



Smart Cities and the 2030 Agenda for Sustainable Development: considerations on public libraries' role in Brazilian National Policy on Smart Cities

Camilla Castro de Almeida Elisabete Gonçalves de Souza

Como citar: ALMEIDA, Camilla Castro de; SOUZA, Elisabete Gonçalves de. Smart Cities and the 2030 Agenda for Sustainable Development: considerations on public libraries' role in Brazilian National Policy on Smart Cities. *In:* TERRA, Ana Lúcia; FUJITA, Mariângela Spotti Lopes (org.). Integrating Information Science for Sustainable Development: Topics and Trends. Marília: Oficina Universitária; São Paulo: Cultura Acadêmica, 2025. p. 419-445. DOI:

https://doi.org/10.36311/2025.978-65-5954-624-4.p419-445



All the contents of this work, except where otherwise noted, is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 (CC BY-NC-ND 4.0).

Todo o conteúdo deste trabalho, exceto quando houver ressalva, é publicado sob a licença Creative Commons Atribuição-NãoComercial-SemDerivações 4.0 (CC BY-NC-ND 4.0).

Todo el contenido de esta obra, excepto donde se indique lo contrario, está bajo licencia de la licencia Creative Commons Reconocimiento-No comercial-Sin derivados 4.0 (CC BY-NC-ND 4.0).

Smart Cities and the 2030 Agenda for Sustainable Development: considerations on public libraries' role in Brazilian National Policy on Smart Cities

Camilla Castro de Almeida¹ Elisabete Gonçalves de Souza²

ABSTRACT: Smart cities are intensely interconnected urban centers that have infrastructure that enables efficient governance, innovation, knowledge sharing and citizen participation, in order to mitigate urban problems without compromising natural resources for future generations. In this setting of urban development, digital inclusion becomes an imperative factor, not only in its infrastructural form, but considering the proper use of networks to increase citizens' interest in using digital environments to improve their surroundings. Since the city is a historical-cultural materialization of a social reality, it is understood that the public library conditions and is conditioned by urban space, facilitating active citizenship and consolidation of social rights. The objective of this work is to discuss the role of the public library in the National Policy on Smart Cities, under discussion in the Brazilian Congress since 2021, with emphasis on what the Sustainable Development Goals of the 2030 Agenda advocate. This is an exploratory and documental research, with qualitative approach, with content analysis of Bill no 976/2021 and 2030 Agenda. The results refer to the reductionist view reserved for public libraries in the policy and

Federal Fluminense University, UFF, Brazil.
E-mail: camillaalmeida@id.uff.br | ORCID ID: https://orcid.org/0000-0003-0386-6902

Federal Fluminense University, UFF, Brazil.
E-mail: elisabetegs@id.uff.br | ORCID ID: https://orcid.org/0000-0001-907-6017

discuss the role of public libraries in the context of Brazilian urban centers based on information actions that these institutions have undertaken in order to align with the sustainable development goals. It is concluded that the recognition of the public library as a fundamental public policy actor, with objectives congruent with the 2030 Agenda, is important so that local strategies relevantly include it in their smart city projects.

KEYWORDS: Smart cities, Sustainable Development Agenda, Brazilian National Policy on Smart Cities, Public libraries.

Introduction

Smart cities are defined as intensely interconnected urban centers that have infrastructure that enables efficient governance, opportunities for innovation, knowledge sharing and, mainly, citizen participation, in order to mitigate numerous urban problems.

Social participation and citizen quality of life are explicitly mean and objective in the literature on this model of urban development. Initiatives for smart cities are a mix of hard (energy and natural resources, mobility and buildings) and soft (quality of life, government, economy and people) domains (Schöpfel, 2018), however, some governments, such as Brazilian federal government, are too focused on infrastructure problems (availability of networks and computers), paying little attention to social issues that involve the use of digital technologies, such as information literacy, political-social engagement and encouragement of citizens in public discussions. In this scenario of urban and technological development, digital inclusion is an imperative factor, not only in its infrastructural form, but considering the appropriate use of networks aimed at increasing citizens' interest in using digital environments to improve their surroundings.

Currently, despite the inequality of access to infoways (mainly in peripheries), some Brazilian cities, especially in metropolitan regions in the South and Southeast of Brazil, have satisfactory infrastructure for the technological convergence intended in the smart cities model. This ubiquitous computing infrastructure is mainly composed of information and communication technologies, such as geographic information systems, data transmission systems, communication standards, wireless sensor networks (Internet of Things), processing of large volumes of data

(Big Data) and cloud storage. However, as it is a huge and very unequal country, only a few cities already have structure and policies well defined for this context.

Therefore, increasingly, this public administration model receives incentives at global, national, state and municipal levels. At a national level, Bill of Law n. 976/2021 is being processed in the Chamber of Deputies, which will establish the National Policy on Smart Cities (PNCI), a public policy that includes guidelines, objectives and elements for federal and municipal planning and action. Currently, this bill is being processed in the legislative house, specifically under evaluation by the Constitution, Justice and Citizenship Committee (CCJC) of the Chamber of Deputies since July 2022.³

In Brazil, we can highlight three major challenges for digital inclusion: i) high cost of service and low network capillarity; ii) need of training in internet use (media literacy); and iii) provision of quality public services in a digital environment. Therefore, the urban management model of smart cities presupposes that the population has access to technological infrastructure, is politically engaged and has skills for citizen participation.

It is a context that involves sociocultural difficulties and social contradictions, therefore it is appropriate, especially since it is a policy still in drafting phase, to reflect on the action of information policy, relating actors, technologies, representations, norms, and regulatory standards that configure implicit or explicit information policies. For that reason, in this chapter, we highlight the public library as a social actor and the 2030 Agenda as a macro policy that conditions the PNCI.

The public library is an institution that exists to meet the informational needs of citizens in an inclusive way. Since the city is a historical-cultural materialization of a social reality, it is understood that the public library, as a cultural equipment that encourages creativity and citizen participation in the community, conditions (and is conditioned by) urban space, facilitating active citizenship and consolidation and enforcement of social rights.

³ In June 2023, CCJC's deadline for amendment submission ended. The committee did not present amendments to the project.

Despite the recognition in scientific literature and macro policies that indicate the public library as a space for citizen interaction and articulation, such as *IFLA-UNESCO Public Library Manifesto* (IFLA, 2022), *IFLA Public Library Service Guidelines* (Koontz & Gubbin, 2013) and *IFLA/UNESCO Internet Manifesto Guidelines* (IFLA, 2006), the institution has closed many doors in Brazil in recent years. According to the latest update (2022-2023) of the National Public Library System (SNBP), Brazil has 5,318 public libraries. Currently, the country has 5,318 public libraries to serve approximately 203 million people (IBGE, 2023). Therefore, a public library serves more than 38,000 people. Ten years ago, in 2014, this proportion was one public library to attend to 33,000 people (Reis, 2014).

The objective of this chapter is to discuss the role of the public library in the National Policy on Smart Cities, still in progress in Brazilian Congress since 2021, in the form of Bill of Law n. 976/2021, with an emphasis on what the Sustainable Development Goals (SDGs) advocate. The SDGs are a set of goals expressed in the 2030 Agenda for Sustainable Development, a global political agenda agreed in 2015 at the United Nations Assembly, which guides public policies in different areas and around the world.

RESEARCH METHODS

To achieve the objective of the chapter, which is part of a broader study that addresses the perspectives of public libraries' engagement in this model of urban development, exploratory and documentary research was carried out, with a qualitative approach, which included content analysis of Bill of Law n. 976/2021 and the 2030 Agenda (in particular 22 of the 169 agreed targets).

Twelve SDGs from the 2030 Agenda were analyzed, distributed across 22 goals that, in some way, are related to public libraries' social function, with information actions carried out in Brazilian public libraries based on experience reports found in scientific literature, news outlets and government websites, with the purpose of verifying whether and how

Brazilian public libraries, within their possibilities, meet the global goals of the main global political agenda that underpins the PNCI.

To support the discussion, we chose to identify information actions because, according to Gil (2002), experience reports express a type of knowledge production that qualifies descriptive studies, helping us to describe phenomena through the establishment of empirical relationships, being a relevant technique for understanding social phenomena, their limitations and possibilities for intervention.

Thus, based on the inferences about the role of public library concerning the analysis of the PNCI and the survey of information actions that contribute to the fulfillment of the SDGs of the 2030 Agenda, it is expected to discuss the perspectives of engagement of public libraries in this context, so that citizens can effectively participate in a participatory, sustainable and technological urban development project.

LITERATURE REVIEW

The concept of *smart city* appeared for the first time in the 1990s, with the purpose of conceptualizing the phenomenon of urban development that depends on technology, innovation and globalization, especially from an economic perspective (Rizzon *et al.*, 2017). Until the middle of the first decade of the 2000s, the ecological dimension of this concept was not frequently articulated, although stopping climate change was also an important factor in the use of some sustainable technologies available at the time. The industry's discourse indicated urban development dependent on technology, innovation and globalization, with technological solutions that increased efficiency and reduced cities' costs (Morozov & Bria, 2019). As time passed and these discussions went beyond market, social participation and sustainable development became keys to the concept. Today, this is observed both in academic literature and standards on the subject.

Nowadays, in general, smart cities express the notion of intensely interconnected urban centers that enable efficient governance and social

participation, in favor of sustainable urban development. It is a model that has different motivations. According to Morozov & Bria (2019), the motivations for cities to opt for technological solutions for governance are diverse, but those of a normative and pragmatic nature predominate. Normative motivations encompass the possibility of achieving universally accepted but ambitious political goals, such as the political participation of citizens, the personalization of public services in a digital environment, the reduction of bureaucracy and the promotion of creativity and innovation. Pragmatic motivations encompass more diverse and specific objectives for urban centers, such as strengthening public safety, reducing traffic, efficient disposal of waste that clogs the streets, among other issues.

Rizzon et al. (2017) listed five essential characteristics of smart cities: i) incorporation of information and communication technologies into the urban fabric; ii) development with a neoliberal approach to governance; iii) focus on the social dimension based on the creativity of the population; iv) adoption of programs aimed at social learning and education; v) focus on sustainability (p.128).

Nicos Komninos (2009), highlighting the importance of information and knowledge in this process, states that smart cities offer "[...] skills, institutions and virtual spaces of cooperation sustaining the creation of new knowledge (research), monitoring knowledge flows (intelligence), disseminating existing knowledge (technology transfer), applying knowledge (innovation), developing new activities based on knowledge (incubation) and managing knowledge remotely (e-government)." (p. 339).

In the conception of Desouza and Flanery (2013), people are the main actors in the development of smart cities. It is citizens who shape social, economic, environmental and governance standards. Furthermore, they are the ones who generate data, which is fundamental for the construction and feeding of the indicators that enable the State's decision-making.

Lemos (2013) defines "smart citizen" as a:

[...] concept in which people also become producers of information. With accessible knowledge closer to their daily activities, they can not only have a better perception of the space where they live, but also propose creative and innovative solutions for their cities. (p.48)

"Smart city initiatives are a mix of hard (natural resources and energy, transport and mobility, buildings) and soft (living, government, economy, and people) domains" (Schöpfel, 2018, p.5). According to the author, these domains are often separated, and the focus of studies and initiatives is on heavy domains, neglecting the fundamental aspect of citizens' personal development (Schöpfel, 2018).

For this reason, State intervention is necessary, balancing interests in favor of citizens. Within the scope of developing public policies to develop Brazilian urban centers, mitigating the daily problems of these specific spaces, as already mentioned, we have the PNCI proposal, which indicates that a smart city is a

Urban space oriented towards investment in human and social capital, sustainable development and the use of available technologies to improve and interconnect cities' services and infrastructure in an inclusive, participatory, transparent and innovative way, with a focus on increasing the quality of life and well-being of citizens (Brasil, 2021, art. 2°, I).

Despite bringing an interesting proposal for promoting civil society participation in public affairs, this is not something guaranteed with technological improvement alone. There are many sociocultural factors involved. Morozov & Bria (2019) highlight, for example, the contradictions and disputes in the development and results of urban technology infrastructures. Those notably aligned with neoliberal values, such as the convenient products and services of large technology and innovation companies that dominate the market, such as big techs, like Uber and Google, for example, that make it difficult to experiment with policies and economic measures centered on social responsibility of governments towards their population, in the use of infrastructures developed based on principles of social well-being and the expansion of citizenship rights.

In this scenario, public libraries, in addition to their traditional functions of providing access to books and reading, preserving and disseminating information, socially and digitally including any citizen who seeks them, position themselves as social actors, moving away from the artifact (thing or place where things develop) bias, to become the subject of all information actions that can be coordinated, from informational ones themselves, to educational, cultural and social actions (Luterek, 2020).

"Constructive participation and the development of democracy depend both on a satisfactory education and on free and unlimited access to knowledge, thought, culture and information" (IFLA, 2022, p.1). Therefore, the formation of individuals who are aware of their political and social rights and duties in a democratic space must also be seen as a mission of public library services.

It is known that public libraries, with their adaptive nature, have a strategic and essential role in mediating education and information literacy in the community in which they operate, skills that are more than fundamental for the consolidation of citizenship (Medeiros, 2010); therefore, skills that become elementary in the context of smart cities given the emphasis on the citizen participation, as observed in the literature on that subject.

Reflecting on libraries in territories of technological convergence (smart city), Schöpfel (2018) indicates four dimensions of libraries that play a role in this urban development model: smart services, smart people, smart space and governance.

According to the author, the first dimension (smart services) refers to the application of the spirit of innovation of the smart cities model in the services offered by libraries, using technological innovations in an informational ecosystem focused on the user. The second dimension presented (intelligent people), as already mentioned, concerns the fact that the library user is no longer a passive consumer of information, but a coproducer of knowledge inserted in a community that goes beyond the walls of the library.

Still examining the dimensions of the smart library, Schöpfel (2018) indicates the dimension of the smart space, aiming for a library with sustainable architecture that enables sustainable practices for users. Furthermore, it points to a fourth and final dimension, referring to governance, which encapsulates aspects of social participation in public libraries' daily life by suggesting the participation of users in library decision-making, providing more transparency and collaboration in this ecosystem, which, having a bias more collective, it better develops the singularities of the community in which it operates.

IFLA/UNESCO, through its *Public Library Manifesto* (2022), very clearly meets what the United Nations (UN) Agenda 2030 recommends, encouraging sustainable development through education, culture, inclusion and information. It is worth noting that the Manifesto itself already makes a correlation between the services offered in public libraries, the implementation of the SDGs and the construction of fairer and more sustainable societies. Regarding the guidelines for the institution, IFLA states that they do not constitute a finished product, but that they must be understood as a process in development as technologies and concepts constantly change (Koontz & Gubbin, 2013).

The UN Agenda 2030 is a global pact signed in 2015 by the 193 countries that made up the United Nations Summit on Sustainable Development, being the main reference in the formulation and implementation of public policies in the context of the ongoing neoliberal agenda, where universal structural problems (such as poverty, illiteracy and unemployment) expose the contradictions of this economic model and place the possibilities of achieving "sustainable development" under suspicion. This is an important device in smart city projects developed in Brazil and around the world.

Like many public policies developed in the last decade, in Brazil and around the world, the PNCI is conditioned by guidelines defined in international agreements, such as those signed within the UN. In the domain of this study, the SDGs of the 2030 Agenda, document analyzed in this section, express the ambitious purpose of achieving dignity and quality of life without compromising the environment, and, consequently,

future generations. The Agenda advocates and its 17 SDGs (Figure 1) plan transformative measures towards a more sustainable global direction.

Figure 1: UN Sustainable Development Goals



Source: United Nations Organization Website.

Therefore, libraries, especially public libraries, with their social function, are allies in this political agenda. The information services provided by public libraries must also reflect social changes. In this way, the International Federation of Library Associations and Institutions (IFLA) and the Brazilian Federation of Associations of Librarians, Information Scientists and Institutions (FEBAB) have encouraged the adoption of the objectives of the 2030 Agenda in planning library services (IFLA, 2015; FEBAB, 2018). However, it is known that this is a rhetoric that involves many contradictions, which we seek to explore in this work in order to take ownership of this debate, pointing out the limits and possibilities of including public libraries in these discussions, always thinking of them as social institutions that must act cooperatively with public authorities.

FINDINGS AND DISCUSSION

PUBLIC LIBRARIES' EXPRESSED ROLE IN PNCI

The smart city, with its *smart* quality, promises citizenship and sustainability. However, as Morozov and Bria (2019) indicate, the neoliberal context that frames this urban development model tends towards entrepreneurial and financialized urbanism. Thus, the main point of this mode of urban planning, the sustainable use of the city's resources with a higher quality of life for citizens, ends up losing prominence to an emphasis on intelligent and interactive devices that enable an "inconvenience-free urban experience". There is a lack of connection with real problems. Public libraries have traditionally worked toward a more aware, informed, and, more recently, digitally included community; therefore, it can enhance the creativity and social participation that are so important to this model of urban development.

Although public libraries have a strategic and essential role mediating education and information literacy in the community in which they operate, they appear rarefied throughout the PNCI. The text of the bill mentions actions that circumscribe the activities of public libraries, actions foreseen in its guidelines for the development of the structuring axis "innovative and highly qualified society", such as: "social participation and exercise of citizenship"; "places of co-creation and knowledge exchange"; "continuing education and training programs"; "digital information and education services"; "management of schoolchildren's learning"; "development of creativity and innovation"; "innovation and technologies in education"; "repository with public utility information"; and "training in the use of technological resources" [information literacy], but not directly articulated with the institution. Libraries are only mentioned twice in its thirty pages:

Improvement of learning infrastructure, such as **libraries** and reading rooms (Brasil, 2021, art. 17, I, paragraph c, emphasis added).

Resources for smart city initiatives originated from agreements with the Union can be used to create public workshops for the development and elaboration of innovative products and processes

and, preferably in **public libraries**, multifunctional creation spaces, for the development of curricular activities or extracurricular activities for public school students (Brasil, 2021, art. 18, emphasis added).

The rarefied insertion of management, production and dissemination actions and access to information for the generation of knowledge, in addition to promoting citizenship and social inclusion actions, could be enhanced if the public library, as a social and urban equipment, was adequately triggered in this public policy.

Mersand et al. (2019) indicate that greater participation of local community members in literacy initiatives and learning opportunities increases understanding of civic and legal issues and results in greater economic development, which meets the purpose of the smart cities project. Therefore, reducing the public library to a space for the development of school activities is to underestimate its social function of working within its community. In order to aim at the school public, political and social efforts must be made to implement Law n. 12.244/2010, which provides for the universalization of the school library in Brazil. That law has not yet been successfully implemented and would be another resource to be addressed in debates about the PNCI in the light of Information Science. This approach would provide more support for discussions about digital and information literacy, considering that school is the first place where children and young people come into contact with different forms of literacy.

Legislators could have considered digital and informational literacy actions for the political-social engagement of citizens when drafting a sustainable and technological urban development policy, but this aspect was subsumed under the main idea of the functionalist discourse that surrounds the topic. It is inferred that the absence of representatives of the librarian class in the hearings to debate the Brazilian smart city model (Brasil, 2021b) explains the instrumental look cast on the public library in the construction of the PNCI bill of law. It is worth remembering that the PNCI is what will direct the development of municipal plans for smart cities, therefore, an inadequate function in this context is very harmful for the institution and the community.

That said, for the analysis undertaken in the next section we gathered information actions aligned with the 2030 Agenda, a device that conditions the PNCI regime, carried out in Brazilian public libraries, highlighting their possibilities and limitations.

Brazilian public libraries' information actions aligned with the $2030\ A$ genda for Sustainable Development

Moyses et al. (2019) analyze that, nowadays, the public library plays a fundamental role in social participation and citizen articulation, in addition to being an essential equipment in the cultural life of Brazilian municipalities.

Paying attention to the objectives of this work, we gathered experience reports and/or news about Brazilian public libraries that impact 12 of the 17 Sustainable Development Goals. Information actions were identified in public libraries located in all the five regions of Brazil. Those actions help to achieve 22 of the 169 targets included in the SDGs of the 2030 Agenda.

- 1 No poverty (2 goals);
- 3 Good health and well-being (1 goal);
- 4 Quality education (3 goals);
- 5 Gender equality (2 goals);
- 8 Decent work and economic growth (1 goal);
- 9 Industry, innovation and infrastructure (1 goal);
- 10 Reduced inequalities (1 goal);
- 11 Sustainable cities and communities (2 goals);
- 12 Responsible consumption and production (2 goals);
- 13 Climate action (1 goal);
- 16 Peace, justice and strong institutions (3 goals);
- 17 Partnerships for the goals (3 goals).

Although SDG 11 (sustainable cities and communities) is the central and most obvious objective to be considered when developing a smart city plan, other objectives and their respective targets align with the theme of sustainable urban development, to a greater or lesser extent, in information actions undertaken in public libraries.

In this sense, our survey resulted in the following information actions in Brazilian public libraries: sustainable biased vocational training actions for vulnerable young people, job boards, social assistance actions, information literacy actions, health literacy actions, vocational guidance, instrumental language courses, reading mediation with focus on the SDGs, provision of collections and tools that empower minorities (women, people with disabilities, elderly people, LGBTI+ people, black people and indigenous people), digital literacy workshops aimed at targeted audiences, lectures on inclusive themes, actions for the preservation and dissemination of cultural heritage, promotion of accessible events, ecodesign actions, environmental education activities, environmental preservation actions and hackathons (Recode, [2019]; Consed, 2019; Sergipe, [2024]; BSP, [2023]; Caxias, 2023; CRB-3, 2019; Quintanilha, 2023; Lima et al., 2019; Palhares & Santos, 2022; Silva, 2019; Sapiranga, 2023; Biblioteca Pública Municipal Professor Bruno Enei, 2023; Coelho, 2023; Virada Sustentável, [2023]; Santos, 2021; Aguiar & Oliveira, 2022; Domingos Martins, 2022a; 2022b; Ceará, 2023; FBN, 2023; Mato Grosso do Sul, 2017; 2021; CNM, 2019; Revista Programa, 2022). Considering our objective of discussing the role of the public library based on what was found in the PNCI, we chose not to describe each of the identified actions, but, in fact, to address the possibilities and limitations of the Brazilian context observed in the analysis of these actions, which are listed in the Appendix at the end of this chapter.

The formative, relational and mediation actions undertaken in Brazilian public libraries identified in this study impact in some way on the fulfillment of the SDGs of the 2030 Agenda and are intertwined with the information regime of smart cities, in order to promote access to information and literacy for citizenship through a collaborative and continuous process. The Appendix presents a synthesis of findings in

scientific literature and media outlets, with the aim of arguing, based on the Brazilian reality, about the little explored potential of this institution by the public power in the context under study, indicating actions undertaken in Brazilian public libraries that are related with the objectives of the 2030 Agenda, in which we observed limits and possibilities in mitigating structural problems that require more forceful public policies to be truly resolved. However, we highlight the social role of public library in these scenarios and the importance of their information actions for understanding the complexity of the issues surrounding the smart cities model of urban development. Below are mentioned 2 of the 22 actions raised in this study.

There are approximately 222,000 people living on Brazilian streets (Quintanilha, 2023). The homeless population is made up of a heterogeneous group of individuals in conditions of extreme poverty that are related to the dynamics of the city, the formation of territories and social segregation. This portion of the population has different life stories and motivations and is made invisible, in addition to being considered a nuisance for many. That said, to exemplify an information action that aligns with the goal "[...] to ensure that all men and women, particularly the poor and people in vulnerable situations, have access to social services, basic infrastructure, new technologies and means of production, information and communication technologies, financial services and security in equitable access to land and natural resources." (IPEA, 2018, p.38), we have the project Acolhimento, from São Paulo Library, in the capital of São Paulo. This is an action for the socio-cultural inclusion of citizens, especially homeless people and immigrants. Welcoming and collecting demands consists of dialogue on topics such as feelings, expectations and work. The library has social workers on its team, promoting actions internally or referring them to other municipal services. It carries out humanized listening activities and provides guidance for removing new copies of documents and resolving health, housing and legal issues. Furthermore, they develop reading mediation actions and workshops that integrate this group of people in vulnerable situations (BSP, [2024?]).

It is true that welcoming and understanding the needs (informational and others) of homeless people are ways of slowing down the exclusion of these vulnerable groups, however, the information actions mentioned have limits in the sense of needing other instances of the Public Power, such as the State departments of education, culture, employment and social assistance. The limitations that are found, in the informational sphere, are mainly related to cognitive and technological disparities due to the condition of social invisibility. In the context of technological disparities, to exemplify an information action that collaborates with the goal of "[...] significantly increasing access to information and communication technologies and striving to offer universal and affordable access to the internet by 2020, seeking to guarantee quality, privacy, data protection and cyber security." (IPEA, 2018, p.242), we highlight the project A vovó está on!, carried out at the Public Library Mayor Edwin Kuwer, located in Sapiranga, in Rio Grande do Sul. This is a digital inclusion initiative for seniors, with weekly meetings that aim to introduce the daily functionalities of the smartphone in the routine of this audience (Sapiranga, 2023).

It is important to highlight that a large part of these information actions touch on problems that affect developing countries, such as universalization of education at all levels of education, decent housing, professional qualification, digital literacy and serious environmental problems, such as lack of basic sanitation, selective waste collection, among other issues. These are actions that were or are financed through nongovernmental organizations (NGOs), resources from projects or financial incentives by federal law. This situation demonstrates the proactivity of public library librarians in promoting actions on a permanent basis and the urgency of recognition by state and municipal spheres in enabling significant and continuous work towards sustainable development.

The survey of information actions aligned with the 2030 Agenda in the five regions of Brazil and the production of knowledge about sustainable development and public libraries by the associative movement demonstrate that librarians have been proactive and aware of this political agenda. However, legislators and public administrators still show little sensitivity to the issue.

In addition to the positive impact of these practices, actions such as those listed bring the public library closer to the community. It is also worth noting that some actions achieve the SDGs' targets more efficiently than others. In general, it is observed that more assertive and engaged actions on social issues, such as identity and diversity, have an impact on human and sustainable development, such as anti-capacity, anti-racist, anti-misogyny and anti-homophobia causes, mobilized more frequently in periodical awareness campaigns. Public libraries traditionally carry out awareness-raising activities in a more engaged way during the campaign months agreed with the government. The participation of public libraries in awareness campaigns launched by the government is an important opportunity to mediate information, especially when they cover sensitive topics such as those mentioned here.

It is worth highlighting the work of the Brazilian Federation of Associations of Librarians, Information Scientists and Institutions (FEBAB), the largest entity in the librarian association movement in Brazil, which reveals itself as a fundamental social actor in containing the tendency towards the invisibility of the public library, stimulating political, social, cultural and economic incentives at governmental level. This effort can be exemplified by the activity of its working groups, its thematic events and recent publications aimed at promoting dialogue between libraries, State and civil society, such as *Cartilha para Municípios: Biblioteca Viva* (2018) and the advocacy campaign letter *Libraries for a better world: yesterday, today and always* (2021), which aim to underpin the importance of libraries in contemporary times. Theory and practice constantly reinforce that libraries are strategic partners in achieving the SDGs, contextualizing and analyzing the limits and possibilities of their application and adapting them to the reality of their countries.

Brazilian public libraries have been active in promoting actions that explore the contradictions of Brazilian society in a tenuous dimension and, we believe, initially, in a more instrumental direction. An example of that are environmental education actions to inform about and make spaces available for selective waste collection, which is rather a kickstart for engagement, but does not yet constitute an emancipatory action, including

citizens in the political dynamics and production of urban space in a way that is more active and conscious.

However, the importance of public libraries for their communities is undeniable. The indicated macro policies seek to homogenize issues on their agendas, focusing on solutions and hiding the contradictions of current models and discourses. Information actions in public libraries present limitations, but signal possibilities for revealing social conflicts and enabling social participation. Even though planning (establishing goals) is very necessary in public administration, it is by facing conflicts collectively that we will be able to find permanent solutions for sustainable urban development, with a decent quality of life for everyone.

In this chain of events, citizens might be neglected by other social actors in their daily lives to the detriment of focus on governance, infrastructure and technology; and digital segregation ends up increasing as this negligence continues. The smart cities model needs that its policies and indicators really express and guarantee the rights of citizens, otherwise the ideology of sustainability, as a "civilizing" resource for an economic development model that is characterized by being predatory will constitute an illusion.

The development of an information policy for cities based on the use of digital technologies is complex and depends on studies on information flows that will guide the course of actions and strategies to be adopted by Brazilian municipalities. Given this fact, reflecting on the social function of public libraries in this context is urgent and powerful. It is expected, therefore, that the library will be seen, both by the public power and by society, as a centuries-old social institution that houses information artifacts and develops mediation, formative and relational information actions.

Conclusion

It is concluded that the urban development model of smart cities, especially in the form of the PNCI (Bill of Law n. 976/2021), develops from an emerging information regime, which highlights structural

challenges of Brazilian society, with accentuated inequalities and power relations, but establishes a more connected and transparent project for citizen participation. Regardless of recognizing the advantages placed by that model, in order to enable social participation, we cannot ignore the limitations of Brazilian society, which faces profound educational problems and challenges that concern information literacy, access to technologies and, mainly, the grasp of rights and duties of the citizen and of the State towards him.

Despite including libraries in the legislative proposal, the PNCI, as written, disregards the importance of the public library as a cultural facility, a setting that encourages creativity and citizen participation in the community. Furthermore, the absence of national associations, such as FEBAB and the Brazilian Association of Education in Information Science (ABECIN), in addition to normative, training and class bodies in the process of preparing the PNCI, demonstrates the lack of awareness in understanding the institution and interest in including libraries and librarians as actors in this policy.

Our results refer to the reductionist and instrumental view reserved for public libraries in the text of the National Policy on Smart Cities and discuss the function of public libraries in the context of Brazilian urban centers based on information actions undertaken by these institutions in favor of sustainable development, based on the 2030 Agenda. It is observed that the SDGs mobilized in these actions are still limited in mitigating structural problems that require public policies to be overcome, for which public libraries, through its professionals and its class entities, must position themselves as a preponderant social actor and persistent mediator together with local governments, doing justice to the political and social role that permeates the know-how of these institutions and that encompass information literacy and critical competence in the use of information in pursuit of development that respects diversity, social context and local culture. Only in this way will the information actions that come to mobilize express their informational value, that is, they will be meaningful to those who get involved in them.

However, within the scope of public policies for smart cities, the recognition of the public library as a social actor and the measurement of the importance of the institution in a community explicitly in strategic plans of all public spheres has limitations due to the lack of understanding of the social, political, cultural and educational aspects that permeate the actions involving this institution. There is still much to discuss about the humanistic dimension of the smart city, as the model's focus still remains on the hard domains of smart cities initiatives. Still, the 2030 Agenda reveals itself as a device with effects on the balance between the hard and soft domains of smart cities and, in a way, is strategic to reinforce the social function of the public library and its nuances in this context.

The work of libraries would certainly be more efficient if it had greater support from public authorities and civil society. Considering our object of study, it would be important for local governments to include public libraries in their smart city plans and adequately recognize the value of these entities as social institutions capable, not only of executing actions, but thinking about them collectively, mobilizing patrons, professionals and governments in the development of public policies. The smart cities model needs the ethical responsibility of highlighting the public library as a space for inclusion and interaction, capable of serving all citizens. Like many developing countries, Brazil lives in a context in which neoliberal policies affect governance, in the sense that market interests are prioritized in detriment of the use and application of technology to solve social problems. Such problems require comprehension of informational content to access social and citizenship rights, but they are not yet prioritized.

These reflections bring to the center of discussions on information policies the issue that, in order to be innovative and creative and fulfill the evident potential in the development of smart cities, Brazilian public libraries still require adequate funding to meet the informational and infrastructural needs of the communities in which they are located. The recognition in law of the public library as a social actor is fundamental for the implementation of the Brazilian policy for smart cities, so that its objectives are in fact congruent with those of the 2030 Agenda, not disregarding, as we have seen, the need to contextualize it to the local reality

so that it is actually meaningful to the population and its surroundings. Hence the emphasis in this study on local strategies, mobilized by governments, including the library in an appropriate and relevant way in their smart city projects.

REFERENCES

- Aguiar, N. C., & Oliveira, M. C. (2022). Sustentabilidade ambiental e informacional em bibliotecas públicas: Práticas desenvolvidas na cidade de Poço Verde, Sergipe.

 Anais do Congresso Brasileiro de Biblioteconomia e Documentação. Federação Brasileira de Associações de Bibliotecários, São Paulo. https://portal.febab.org.br/cbbd2022/article/view/2646/2468
- Biblioteca de São Paulo. (2023). Serviço Social. https://bsp.org.br/servico-social/
- Biblioteca Pública Epiphanio Dória. ([2024]). *Projeto Reciclatec*. https://biblioteca.seduc.se.gov.br/?page_id=21
- Biblioteca Pública Estadual do Ceará. (2023, dezembro 6). *Encontro Literatura & Diversidade acontece próximo sábado, dia 09, na Biblioteca* Pública. Notícia. https://bece.cultura.ce.gov.br/encontro-literatura-diversidade-acontece-proximo-sabado-dia-09-na-biblioteca-publica/
- Biblioteca Pública Municipal Professor Bruno Enei. (2023). *Biblioteca* Pública Municipal Professor Bruno *Enei*. https://bibliotecabrunoenei.blogspot.com/
- Câmara dos Deputados (2021). *Cidades inteligentes: Uma abordagem humana e sustentável.* (Série estudos estratégicos, 12). Edições Câmara.
- Cance, T. C. A. da M. (2017, setembro 18). Projeto de acessibilidade da Biblioteca Isaias Paim vai a escolas de Aquidauana. *Agência de Notícias do Governo do Estado do Mato Grosso do Sul.* https://agenciadenoticias.ms.gov.br/projeto-de-acessibilidade-da-biblioteca-isaias-paim-vai-a-escolas-de-aquidauana/.
- Coelho, N. (2023). Biblioteca *Pública recebe pela segunda vez certificação de "Declaração de Cuidados com Acervos Raros"*. Prefeitura de Ouro Preto. https://ouropreto.mg.gov.br/noticia/3615
- Confederação Nacional de Municípios. (2019, julho 5). Biblioteca pública de Tomé-Açú (PA) desenvolve projeto para produtores rurais. CNM. https://www.cnm.org.br/comunicacao/noticias/biblioteca-publica-de-tome-acu-pa-desenvolve-projeto-para-produtores-rurais
- Conselho Nacional de Secretários de Educação. (2019, maio 9). Projeto de biblioteca pública de Sergipe é citado como referência para todo o país. CONSED. https://www.consed.org.br/noticia/projeto-de-biblioteca-publica-de-sergipe-e-citado-como-referencia-para-todo-o-pais

- Conselho Regional de Biblioteconomia 3a região. (2019, outubro 9). *Biblioteca*Pública de *Iguatu (CE) é uma das premiadas pela Organização Recode*. CRB3.
 https://crb3.org.br/biblioteca-publica-de-iguatu-ce-e-uma-das-premiadas-pela-organizacao-recode/
- Desouza, K. C., & Flanery, T. H. (2013). Designing, planning, and managing resilient cities: a conceptual framework. *Cities*, 35, 89-99.
- Federação Brasileira de Associações de Bibliotecários, Cientistas de Informação e Instituições. (2018). Cartilha para municípios: biblioteca viva: todo município pode ter bibliotecas de qualidade. FEBAB.
- Federação Internacional de Associações e Instituições Bibliotecárias. (2015). As bibliotecas e a implementação da Agenda 2030 da ONU. ONU.
- Fundação Biblioteca Nacional. (2023). *Biblioteca Euclides da Cunha Convida* | *Programa Vozes Brasilis: "Combate à Intolerância Religiosa"*. Fundação Biblioteca Nacional. https://www.gov.br/bn/pt-br/central-de-conteudos/eventos/biblioteca-euclides-da-cunha-convida-programa-vozes-brasilis-combate-a-intolerancia-religiosa.
- Fundação do Trabalho de Mato Grosso do Sul. (2021, fevereiro 22). *Acessibilidade: Estão abertas inscrições para curso de Braille*. FUNTRAB. https://www.funtrab.ms.gov.br/acessibilidade-estao-abertas-inscricoes-para-curso-de-braille/
- Gil, A. C. (2002). Como elaborar projetos de pesquisa (4a ed.). Atlas.
- Instituto Brasileiro de Geografia e Estatística. (2023). *População brasileira cresce 6,5% e chega a 203,1 milhões de habitantes, aponta Censo 2022*. IBGE Educa. https://educa.ibge.gov.br/jovens/materias-especiais/21972-populacao-brasileira-cresce-6-5-e-chega-a-203-1-milhoes-de-habitantes-aponta-censo-2022.html.
- Instituto de Pesquisa Econômica Aplicada. (2018). Agenda 2030: ODS: Metas nacionais dos objetivos de desenvolvimento sustentável. IPEA.
- International Federation of Library Associations and Institutions. (2006). *Manifesto IFLA/UNESCO sobre a internet: diretrizes.* IFLA.
- International Federation of Library Associations and Institutions. (2022). *Manifesto da biblioteca pública IFLA/UNESCO 2022*. IFLA.
- Komninos, N. (2009). Intelligent cities: towards interactive and global innovation environments. *International Journal of Innovation and Regional Development*, 1(4), 337-355.
- Koontz, C., & Gubbin, B. (2013). *Diretrizes da IFLA sobre os serviços da biblioteca pública* (2a ed.). IFLA.
- Lemos, A. (2013). Cidades inteligentes. GV Executivo, 12(2), 46-49.
- Lei n. 12.244 de 24 de maio de 2010. (2010, maio 25). Dispõe sobre a universalização das bibliotecas nas instituições de ensino do País. Presidência da República. https://www2.camara.leg.br/legin/fed/lei/2010/lei-12244-24-maio-2010-606412-publicacaooriginal-127238-pl.html

- Lima, I. F., França, F. da S., Cavalcante, G. F. F., Silva, T. de F. C., Nunes, C. M., Melo, A. M. D. de M., Francisco, A. A., & Antonacci, D. C. G. (2019). Além dos livros: A biblioteca pública enquanto espaço de inclusão, ação e interação. *Inclusão Social*, 13(1), 84-97.
- Luterek, M. (2020). Public libraries: Their role in smart city strategies. *Zagadnienia Informacji Naukowej*, 116(2), 27-44.
- Medeiros, A. L. (2010). Bibliotecas e cidadania. Sinais Sociais, 4(13).
- Mersand, S., Gasco-Hernandez, M., Udoh, E., & Gil-Garcia, J. R. (2019). *Public libraries as anchor institutions in smart communities: Current practices and future development.* Proceedings of the 52nd Hawaii International Conference on System Sciences (3305-3314). University of Hawaii at Mānoa, Honolulu.
- Morozov, E., & Bria, F. (2019). A cidade inteligente: Tecnologias urbanas e democracia. Ubu.
- Moyses, M. F., Mont'Alvão, C. R., & Zattar, M. (2019). A biblioteca pública como ambiente de aprendizagem: Casos de makerspaces, learning commons e coworking. *Conhecimento em Ação*, 4(2), 4-22. https://doi.org/10.47681/rca.v4i2.30981
- Organização das Nações Unidas. (2015). *Transformando nosso mundo: A agenda 2030 para o desenvolvimento sustentável*. Centro de Informação das Nações Unidas para o Brasil.
- Palhares, M. C., & Santos, L. H. (2022). A Biblioteca Pública Cora Coralina como espaço para o empoderamento da mulher negra em atendimento aos Objetivos do Desenvolvimento Sustentável. *Revista Brasileira de Biblioteconomia e Documentação, 18*, 1-17.
- Prefeitura Municipal de Caxias. (2023, dezembro 7). *Biblioteca* Pública Municipal *Odylo Costa Filho recebe atividade de prevenção à saúde do homem.* Prefeitura Municipal de Caxias. https://caxias.ma.gov.br/2023/12/07/biblioteca-publica-municipio-odylo-costa-recebe-atividade-de-prevenção-a-saude-do-homem/.
- Prefeitura Municipal de Domingos Martins. (2022a). *Projeto Biblioteca Sustentável:*Jardim Secreto completa 6 anos. https://www.domingosmartins.es.gov.br/detalheda-materia/info/projeto-biblioteca-sustentavel-jardim-secreto-completa-6-anos/29285
- Prefeitura Municipal de Domingos Martins. (2022b). *Biblioteca Municipal é reconhecida como Centro de Educação Ambiental*. https://www.domingosmartins.es.gov.br/detalhe-da-materia/info/biblioteca-municipal-e-reconhecida-como-centro-de-educacao-ambiental/29328.

- Projeto de lei no 976/2021. (2021, março 3). Institui a Política Nacional de Cidades Inteligentes (PNCI), com vistas à melhoria da qualidade de vida dos munícipes, e dispõe sobre os princípios e diretrizes que a nortearão, os seus objetivos, as ações a serem realizadas, os recursos alocáveis e dá outras providências. Câmara dos Deputados. https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=2274449&fichaAmigavel=nao#:~:text=PL%20 976%2F2021&text=Institui%20a%20Pol%C3%ADtica%20 Nacional%20de,aloc%C3%A1veis%20e%20d%C3%A1%20outras%20 provid%C3%AAncias.
- Quintanilha, I. C. (2023). Entre a margem e o centro: Um panorama das ações das bibliotecas públicas para a população em situação de rua [Trabalho de Conclusão de Curso]. Universidade Federal Fluminense, Rio de Janeiro.
- Recode. ([2019]). Bibliotecas transformadoras: Novas programações em bibliotecas brasileiras. Recode.
- Reis, T. (2014, novembro 2). Brasil tem uma biblioteca pública para cada 33 mil habitantes. *G1 Educação*. https://g1.globo.com/educacao/noticia/2014/11/brasil-tem-uma-biblioteca-publica-para-cada-33-mil-habitantes.html
- Revista Programa. (2022, abril 4). Biblioteca Parque Estadual do Rio de Janeiro abre o 10 XBoom Game Jam Experience nessa terça. *Jornal do Brasil.* https://www.jb.com.br/cadernob/programa/2022/04/1036759-biblioteca-parque-estadual-dorio-de-janeiro-abre-o-1-xboom-game-jam-experience-nessa-terca.html
- Rizzon, F., Bertelli, J., Matte, J., Graebin, R. E., & Macke, J. (2017, setembro/dezembro). Smart city: Um conceito em construção. *Revista Metropolitana de Sustentabilidade*, 7(3), 123-142.
- Santos, L. (2021, outubro 14). Design sustentável e reciclagem são destaques em exposições abertas na Biblioteca Avertano Rocha. *Agência Belém: De pauta e portas abertas*. https://agenciabelem.com.br/Noticia/222066/design-sustentavel-e-reciclagem-sao-destaques-em-exposicoes-abertas-na-biblioteca-avertano-rocha
- Prefeitura Municipal de Sapiranga. (2023). A vovó tá on: Projeto de inclusão digital para terceira idade é sucesso em Sapiranga. https://sapiranga.atende.net/cidadao/noticia/a-vovo-ta-on-projeto-de-inclusao-digital-para-terceira-idade-e-sucesso-em-sapiranga
- Schöpfel, J. (2018) Smart libraries. *Infrastructures*, 3(4), 43. https://doi.org/10.3390/infrastructures3040043
- Silva, F. S. (2019). *A relação entre a Agenda 2030 da ONU e as bibliotecas públicas: Um estudo na Biblioteca* Pública Municipal Josué Guimarães [Trabalho de Conclusão de Curso]. Universidade Federal do Rio Grande do Sul, Porto Alegre.
- Virada Sustentável. ([2023]). *Clube de leitura com Djamila Ribeiro*. https://www.viradasustentavel.org.br/

Appendix.

Information actions aligned with the SDG of the 2030 Agenda

Target	City	Information action			
Goal 1 - No poverty					
1.2	Aracaju-SE	"Reciclatec" - Biblioteca Pública Estadual Epiphanio Dória			
1.4	São Paulo-SP	"Hospitality" - Biblioteca de São Paulo			
Goal 3 - Good health and well-being					
3.4	Caxias-MA	"Men's health prevention action" - Biblioteca Pública Municipal Odylo Costa Filho			
Goal 4 - Quality education					
4.4	Iguatu-CE	"The Library as a Tool for Youth Insertion into the Job Market" - Biblioteca Municipal Dr. Matos Peixoto			
4.5	Niterói-RJ	"Portuguese Course for Immigrants and Homeless People" - Biblioteca Parque de Niterói			
4.7	João Pessoa-PB	"Beyond Books" - Biblioteca Pública Estadual Juarez da Gama Batista			
Goal 5 - Gender equality					
5.1	São Paulo-SP	"Feminist Room" - Biblioteca Pública Cora Coralina			
5.2	Seringueiras-RO	"Meetings on violence against women" - Biblioteca Pública Municipal Renan Camilo Vasconcelos			

Target	City	Information action		
Goal 8 - Decent work and economic growth				
8.3	Porto Alegre-RS	"Job training workshops, job boards, local farmers' markets" - Biblioteca Pública Municipal Josué Guimarães		
Goal 9 - Industry, innovation and infrastructure				
9.c	Sapiranga-RS	"Grandma is on!" - Biblioteca Pública Municipal Prefeito Edwin Kuwer		
Goal 10 - Reduced inequalities				
10.2	Ponta Grossa-PR	"BiblioSocial" - Biblioteca Pública Municipal Professor Bruno Enei		
Goal 11 - Sustainable cities and communities				
11.4	Ouro Preto-MG	"Preservation and access to cultural heritage policies" - Biblioteca Pública Municipal de Ouro Preto		
11.7	São Paulo-SP	"Sustainable Turn" - Biblioteca Villa Lobos		
Goal 12 - Responsible consumption and production				
12.5	Belém-PA	"Immersion - creation and ecodesign processes in Spanish Pottery" - Biblioteca Pública Municipal Avertano Rocha		
12.8	Poço Verde-SE	"Sustainability and environmental education actions" - Biblioteca Pública Municipal Epifânio Dória		
Goal 13 - Climate action				
13.3	Domingos Martins-ES	"Secret Garden" - Biblioteca Municipal Argentina Lopes Tristão		
Goal 16 - Peace, justice and strong institutions				
16.1	Fortaleza-CE	"Literature & Diversity Meeting" - Biblioteca Pública Municipal do Ceará		
16.10	Rio de Janeiro-RJ	"Vozes brasilis" - Biblioteca Euclides da Cunha		
16.b	Campo Grande-MS	"Accessibility practices" - Biblioteca Pública Estadual Dr. Isaias Paim		

Target	City	Information action		
Goal 17 - Partnerships for the goals				
17.7	Tomé-Açú-PA	"BiblioAgrorural: sustainable management for small farmers" - Biblioteca Pública Municipal Desembargador Wilson de Jesus Marques da Silva		
17.8	Redenção-PA	"Training in IT and web development" - Biblioteca Pública Municipal Wesley Viana de Moura		
17.17	Rio de Janeiro-RJ	"1º XBoom – Game Jam Experience" - Biblioteca Parque Estadual do Rio de Janeiro		