# SMART DESTINATION AND URBAN LANDSCAPE:
## video surveillance images as a resource for protection in São Luís, Maranhão, Brazil

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**ABSTRACT**
From technological solutions, man has created mechanisms that assist in the preservation of common goods, as in the case of historical sites. In the city of São Luís, Maranhão, Brazil, has created in 2012, two centers monitoring, a state and other municipal, aimed to control and protect the population. The objective of this article is to identify the perception of residents in the capital of Maranhão with the cameras installed in the city to monitor the urban landscape. The methodological procedures used were bibliographical and documentary research, with interpretation of secondary sources. In a second step, the empirical analysis was used through the use of questionnaires to residents. In conclusion, the results point to the possibility of alignment of new strategies, not only for safety, but also for the preservation of the historical heritage and its cultural and urban landscape, reinforcing the concept of smart destination and improving urban management principles.
**Keywords:** Historic and cultural heritage. São Luís. Smart destination. Urban landscape. Video surveillance.

## Introduction

The capital of Maranhão state is São Luís, and the city was declared a World Heritage Site by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1997, especially because of the importance of its architectural heritage of Portugal-Brazilian origin, dating from the eighteenth and nineteenth centuries. Characterized as the largest collection in this regard in Latin America, comprises 60 hectares in the old core of the urban fabric (Silva Filho, 1998).

Streets, houses and roofs, among other elements, make up the historical and cultural landscape in São Luís, holding in its history, moments of a city that was in that time the fourth most important in Brazil, after Salvador, Recife and Rio de Janeiro (Silva Filho, 1998). In this context, its architecture must be preserved according to UNESCO standards, because it does has been created public protection policies at all levels of the assets of public interest.

For the safety of the people that was born and live in São Luís, the State of Maranhão and the city of São Luís created in 2012, specialized institutes for inspection and monitoring strategic areas of the city, such as the installation of high-definition cameras, with viewing capability objects and people in a radius of one kilometer without losing focus in 2013, thus enabling the direct actions with a view to the welfare of all.

According to Rezende (2012), one of the assumptions that underlie the concept of strategic digital city is precisely the realization of information through technological resources. So one of the means towards achieving this city typology is to grant it integrated network these resources aimed at improving urban services. Thus, the implementation of video surveillance enabled the capture of a number of public spaces data, helping state and local governments in promoting focused on the area of security policies.

To protect the people and the architectural heritage they have been installed at various strategic points of the old town in São Luís. From this premise, the general objective of this research is to identify the perception of residents regarding the use of cameras installed in the city to monitor the cultural landscape.

Based on these, it is possible to understand the usefulness of cameras from government agencies in order to minimize damage caused to the public good (especially the heritage and community spaces), so the São Luís urban landscape remains preserved under the rules of UNESCO, as directed to the standards set by the master plan.

The study becomes relevant to the fact that, until the present time, there are no indications that the video surveillance in São Luís using cameras as a technological tool for the production of images, has supported the formation of public policies for the protection of their landscape. Thus, the results become crucial for state and municipal administrators consider these artifacts as additional tools for these purposes.

**Smart City Destination**

With the advent of globalization, urban managers have faced the challenge of preparing brazilian cities to its connection with new technologies and their inclusion in the list of those that have effective results to its residents. Therefore, they have adopted technological tools for streamlining processes, which, as Bishop (2000) make it possible to capture images that provide visualization mechanisms in real time, such as geographic information that expand the volume of data for decision making.

On the other hand, urban expansion in global environments has affected developed countries and developing ones, because cities are a dynamic areas in terms of land use, generating significant changes, especially on questions related to economic growth (Grey; Luckman; Holland, 2003).

In this context of rapid urban change, there have been so-called "strategic digital cities", focused on the challenge of achieving progress through technology and communication, based on strategic planning processes, with a view to the interaction of the city with both its citizens and with the world (Doukas et al., 2011).

However, the concept of strategic digital city involves not only the allocation of resources on the internet, but understands the creation of information networks, using telecommunications strategies grounded in planning and implementing financial resources for the provision of data to the municipal management (Rezende, 2012). For Doukas et al. (2011), to integrate information and communication technologies (ICTs) with the services offered. In turn, the Rezende view (2012:84):

> [...] Can be understood as the application of technology resources in the municipal management and also in providing information and services to municipalities or citizens. It is a more comprehensive design than just offering Internet to the public via conventional telecommunications resources. Goes beyond digitally include citizens in the World Wide Web, as comprehensive projects include: information systems for municipal management and citizen services; and also municipal security systems.

Thus it is a bit city, in one that generates and contains information for several reasons (Lin; Chiu, 2003), constituting a local data exchange. The relationship between the physical and digital city lies replacement, complementation and independent, ie the elements that compose the digital city create a new structure.

Rapid urbanization in Brazil has caused significant changes in the urban landscape, which, with the aid of technology, are likely to be monitored, as in the case of Seoul, South Korea, where it is used the Landscape Information System (Information System Landscape) for the assessment of project impacts developed in the city (Oh, 2001).

Thus, the concept of information landscape is adopted for disclosure of city data, and, in the view of Lin and Chiu (2003:474), set "to be a repository of information about cyberspace and characterized by spatial attributes".

Guilarte (2015) says that in heritage destinations it´s necessary to make actions in terms of competitiveness and sustainability, through tools that enable a comprehensive analysis of the development of tourism under systematic monitoring of certain tourist indicators for decision making.

So, smart cities have provided distinctive experiences to its visitors and residents through the available technological infrastructure, helping to improve the quality of life and sustainable economic growth, through a participatory government management model (Buhalis; Costa, 2006; Caragliu; Bel Bo; Nijkamp, 2009).

One of the challenges of smart tourist destinations is to promote the quality of the tourist experience, that is, how to use tourism (Jensen, 1999). This prospect that people increasingly seek the satisfaction of the services provided and the emotions experienced on the trip (product and service), is creating new ways of understanding the consumer profile (Pine II; Gilmore, 1999), which can be both positive and negative.

The idea of a smart city with a tourist destination that benefits from such an advantage, we may confound with certain settings. Muñoz (2015:15) warns that there are differences between a smart city and smart destination.

> Key differences between a city and a smart tourist destination: the smart tourist destination is driven by the tourism sector, both public and private; the target audience is the tourist, not the citizen; the offer consists of tourism experiences that are lived in a destination; the smart tourist destinations are linked to the increased competitiveness of the industry and to the improving tourist experience; interaction goes far beyond the actual time spent in the city.

Thus, cities have begun to include the development of smart tourist destinations (smart destinations) to incorporate sustainability and technology in all phases of the value chain as a strategy to increase its competitive advantage in the tourism market. Smart destination is a

tourist area that has defined project and aim to create sustainable development based on the limitations and local capabilities, enhancing the integration of technology throughout the creative relationship destination value, as well as strengthen and incorporate actions between public and private managers promote greater competitiveness of the destination.

For Bishop (2000), the twenty-first century is the time of superinformation with ever faster technological solutions and new techniques for solving emergency problems, which have become progressively more complex (Oh, 2001). Therefore, one should also focus on the production of quality information, and new practices for proper landscape management of cities.

**Urban Landscape**

Studies on urban landscape are gaining growing importance, from fast, frequent and significant conceptual changes introduced in the second half of the twentieth century (Antrop, 2004).

In the view of Maderuelo (2010), the landscape does not consist of an object, but comprises a mental construct prepared by given observer from sensations and perceptions seized during contemplation given place, rural or urban.

In turn, Andreotti (2012:6) comments that the landscape goes beyond its own definition, reflecting society and its history, because for the author, "can not be separated from man and his spirit, imagination and perception". Additionally, Hardt (2000) appraises consisting of a combination of natural and man-made elements (interrelated and interdependent), producing a set of sensations. In the crossing of different places and periods, so, in the urbanized environment, which is known as "urban landscape", composed by overlapping historical and socioeconomic events witnessed over time. As a result, it is designed from unique spatial composition to the society to which it belongs.

It is therefore the product of the visual perception of something that constitutes the built environment, consisting of streets, buildings, squares and sidewalks, among other components. Bonametti (2010:5) extends this idea by stating that:

> Intervention in urban landscapes should take into account the evolution of society and its basic transformations, because cities are endowed with weight and permanence of landscapes, where the current coexists with decay; the future with the old; where traces and memories are present.

The constant transformation of society, also changes the concept of urban landscape, as the dynamics of cities in the globalization time that has caused significant changes in their surroundings. Overall, Cullen (2006) structured a conception of urban landscape that refers to: a) proper vision - consisting of sequential perceptions (series) of urban spaces; b) the subject's reactions in relation to its position in space - directed location aspects - internal and external - the observer, referring to the sensations caused by spaces: open, close, high, low; c) construction of the city - related characteristics of colors, textures, scales and styles of built and natural elements and the conformations of the urban fabric.

Adam (2008) states that, from these ideas, you can see that there are many ways of understanding the urban landscape, as the city and its neighborhoods are being established over the years, forming and reforming the urbanized environment (Hardt; Hardt, 2006). In this sense, Fernandes (2009:2) states that "the city is built over time in a process that, far from a perfect stratigraphy, is leaving new applications that coexist or overlap the elements of the past".

In this context of formation of the city by the relation between various components, check that the scenarios are possible are also modified by these intersections. Cavallazi (2010:52) reinforces this assertion by stating that the whole landscape "is the result of interpretation of man and thus the cultural environment is not a third aspect, but is interwoven throughout the environment, particularly in what is urban space".

Andreotti (2010, 2012) believes that the cultural landscape is logos, in memory address, history and culture, making paradigm of ethical and aesthetic merits, in constant development. The author comments that the actual construction of the society promotes the concept of this landscape type, also expressed in values, customs, images and symbols.

Thus, the landscape comprises the different stages of a territory in continuous interaction between boundaries - internal and external - and its structural elements in time (Andreotti, 2010, 2012; Unesco, 2012). In this context, it highlights the importance of the importance of heritage in its very essence.

It is worth mentioning in this context, the relevance of human perception, understood as a mental process of interaction between individual and environment. Tuan (2012) explains that economic conditions, lifestyles and physical characteristics of the environment affect attitudes and human environmental values. So Hardt (2004:597) adds that:

the visual space and the human perceptual mechanisms are the linchpins of this perception, which is conditioned by two filter types: biophysical (visual and sensory perception) and condutual (psychic perception) that act differently for each observer, determining its biopsychic state .

The author also considers that the integrated systemic ecological approach, interrelating the total environment to human experience, perception has a mandatory analysis of foundation of the urban landscape (Hardt, 2004).

**Methodology**

In the first instance, this research is characterized as exploratory, because, according to Gil (2008), seeks to deepen the knowledge about the issues addressed by providing higher levels of familiarity with the subject addressed. It is also descriptive, it comprises a set of survey techniques of primary and secondary data, to characterize the various aspects involved (Dencker, 2007). Moreover, it is analytical, with the intentions of planning and evaluation of information, focusing on the most relevant characteristics (Gil, 2008).

The theoretical framework was based on literature research, is one based on the contributions of many authors on the subjects covered (Gonsalves, 2003). In addition to the aforementioned sources, it is worth mentioning the direct observation of São Luís video surveillance centers. The characterization of the study area was carried out from the interpretation both of primary data through field surveys, as official documents relating to the historic center of the capital of Maranhão.

The results were derived from field study conducted in march 2013, with questionnaires, and the universe of the research made by the residents of the city of São Luís and the sample of 73 people, with a confidence level of 95% and sampling error of 5%, calculated from the formula refers to the infinite population (Gil, 2008). The approach of respondents was carried out electronically and in person. The evaluation of the responses of the interviewees was confronted with the analysis of the images transferred by video surveillance centers.

Due to the above reported specifications, research takes quantitative and qualitative contours.

**STUDY AREA**

The city of São Luís is located in northeastern Brazil, on the banks of the bay of San Marcos (Figure 1) between the 2nd and 3rd parallel south and the meridians 44º and 45º West Greenwich (Ribeiro Junior, 2001).

Figure 1: Map and location of São Luís in South America [adapted by Google Maps (2014)].



The city has a population of 1.014,837 habitants in a land area of 831.7 km² (Ibge, 2014), of which 157.6 km² are in the urban area, housing 955,600 people in the municipal seat. In the seventeenth century, a French squadron, led by Daniel de La Touche, went in search of the establishment of a colony "beyond the seas", reaching the Maranhão coast, and September 8, 1612, with the start of construction of Fort São Luís in honor of King Luís XIII, the French founded the so-called "Equinoctial France" in the region where today sits the city of São Luís (Ribeiro Junior, 2001; Silva Filho, 1998).

The São Luís urban design was effective beginning in 1615, after the expulsion of the French by the Portuguese. According to Meireles (2001:60), "in Jerônimo de Albuquerque administration (1616-1618) was asked the chief engineer of Brazil, Frias de Mesquita, an urban route to São Luís, which constitute the urban core original".

That engineer created a strict standard for the city of São Luís (Muniz, 2005), which lasted for about 350 years, until the 1970s, when, with the construction of the bridge, there was the expansion to the beaches. This original design was one of the reasons which permitted the city Cultural Heritage of Humanity, awarded by UNESCO in 1997 due to its historic center (Andrés; Moreira; Silva, 1998). Whole is bounded strictly by the perimeters of the federal overturning (about 1,000 buildings) and state (about 2,500 buildings), having a total of approximately 3,500 properties of historical and architectural value, civil majority, constructions of colonial period spread over nearly 220 hectares (Andres; Moreira; Silva, 1998).

Despite the longevity of this history, the architectural heritage of São Luís stands out for the singularity of the buildings in its historic center, whose range includes the original core of the city, dating from the first quarter of the seventeenth century and the adjacent areas of urban expansion in in the eighteenth and nineteenth centuries, and in the early 1900s.

The impulse of São Luís urban modernization took place after the military coup of 1964, aiming at the progress of the country's structures, in both political and socioeconomic level. In the state, this project became known as "Maranhão Novo" under the patronage of the then Governor José Sarney (Gonçalves, 2006; Ribeiro Junior, 2001).

In the government's "Maranhão Novo" the development was justified by the transformations of the state and the city of São Luís, for example, population growth and the expansion of the urban fabric, and various symbols of modernization that transformed the landscape of the Maranhão capital (Gonçalves, 2006; Ribeiro Junior, 2001).

> The front pioneer toward the North São Luís area and neighboring municipalities in Maranhão island became possible modernization project, with the predominance of mansions, vertical integration with spikes and multifunctional buildings style glass towers, as well as the boom of the great shopping centers, horizontal and vertical condominiums middle class. [...]. The rapid population growth in São Luís from 1970 could not be concomitant with urban planning, creating a dense urban fabric, disorderly, of apparent antagonisms, with several urban prostheses [...] (Oliveira et al., 2010:2-8).

As a result, presence is currently a landscape produced by the wide mix of elements of heritage and changes resulting from contemporary demands. However, it is evident the deterioration of old buildings, coming from the neglect of the private and public sector oversight, as well as from physical factors, chemical, biological and human.


**Results**

The results discussed below were obtained from the use of questionnaires to residents of the city of São Luís. The profile of the respondents is related to 58% of people were female and 42% male, approximate proportion to those found for the urban population of São Luís (53% women and 47% men) (Ibge, 2014). Most respondents (47%) under the age of 30 years, with the remaining 26% recorded between 30 and 40 years, 16% between 40 and 50 years and 11% over 50 years.

As video surveillance cameras are installed at various strategic points in the city aimed to ensure wide coverage as the place of residence of respondents, thus favoring broad perception of the residents of these devices in São Luís. The analysis of the data shown in Figure 2, it is found that 66% of the official 38 quarters were represented in the sample.

Figure 2: Quantity of residentes than responded from São Luís
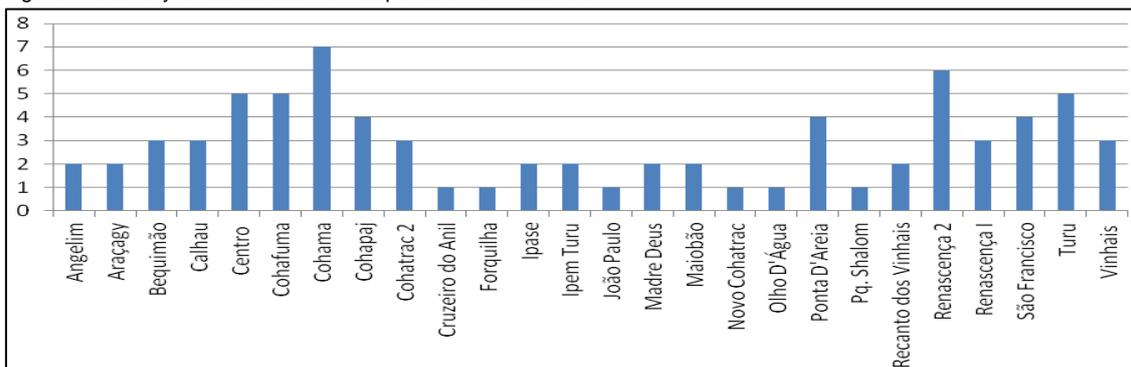
Regarding the opinion of respondents, it was found, first, that all said he knew the deployment of cameras due to its easy viewing in highways, as well as due to its extensive dissemination by the State and the Municipality in the media (Ciops-Ma, 2013).

Then questioned the adequacy of the implementation of cameras as planning and control tool of urban planning; 63% reported that they believe in the possibility of them being effective in this role. Lin and Chiu (2003) point out that the technology provides information from the moment it is used for this purpose, with the data generated by the images contributing to the public sector can monitor the effects of urbanization, identifying their similarities and differences in relation that provided by city planning.

It is of vast knowledge that in any kind of planning, including strategic, constant feedback of information is necessary; thus those assigned by the images of the cameras make it possible to monitor, in real time, the transformations and verification, in a systematic way of compliance with the standards set out in the plan. That is, the concept of strategic digital city is introduced by the transmission speed and the connectivity data (Bishop, 2000; Rezende, 2012).

This city is becoming a reality in São Luís, mainly as a result of the installation of the cameras, as pointed out by the government of Maranhão:

> In addition to a system of video surveillance, the [Public Security Bureau] SSP has developed a complete project of technological modernization aimed at improving communication services, reduction in rental cost data links and voice, possibility of integration with other departments and, above all, the construction of a digital belt owned by the State Government. Create their own network of SSP cables without signal interference and without relying on special cables. There is only one share with other posts to system distribution. [...] The construction of the digital belt in São Luís allows the full integration of all units connected to the SSP and the other organs of the Government, and estimated that the total return on investment occurs in less than 18 months. In this first phase, the structure contemplated approximately 60 km distributed optical fiber ring-shaped covering the main points of the capital of Maranhão. From that ring, optical extensions can be derived for interconnection of video surveillance cameras and for communication with the main organ subordinate to the SSP. [...] The SSP also acquired the use of technology nondestructive method (MND) to about 4000 meters of underground infrastructure. The use of this methodology seeks to avoid air crossover cables in large avenues, thus avoiding accidents and system interruption beyond the reform of the entire building [Integrated Center for Integrated Operations] CIOPS to the new system deployment, covering 450 m² fully modernized (CIOPS-MA, 2013).

The cameras used in the metropolitan area of São Luís "have the latest technology in video surveillance in Brazil. Images are captured in high definition and have the ability to view objects or people in a radius of one kilometer without losing focus on clarity "(Ciops-Ma, 2013)

On the urban landscape, 74% of respondents confirmed the possibility of using the cameras also as a way of monitoring landscape of the city. Grey, Luckman and Holland (2003) state that urban growth is an important global environmental factor that affects more or less developed countries. In the example of Brazilian cities, including the capital of Maranhão, the "swelling" urban force the creation of areas for receiving new residents, often from rural areas. Furthermore, the internal migration itself has caused landscape changes. In the case of São Luís, one sees clearly the intensive vertical integration, the construction of new neighborhoods, the establishment of shopping centers and the transformation of historic buildings in social housing.

Thus, with the cameras installed in the historic center and the main avenues of São Luís, the constant monitoring of landscape changes caused by changes arising from rapid urbanization it is possible.

A significant proportion of respondents (68%) believes that the cameras can contribute to studies on the cultural landscape, which, as argued Andreotti (2008; 2010) is constantly developing, as well as urbanized scenarios of São Luís. Thus, his analysis through these devices allow improved understanding of the interaction between man and environment as well as its complexities and dynamics. On the other hand, it is noteworthy that 32% of residents said the cameras do not facilitate an understanding of the cultural landscape of St. Louis.

When asked about the preservation of historical heritage, 89% believe in the usefulness of the images monitored to prevent the degradation of public goods. This type of action is already happening, for example, in some historic towns of Minas Gerais (Congonhas, Diamantina, Mariana, Ouro Preto, São João del Rei and Tiradentes) (São Luis, 2013).

The use of cameras for this purpose also in São Luís historic center makes it possible to monitor numerous types of changes of public assets, including those arising from vandalism and fires. However, 11% of respondents declared their disbelief in this technology for asset protection.

Almost all respondents (95%) agreed with the fact that the images collected by the cameras would allow the development of projects and the preparation of legal regulations on urban landscape. In the view of Meneghetti, Rego and Pellegrino (2005, p.168):

The landscape design is located on the threshold of conflicts between town and country, between social and cultural, and can be used as a key tool for defining the interrelationships between organisms and their environment and between society and its territories.

The rational and sustainable use of the landscape becomes the objective of the plans and landscaping projects, seeking the best use, considered all

aspects that affect the conservation of resources, so as not to compromise the ability of future generations to meet their needs (environmental sustainability).

In summary, through the images it is possible the selection of areas to be optimized from the idealization of projects aimed at the welfare of the community as a whole. Formatting public environments that generate leisure options and to improve visual aspects of urban allow the gain, the population, social interaction sites, valuing their culture. Meneghetti, Rego and Pellegrino (2005, p.172) state that "the appropriation of these spaces is one of the conditions for the creation of posts and the identification of people with the city".

> The Plan of São Luís County's Urban Landscape is an important tool developed from the need to plan the development of the city with a wider-oriented vision of growth. Considers the urban settlement and the natural and architectural features of the city and, from there, says its landscape potential combined with urban peculiarities of St. Louis. It was developed in phases that gave St. Louis a general framework for its urban situation where aspects were analyzed physiographic, occupation, landscape heritage, landscape zoning and trends of expansion and legislation through a diagnosis of conflicts and problems, and finally, proposals occupation strategies, preservation and enhancement of the city (São Luis, 2013:01).

The existence of this plan provides the establishment of new strategies for constantly updated, allowing the triggering of an adequate planning process of landscape interventions, in order to avoid financial waste and causing urban improvements.

Another aspect that deserves mention is the perspective from the generated images, creating, by the municipality and the state, maps with the main critical points of the city in relation to various problems; 95% of residents believe that this is an opportunity of great value. Oh (2001) points out that, with the use of geographic information system (GIS) and landscape information system (SIP), the systematization of information related to various urban elements and management of urban activities is possible. Diagnostic is, therefore, the existence of great potential for the planning and creation of public policies for the protection of cultural settings and the appreciation of the urban landscape of São Luís.

Finally, were requested, respondents, suggestions for optimization of video surveillance centers, among which are:

Among the suggestions that I consider most important and basic, considering the current scenario of complications due to lack of planning and project surveys, I believe that this monitoring should assume the role of "watchful" of reality and, in partnership with responsible agencies directly involved in issues, initiate corrective actions to those not suitable spaces and then pass also to maintain the environment. Of course, a communication structure between these bodies should be horizontalized to be aligned towards a common goal: the preservation of the cultural landscape of São Luís.

That through the data generated by the observations made in videomonitoradas areas, more effective public policies are defined and that are consistent with the wishes of ludovicenses citizens, especially with regard to security and preservation of public property.

I think, be required integration of public policies corresponsabilizando the various sectors to think about the use of these images / data by means of a specialized team, organizing projects that effectively contribute to the economic, planning, cultural and heritage of the city. including the multi-year plan (PPA) of São Luís, joint actions and budgeted to consider the city not in parts but as a whole and in the long run.

Creating a public policy integrated (city and state) monitoring, with specific laws of punishment for urban disorder and vandalism of public property, and also the use of images and their dissemination (complaints), with clarification of monitoring actions and defense patrimony.

control centers can serve for a risk areas mapping, acting as a monitoring tool of cultural heritage of the city.

Assemble multidisciplinary teams for evaluation of the images obtained with the purpose of generating reports with a view to preparing viable projects to the implementation of control policies and preservation of the cultural landscape of the city.

By monitoring the changes in these areas, you can work in a preventive way in order to prevent acts of vandalism or pillaging of assets and, consequently, the urban landscape.

Greater control of the transport system and constant reports to the community, enabling spatial traffic.

It is clear, then, that these responses are in line with the thoughts of the authors mentioned throughout the article, even on the assumption that the concept of strategic digital city, is fundamental technological connectivity information. As the cameras have been installed with security purposes, you can structure new goals so that they can produce information and data relevant to various sectors of São Luís, promoting conditions for the development of relevant urban policies, particularly within the urban landscape and their cultural settings.

## Considerations

Despite the strategic digital city concept is recent, including scarcity of references on the subject, the Brazilian municipal administrations, including São Luís, should be mindful of the principle that systematic and integrated information, mainly through the use of technology, favors creating considerable public policies in favor of the citizen.

On the other hand, despite the longevity of the treatment of issues related to landscape, its concept still suffers numerous distortions, and its perception by the human being relegated often the background, the example of his disregard in making decisions about urbanized scenarios.

By now achieved results, it appears that the use of images from cameras installed in São Luís for backup purposes can be extended to the management of its landscape, thereby serving as an important instrument for the protection of historical and cultural heritage of the city .

From the moment the capital of Maranhão has video surveillance capabilities that can be shared by multiple organs, generating the necessary data connection will be had to the effective implementation of the concept of strategic digital city. In this sense, it is worth remembering that only the existence of the internet does not configure this strategy, should occur the composition of various components. In the case of São Luís, a virtual belt is designed for continuous monitoring of the city. Since the municipal administration has the technology at its disposal, it is essential to use for its various bodies, making any kind of information is integrated, including with other spheres of government, creating a database for creating and implementation of appropriate policies to improve the city's quality and promoting the welfare of its citizens.

Finally, with a view to scientific further research theme, the expansion is recommended both of your sample with larger number of respondents to increase the statistical consistency, as the spatiality considering other cities for the viability of the necessary comparative analysis effective proposition of public policies.

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