional theory) are the factors addressed by this study. The objective of this research in progress is to propose a decision-making committee for smart city initiatives, which can mitigate the influence of the mentioned variables and further multidisciplinary and diversity.

## Keywords

Smart cities, decision-making process, collaborative governance.

## Introduction

Smart Cities (SC) have been arising in a context where population growth and resource scarcity require thinking about cities' issues. SCs have their origins in smart growth idea, a movement derived from claims about urbanity that erupted at the end of the 20th century (Hollands 2008). The current popularity of the term and the enthusiasm to adopt its proposed solutions come from the imminent challenge of solving urbanism problems (Ahvenniemi et al. 2017). A city is considered smart when it develops and invests in social capital, traditional, and modern infrastructures, promoting high quality of life and sustainable economic growth, with sensible management of natural resources, through collaborative governance (Caragliu, del Bo, and Nijkamp 2011). Developing SC initiatives and promoting quality of life demands that managers think about various city issues. There are areas that are considered important for SC initiatives to be implemented it is taken six major areas known as dimensions, Smart Economy, Smart Environment, Smart Governance, Smart People, Smart Mobility, and Smart Living (Giffinger et al. 2007).

Smart governance is considered a crucial dimension for the development of the other dimensions and the SC initiatives (Pereira et al. 2017). The stakeholder's participation and de collaborative governance are both a part of smart governance issues. Collaborative Governance is a tool where governments and one or more public institutions connect directly or indirectly with private institutions that are stakeholders in the

decision-making process that takes place in a collective and consensual manner (Ansell and Gash 2008). The objective of this research is to propose a committee to instrumentalize collaborative governance for smart city initiatives. Solving urbanity problems brings significant challenges in terms of management and governance (Pereira et al. 2017). Understand the difficulties experienced by cities demands to think about the best ways to manage them (Chourabi et al. 2012). Even with the growing concern about urbanism problems and the expansion of SC concepts, methodologies, and tools to improve life in cities, many of these initiatives do not succeed in solving the problems (Cardullo e Kitchin 2019).

We argue three elements may be involved in the decision-making process in cities that wish to become smart. The following elements will compose or influence the decisions of the people who choose the directions that the cities will take. The historical factors (colonialism and dependence), the ideas that ICT companies' recommendations are suitable and sufficient to cities (socio-technical imaginary), and the search of decision-makers and stakeholders for legitimacy copying practices from other cities (institutional theory) are the factors addressed in this theoretical essay, by a reflection and interpretation on literature of smart cities and collaborative governance, which aims to suggest a committee that can be applied to improve the decision-making process in smart and sustainable cities.

The study was based on a bibliographic research which, according to Cerro and Bervian (2011), explains a problem based on published theoretical references, seeking to elucidate the reasons that lead to the constancy of motivation. Marconi and Lakatos (2004) refer to bibliographic research as being a secondary source that make it possible not only to solve well-known problems, but also to explore new areas where the issues have not yet been crystallized sufficiently, which enables the investigation of a certain subject under a new focus or approach.

## **Variables Affecting the Smart Cities Initiatives' Decisions**

Social inequality is prevalent in cities. Around the world, peripheries and slums are home to 881 million people in extremely precarious situations (UN Habitat 2016). Inequality is more visible in so-called emerging countries. Marxist Dependency Theory (MDT) says that the condition dependent on peripheral economies (underdeveloped or developing) is the result of the intense implementation of neoliberal development strategies (Borges Neto 2011). This situation has not lost its topicality and began in the colonization process. Colonization, which emerged at the beginning of modernity, was first practiced by European countries in America and later in Africa (Dussel 1993) and Asia by other western countries. In addition to the historical process of domination and political and economic exploitation, colonialism has become a worldview (Mignolo 2017). It was one of the factors that strengthened capitalism and still echoed these days (Spivak 2003). Cities located in underdeveloped countries face the problems of inequality; they must be attentive to the economic and political context that they are in. They must create ways to solve their problems without perpetuating colonial values and not be guided by neoliberal elements that will not really solve their problems.

The development of solutions for SC initiatives has gained substantial attention from IT companies (Söderström, Paasche, and Klauser 2014). IT companies have started to develop and sell SC projects that propose the improvement of city processes through the use of technology (Sadowski and Bendor 2019). To become a smart city and to implement and manage public services, many cities partner or buy ICT solutions (Cardullo and Kitchin 2019). However, in this process, IT companies end up defining what is considered suitable for the cities without considering their real needs. The speech of IT companies to cities can serve as an important tool for obtaining political legitimacy (Vanolo 2014). The practice of looking at cities with only the implementation of highly technological devices to turn them into intelligent hinders the understanding of what an intelligent city really is (Angelidou 2014). Large technology companies sell the idea of a smart city as a reactionary and visionary force, but to a large extent still, reproduce and maintain existing and unequal sociopolitical systems (Sadowski and Bendor 2019). The practice of putting urban planning and projects in the hands of technology companies weakens the issue of data management and security, also serves as a way to produce and perpetuate neoliberal values in city management (Vanolo 2014).

Institutions tend to become similar in a not always positive way. Through the isomorphism present in institutions cities, it tends to adopt solutions that serve legitimization. In the political sphere, there are two peculiarities: a) decision-makers generally do not suffer from the reflexes of their choices; b) political decisions taken apply to all types of organizations and these decisions are therefore not adjustable and malleable (DiMaggio and Powell 2005). Policymakers "concerned with pluralism should consider the impact of their programs on the structure of organizational fields as a whole and not just on the programs of individual organizations" (DiMaggio and Powell 2005). Underdeveloped countries tend to be more isomorphic on issues such as administrative reforms and economic models than developed ones (DiMaggio e Powell 2005; Meyer and Rowan 1977). In this case, the authors do not consider the various cultural issues and the efforts to implement administrative reforms that make each organization and country go through the process differently and, consequently, obtain a different administrative reform (Peci 2006). It is proper of politics that strategic decision-makers participate in politics and that ultimately the most influential determine decisions (Eisenhardt and Zbaracki 1992). In the case of governments, public acts and decisions are not seen as mechanisms that solve problems, but rather as the effect of negotiations, compliance with agendas, and disagreements by decision-makers (Bignetti 2009).

## Multi-stakeholder Decision Making

The better governance occurs through the participation, involvement and negotiation of multi-stakeholder and the power decentralization, with the involvement of other sectors in the elaboration and implementation of public policies a way to legitimize the decisions made (Jacobi 2002).

In multi-stakeholder networks, although participation takes time and investments are necessary, the results can be effective, when the problem addressed is relevant, urgent and complex. An appropriate multi-stakeholder decision-making process must meet the following premises (Edmunds and Wollenberg, 2001):

- A neutral or objective space for negotiation must be created;
- Consensus is desirable;
- All stakeholders need to be involved for the process to be effective;
- Negotiations can be considered in isolation from other strategies employed by interested parties;
- A communication process for effective collective action.

Granting the possibility for citizens to assume a role in the process of dynamizing society will make them able to intervene in decision-making processes of public interest, legitimizing proposals and consolidating participation. The introduction of popular participation in the decision-making process can be understood as a strategy aimed at developing the social and political base, with the objective of strengthen the government with the introduction of new actors, who will participate in a more democratic management process. However, community and associative groups are often heterogeneous, contributing to the complexity of representation and creating conflicts over the criteria for choosing (Jacobi 2002).

Public involvement in decision-making is how to assist in the effective implementation of policies. It also includes more inclinations to appreciate best practices in policy implementation and will therefore be less harmful and impatient with policy makers (Yearley *et al.* 2003).

## Collaborative Governance in Smart Cities initiatives' Decisions

Collaborative Governance is a form of shared governance in which authority and responsibility for decision making depend on an agency to inform or consult stakeholders when planning or implementing initiatives (Borrini-Feyerabend *et al.* 2013). Collaborative Governance can be an effective strategy when public problems are reshaped to account for new information or failures in traditional governance approaches. In addition, diverse governance structures are more productive when members are free to leverage individual

expertise in policy formulation, rather than simply serving the interests of the organizations they represent (Siddiki et al. 2015).

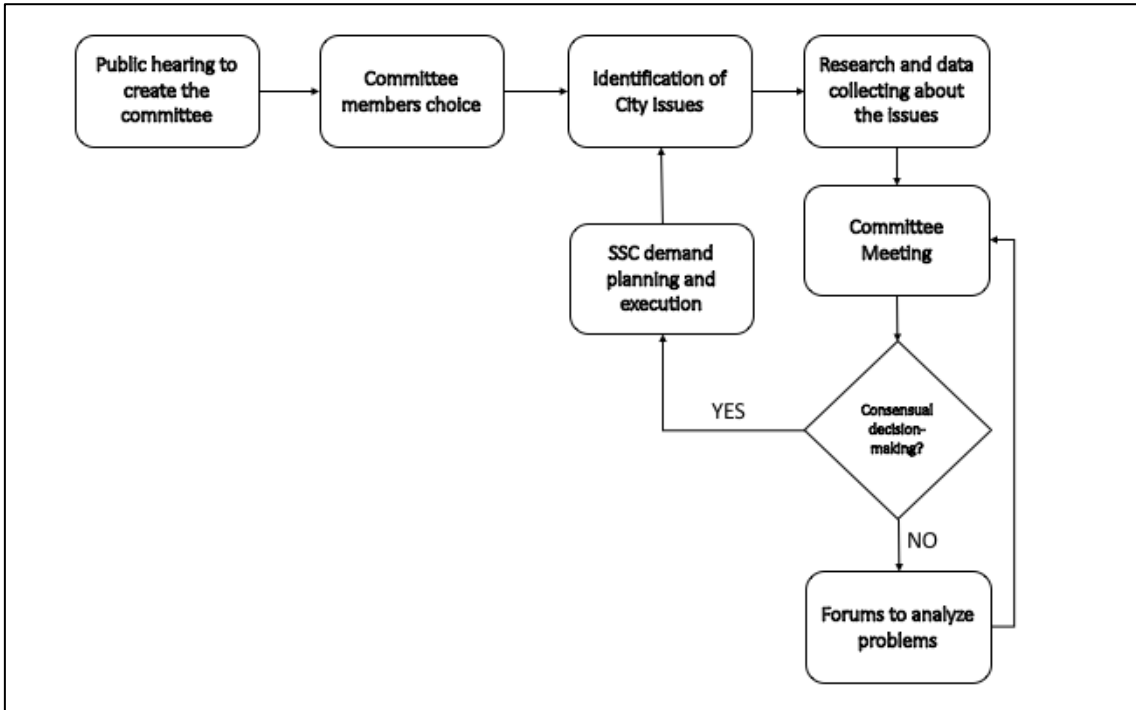
The most successful collaborative ventures (in terms of reaching agreements and producing high-quality collective results) are those that a small group of actors (concerning the global network) collaborate to leverage resources and influence policymaking (Ansell and Gash 2008). The nature and forms of stakeholder engagement will depend on how policymakers and stakeholders characterize problems and seek to account for the inherent complexity of the issues. Collaborative governance provides an alternative to conflicting governance based on interest group policies. It can provide ways for the public and stakeholders to be partners along with governments as a way to solve problems and promote the collective good (Bingham 2010).

## **A Collaborative Governance Committee for Smart Cities**

Decision-making in Collaborative Governance should be collective, with a two-way communication flow or multilateral deliberation. Public agencies or institutions should initiate Collaborative Governance forums for decision-making and policymaking (Ansell and Gash 2008). Collaborative forums are institutions where a subset of key stakeholders in the network are strongly involved (stakeholders providing particularly relevant information, maintaining key resources, and being critical to achieving successful outcomes) (Ulibarri and Scott 2017).

The cooperation work began by developing more efficient strategies, promoting the creation of multi-stakeholder groups composed of different actors belonging to the most diverse sectors, but aiming to achieve common goals and results (Louise and Favareto 2012). Solving complex social problems faced by cities requires new approaches from public authorities and stakeholders (Moscofian, Wegner, and Cislighi 2018). Allowing stakeholders to play a role in the process of making society more dynamic will enable them to intervene in decision-making processes in the public interest, legitimizing proposals and consolidating open channels of participation (Jacobi 2002). Advisory committees can be a way of applying collaborative governance as long as the results are linked to decision making (Ansell and Gash 2008).

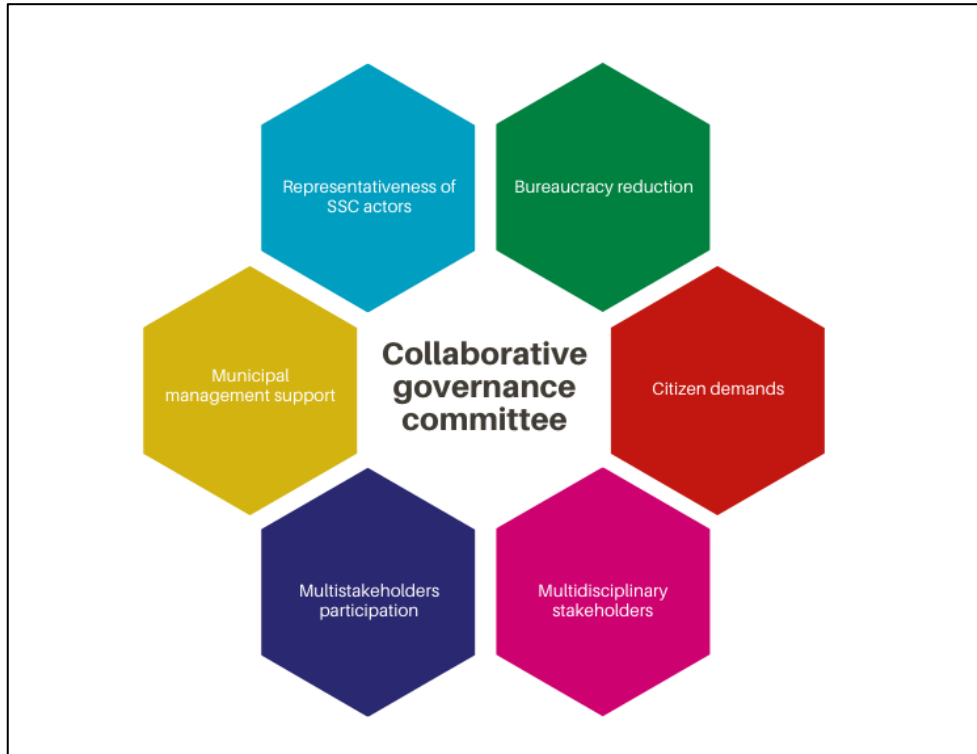
Under the mentioned aspects, decision-making in cities can be improved by involving a municipal decision-making committee. The existence of a committee could mitigate the vulnerability of decisions to these factors that prevent the SC initiative from being effectively an initiative that promotes quality of life, understanding that the promotion of quality of life is one of the main objectives of the SCs. The Committee shall be established by a government entity that convenes and participates in each meeting. The meetings should be open to the public so that society can participate, anticipating the creation of the collaborative network. The meetings must be recorded in minutes that must be made available to society, ensuring transparency and accountability. The committee should monitor the entire decision-making process, implementation, and control of the SC initiative. The Figure 1 shows the committee process.



**Figure 1. Committee Flowchart**

The participation of citizens is of paramount importance as they experience issues that are often unclear to municipal management or are not even contemplated by current governance models (Vidiasova and Cronemberger 2020). The increase in society's participation in decision-making produces benefits, generates positive results when citizens unite with the government, collaborating, and reaching consensus to bring about positive social change (Irvin and Stansbury 2004). From the identification of problems of the city and the intention to undertake efforts to implement an SC initiative, the municipal public management must be involved.

The committee should be composed considering multidisciplinary and diversity. Collaborative partners must be willing to monitor adherence to agreed rules, promoting the ability to build consistent commitments and joint decision-making (Thomson and Perry 2006). The committee's role would be to encourage public hearings for society's participation in the decision-making process for building initiatives in smart sustainable cities, meeting the precepts of collaborative governance so that decisions are based on consensus, the Figure 2 shows the committee's requirements.



**Figure 2. Committee Requirement's**

## Intended Results

This research-in-progress discusses a governance instantiation which aims to provide assertive solutions for cities. With the implementation of a decision-making committee, it is hoped that municipal decisions can be involved in a participatory and transparent process that will provoke reflection on the choice of best practices for cities. The concept of smart cities can be fully developed, and cities' inequalities and problems can be mitigated.

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## REFERENCES

- Ahvenniemi, Hannele, Aapo Huovila, Isabel Pinto-Seppä, e Miimu Airaksinen. 2017. "What are the differences between sustainable and smart cities?" *Cities* 60: 234–45. <http://dx.doi.org/10.1016/j.cities.2016.09.009>.
- Angelidou, Margarita. 2014. "Smart city policies: A spatial approach". *Cities* 41: S3–11. <http://dx.doi.org/10.1016/j.cities.2014.06.007>.
- Ansell, Chris, e Alison Gash. 2008. "Collaborative governance in theory and practice". *Journal of Public Administration Research and Theory* 18(4): 543–71.



- Bignetti, L. P. 2009. “A essência do processo decisório: comentário sobre a obra de Graham Allison”. *Revista de Administração e Contabilidade da Unisinos* 6(1): 71–74.
- Bingham, Lisa Blomgren. 2010. “the Next Generation of Administrative Law: Building the Legal Infrastructure for Collaborative Governance”. *Wisconsin Law Review*: 298–350.
- Borges Neto, João Machado. 2011. “Ruy Mauro Marini: dependência e intercâmbio desigual”. *Crítica Marxista* (33): 83–104.
- Borrini-Feyerabend, Grazia et al. 2013. *Governance of Protected Areas: From understanding to action. Best Practice Protected Area Guidelines No. 20*.
- Caragliu, Andrea, Chiara del Bo, e Peter Nijkamp. 2011. “Smart cities in Europe”. *Journal of Urban Technology* 18(2): 65–82.
- Cardullo, Paolo, e Rob Kitchin. 2019. “Being a ‘citizen’ in the smart city: up and down the scaffold of smart citizen participation in Dublin, Ireland”. *GeoJournal* 84(1). <https://doi.org/10.1007/s10708-0189845-8>.
- Cervo, A. L., e Bervian, P. A. 2011. Metodologia científica: para uso dos estudantes universitários. In *Metodologia científica: para uso dos estudantes universitários*
- Chourabi, Hafedh et al. 2012. “Understanding smart cities: An integrative framework”. *Proceedings of the Annual Hawaii International Conference on System Sciences*: 2289–97.
- DiMaggio, Paul Joseph, e Walter W. Powell. 2005. “A gaiola de ferro revisitada: isomorfismo institucional e racionalidade coletiva nos campos organizacionais”. *RAE - Revista de Administração de Empresas* 45(2): 74–89.
- Dussel, Enrique. 1993. *1492: O Encobrimento do Outro - A origem do mito da modernidade*. Petrópolis: Vozes.
- Edmunds, D., & Wollenberg, E. 2001. A strategic approach to multistakeholder negotiations. *Development and Change*, 32(2), 231–253. <https://doi.org/10.1111/1467-7660.00204>
- Eisenhardt, K., e M. Zbaracki. 1992. “STRATEGIC DECISION MAKING”. *Strategic Management Journal*, 13: 17–37. <https://www.jstor.org/stable/2486364>.
- Hollands, Robert G. 2008. “Will the real smart city please stand up? Intelligent, progressive or entrepreneurial?” *City* 12(3): 303–20.
- Irvin, Renée A., e John Stansbury. 2004. “Citizen Participation in Decision Making: Is It Worth the effort?” *Public Administration Review* 64(1): 55–65.
- Jacobi, Pedro R. 2002. “Políticas sociais locais e os desafios da participação cidadã”. *Ciência & Saúde Coletiva* 7(3): 443–54.
- Louise, Nakagawa, e Arilson da Silva Favareto. 2012. “Governança e Mercados na Elaboração de Políticas Socioambientais em Iniciativas Multi-Stakeholder : a Emergência da Governança Não-Estatal”. *VI Encontro Nacional da ANPPAS*: 1–23.
- Marconi, M. D. A., e Lakatos, E. M. 2004. *Metodologia científica* (Vol. 4). São Paulo: Atlas.
- Meyer, John W., e Brian Rowan. 1977. “Institutionalized Organizations: Formal Structure as Myth and Ceremony”. *American Journal of Sociology* 83(2): 340–63.
- Mignolo, W. D. 2017. “Colonialidade: O Lado Mais Escuro Da Modernidade”. *Revista Brasileira de Ciências Sociais* 32(94): 01.
- Moscofian, Roselaine Nunes de Oliveira, Douglas Wegner, e Tatiane Pellin Cislighi. 2018. “a Estruturação De Redes Multistakeholders Para a Solução De Problemas Sociais Complexos”. *Revista de Gestão Social e Ambiental* 12(1): 21–37.
- Peci, A. 2006. “A nova teoria institucional em estudos organizacionais: uma abordagem crítica”. *Cadernos EBAPE* 4(1): 1–12.
- Pereira, Gabriela Viale et al. 2017. “Increasing collaboration and participation in smart city governance: a cross-case analysis of smart city initiatives”. *Information Technology for Development* 23(3): 526–53.
- Sadowski, Jathan, e Roy Bendor. 2019. “Selling Smartness: Corporate Narratives and the Smart City as a Sociotechnical Imaginary”. *Science Technology and Human Values* 44(3): 540–63.
- Siddiki, Saba N., Julia L Carboni, Chris Koski, e Abdul-Akeem Sadiq. 2015. “Siddiki\_et\_al\_2015Public\_Administration\_Review”. *Public Administration Review* (August): 536–47.



- Söderström, Ola, Till Paasche, e Francisco Klauser. 2014. "Smart cities as corporate storytelling". *City* 18(3): 307–20.
- Spivak, Gayatri Chakravorty. 2003. *A Critique of Postcolonial Reason: Toward a History of the Vanishing Present*. Cambridge: Harvard University.
- Thomson, Ann Marie, e James L Perry. 2006. "Collaboration Processes: Inside the Black Box". (December).
- UN Habitat. 2016. UN Habitat *UN World Cities Report 2016: Abridged Edition*. [http://wcr.unhabitat.org/wp-content/uploads/2017/02/WCR-2016\\_-Abridged-version-1.pdf](http://wcr.unhabitat.org/wp-content/uploads/2017/02/WCR-2016_-Abridged-version-1.pdf).
- Vanolo, Alberto. 2014. "Smartmentality: The Smart City as Disciplinary Strategy". *Urban Studies* 51(5): 883–98.
- Vidiasova, Lyudmila, e Felipe Cronemberger. 2020. "Discrepancies in perceptions of smart city initiatives in Saint Petersburg, Russia". *Sustainable Cities and Society* 59(May): 102158. <https://doi.org/10.1016/j.scs.2020.102158>.
- YEARLEY, S., CINDERBY, S., FORRESTER, J., BAILEY, P., e ROSEN, P. 2003. Participatory Modelling and the Local Governance of the Politics of UK Air Pollution: A Three-City Case Study. *Environmental Values* 12, 12(2003), 247–262.