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WEBINAR REPORT

Brazil-China post-Covid-19: **The Digital City**

29 SEPTEMBER, 2020

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Rua Marquês de São Vicente, 336 – Gávea – Rio de Janeiro / RJ - CEP: 22451-044
Tel + 55 21 2206-4400 - cebri@cebri.org.br - www.cebri.org

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Brazil-China post-Covid-19: **The Digital City**

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PARTICIPANTS:

Miguel Pinto Guimarães, Architect and urban planner and partner at Miguel Pinto Guimarães Arquitetos Associados

Chen Cai, Director of information and technology at the China Academy of Information and Communications Techonology (CAICT)

Marcelo Motta, Director of Solutions and Cybersecurity at Huawei Technologies

Washington Fajardo, Harvard Loeb Fellow and partner at Desenho Brasileiro Arquitetura e Design

Philip Yang, Senior Fellow at CEBRI and Founder of URBEM

OPENING:

Luciana Gama Muniz, Director of Projects at CEBRI

Gao Changlin, Science and Technology Advisor at the Chinese Embassy in Brazil

EDITORIAL COORDINATION:

Julia Dias Leite; Philip Yang; Lara Azevedo; Gustavo Berlie

AUTHOR:

Renata Fraga

SPONSORSHIP:

Chinese Embassy in Brazil

Participants

Miguel Pinto Guimarães

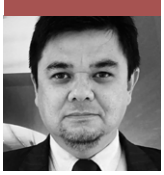
Architect and urban planner and partner at Miguel Pinto Guimarães Arquitetos Associados

Architect and urban planner, graduated from the Federal University of Rio de Janeiro (UFRJ). His first office was opened with architect Thiago Bernardes in 1993. In 2003, Miguel left the company and opened his own studio, Miguel Pinto Guimarães Arquitetos Associados (MPGAA). Since then, he has authored almost a thousand of projects over all regions of Brazil and abroad. His work covers several areas of architecture from houses and residential buildings to hotels, schools, restaurants, and urban projects at different scales. Currently, the sustainability of the natural environment has been the main feature of his projects.

Chen Cai

Director of information and technology at the China Academy of Information and Communications Techonology (CAICT)

Senior Engineer and Director of Information Technology Department of Planning at the Institute of China Academy of Information and Communications Technology (CAICT). Dr. Chen participates as a member of the national policy studies and major projects in the field of smart cities and informatization in China as well as is one of the core members in the drafting group for policy documents. As a project leader or a core member, Dr. Chen has undertaken a series of research projects at provincial and ministerial levels, including Digital China Smart Xiong'an, China-ASEAN Information Port, Digital Guangxi, Smart Chongqing, Smart Qianhai Free Trade Zone, Smart Beijing CBD, among other projects.



Marcelo Motta

Director of Solutions and Cybersecurity at Huawei Technologies

Director of Solutions and Cybersecurity at Huawei Global Cyber Security and Privacy Protection Office, which is focused on end-to-end cybersecurity management and security. At Huawei since 2002, he has worked in various leadership positions in Brazil, Latin America, China, and around the world. Previously, he held positions at Nortel Networks, Siemens, and HP. In addition, he works as a professor of telecommunications engineering for more than 10 years at the Mauá Technology Institute. He is an engineer and a Master of Systems Engineering from Poli-USP and has MBAs in International and Business Economics from FIA/FEA-USP and Grenoble Alpes University (Pierre-Mendès-France University).

Washington Fajardo

Harvard Loeb Fellow and partner at Desenho Brasileiro Arquitetura e Design

Architect and urbanist devoted to the development of the Brazilian cities. He was President of the Rio World Heritage Institute (IRPH) and Rio de Janeiro Mayor's Special Advisor for Urban Issues from 2009 until 2016. The Loeb Fellowship recently selected him for the Class of 2019 at Harvard University's Graduate School of Design. After that, he was Visiting Researcher at the David Rockefeller Center for Latin American Studies, investigating housing policies and community development.

Philip Yang

Senior Fellow at CEBRI and Founder of URBEM

Senior Fellow at CEBRI and Founder of URBEM, an institution dedicated to structuring urban projects. Yang has a Public Administration Master's degree from Harvard Kennedy School. He was a career diplomat in the Brazilian foreign service between 1992 and 2002, having served in Brazilian missions in Geneva, Beijing, and Washington. Served and acts as a board member of the following institutions: MIT Corporation Visiting Committee of the Department of Urban Planning (2012-2016); Arq.Futuro, one of the main forums for debate on architecture and urbanism in Brazil; São Paulo State Symphony Orchestra (OSESP); City Council of the Municipality of São Paulo (2013-2016); City Council of Rio de Janeiro (2013-2016); and Harvard University Brazil Office Advisory Group.

Guiding Questions

1. What is the contribution of technology evolution to the implementation of more secure and inclusive digital city? How can it contribute to change the current dystopian and polarized reality? Furthermore, how tech companies and governments better address this commitment to society?

2. How can digital technology help Brazilian authorities to reach and socially transform territories?

3. Can Brazil learn from China's experience with digital cities and overstep a lack of infrastructure as a historical problem and then implement the digital revolution?

Brazil-China post-Covid-19: The digital city

The webinar "Brazil-China post-Covid-19: The digital city", held on September 29th, 2020, was the second of a cycle of three events organized by CEBRI sponsored by the Chinese Embassy to foster new themes for expanding bilateral cooperation.

During the webinar, the participants highlighted the challenges and opportunities to implement a comprehensive program of digital cities in Brazil as a strategic way to raise the standards of public services and help the overall development of the country. Besides, they stressed out that digital cities can improve the quality of life for Brazilian citizens. Regarding this issue, Chinese experience in digital cities is notable and the bilateral cooperation between China and Brazil can be strategic and benefit both countries, especially in a long term.

"The future is being built by China over the last two decades at a fantastic growing speed that was made possible by planning, education, and intelligence. During this period almost one billion people were taken out of misery, urbanized, and integrated. Almost 15 years ago we were named by some American bankers with some other nations as BRICs. And now China has surpassed Brazil by far. China has a lot to teach us about this path to the future", said Miguel Pinto Guimarães.

China is at the forefront of the development of digital city technologies. It also became a leader in the production of sensing and network devices and all kind of gadgets, which combined with Cloud computing and artificial intelligence (AI) constitute the heart of the digital cities, covering structuring sectors like transport, security, health, education, among others.

The connected city is an environment where services should work for everyone. In this sense, digital inclusion is a priority precondition to transforming societies, but it is a problem that has not yet been overcome in Brazil, due to lack of investment and infrastructure. Ultimately, digital inclusion, participants stressed out, is necessary for data management that can have a high impact on income generation and services provision.

From an agricultural society to an industrialized nation and then to a world leader in technology, China quickly developed its potential. The digital transformation happened in a fast path in just the last fifteen years, showing the potential of technology for economic and social transformation. Nonetheless, the Covid-19 pandemic has impacted the full implementation of the digital cities program in China in the last months. But the health crisis was also an opportunity to implement digital solutions supported by the current digital infrastructure in that country to confront and prevent the disease such as the 'Travel History Card'.

"The Chinese program enabled the government to track 1.6 billion people through their travel history information in domestic cities in a period cycle of 14 days using text messages, QR codes, and web portals", stressed out Chen Cai, Senior Engineer and Director of Information Technology Department of Planning at the Institute of China Academy of Information and Communications Technology (CAICT).

Based on telecommunications Big Data, the system was able to generate automatically different signs of alert like green, yellow, and red indicators according to the epidemic severity in different regions of the country. As a result, the Travel Card has played an important role in Covid-19's prevention and control in China despite some criticism related to mass surveillance.

"The objective of the smart cities is to have equality and services for everybody living in these cities, not only for some people. In this situation, we need to use digital technology to provide inclusion services to everyone to push information services with smart devices. And we can also have some smart instructions for everyone living in sustainable places", pointed out Chen Cai.

Regarding China and Brazil currently bilateral relations on technology, both countries have signed an agreement in 1982 for cooperation on this topic and have been working together consistently for a long time. The context of the Covid-19 pandemic and a heightened global technology competition between China and the United States of America, somehow have impacted the cooperation of Brazil with the Asian country. Despite the fact that the current phase of relations on state level is not as synergetic as it once was, there are some innovative and remarkable initiatives of groups held by members of the private, public and third sectors that exchange insightful experiences and promising ideas on this topic.

“China-Brazil science technology cooperation has many complementary advantages and huge potential. Therefore, strengthening the cooperation between China and Brazil in the field of the digital economy is of great importance to economic recovery and development over the pandemic. I believe this seminar will further deepen the bilateral cooperation not only in digital cities after Covid-19 but also in broad areas to benefit people of our two countries”, highlighted Mr. Gao Changlin, science and technology advisor at Embassy of China in Brazil.

1. What is the contribution of technology evolution to the implementation of more secure and inclusive digital city? How can it contribute to change the current dystopian and polarized reality? Furthermore, how tech companies and governments better address this commitment to society?

At the beginning of the 2000s, the cyberculture expectation was that digital society would empower individuals and lead humanity to a more democratic and 4.0 world. But in recent years, this optimistic scenario has given way to a dystopian market concentration scenario and a growing lack of confidence and polarization between individuals and nations, participants stressed out.

"From what we see today the polarization is just one among many expressions of how we have been directed to a dystopian future. Today's mainstream applications of technology are their use for dystopic means to divide people. We live in a world where nations, communities, neighborhoods and even families are divided. It is a terrible thing. It takes a lot of reason, a lot of thinking to change the course of these events. Everyone's cognitive apparatus is biased. We have to acknowledge that this is a point of departure to overcome this dystopia that we are facing today", said Philip Yang, Senior Fellow at CEBRI and founder of URBEM, an institution dedicated to structuring urban projects.

The new possibilities of digital communication come in the wake of profoundly asymmetric relationships between the social actors involved – governments, companies corporations, and individuals. On top of global infrastructure are the big tech companies. These new intermediaries capitalize on increasingly massive audiences, offering digital platforms that accelerate the process of commoditization of information and operate a 'datafication' of everyday life.

The platform society covers the dependence of billions of human beings on complex online environments that today promote the emergence of virtual communities where the flow and the consumption of information and business transactions are still mediated by opaque algorithms controlled by few people.

Paradoxically, algorithms have public relevance, but platforms establish their logic for managing cash flows, information, a regime of visibility and invisibility, which has a mantle of apparently mathematical objectivity.

Although an algorithm is a set of instructions that make a computer perform a certain assignment, digital platforms programming simplifies the human agency behind the algorithms and avoid critical analysis of those mechanisms. As a result, the lack of confidence is growing up around the world. “We are facing today a lack of confidence, and confidence is something very important to the full implementation of smart city programs everywhere”, reminded Miguel Pinto Guimarães.

Over history, information was manipulated by different actors to advance agendas and inside information. The technology advancement only increases these possibilities. In this context, participants questioned how governments and companies should fully address these challenges to implement and sustain information confidentiality and the overall confidence in digital cities. It was highlighted the importance to protect the data stored in the Cloud and the crucial role of those who are in the strategic management of the digital cities to act safely and ethically.

Nowadays, the key drives for a connected and developed society are sensors, machine interfaces, connectivity, Cloud computing, Big Data, and AI. In this context, the Cloud is the key value of the digital society that can be accessed by different kinds of people, such as the developers of applications, operating management teams, and final users. Given the complexity of the system, it requires strategic management of those who are in control of the data - governments and corporation companies as participants noted.

In the case of Huawei, for example, the Chinese company has been established in Brazil for the last 22 years and maintains a public Cloud in the country that provides different AI services for local ecosystem players. The data belongs to the clients, like governments and other local companies like Huawei, that provide digital infrastructure support for diverse activities such as smart city management; traffic management; environment protection; automatic sorting in the industry; unmanned mining truck, public security by face recognition as well as AI drone inspection.

Concerning the security in the digital cities, it was also reminded that governments and companies should work in collaboration to prevent and confront attacks by hackers that have increased with the development of

digital services in the cities. Since Big Data is the 'new oil' and 'leaks' as well, the basis for a digital society must include cybersecurity and privacy protection. Without these two basic pillars, nobody would trust in the systems and it would simply not work. It is always important to remember that technologies that capture and synthesize massive amounts of real-time data on people´s daily life can easily be deployed in a manner that threatens personal privacy and even national security.

"We have a big concern about security and privacy. We work together with the local ecosystem players in other to build several AI applications for the cities and the industries. We must protect this data and manage the developers, the operation management team, and the users that are going to access these kinds of platforms. There is a lot of space to cooperate in this domain", pointed out Marcelo Motta, Director of Solutions and Cybersecurity at Huawei's Global Cyber Security and Privacy Protection Office.

The latest US Congress report on China's smart city development that was released by the US-China Economic and Security Congressional Review Commission for digital technology[1] shows the central role that the topic occupies today in the world. China is disputing the leadership on digital trends, which mobilized the United States' attention to the consequences of this strategy.

Finally, reassuring the importance of the digital solutions for the cities in the contemporary world, participants highlighted several techniques that can be used to guarantee confidentiality and integrity of the information such as multi-layer authentication access, techniques of encryption and collaboration and ethics on the international level as the main pillars to overcome the big challenges on this topic.

1. Note: For further information on China´s Smart Cities Development document, access: https://www.uscc.gov/research/chinas-smart-cities-development

2. How digital technology can help Brazilian authorities to reach and socially transform territories?

In the contemporary world, given the multi-layered characteristic of cities, public and private investments in technology could help Brazil to quickly overcome a delay in infrastructure as a historic weakness. Furthermore, these initiatives have a high potential to improve the quality of life in territories that do not have public services and quality assistance, such as some slums in Rio de Janeiro. Currently, the technology is the central driver of economic and social development, and the 'Big Data' of the 'favelas', the so-called Brazilian slums, can be useful and strategic to implement effective public policies, participants noted.

"I am starting now a project to bring a more technological approach to favelas, slums in Rio, and I truly believe that by using these technologies in a very short time we will be able to develop better solutions, basically to overcome our lack of infrastructure and have a better comprehension of informal areas. I am optimistic about it and I believe that by using these digital tools we could improve the quality of life in cities like Rio", said architect Washington Fajardo.

In China, technology has been playing an important role in the social and economic transformation of the country over the last two decades. The Chinese industrial policy regarding telecommunications seeks to set technology standards for the rest of the world in important high-tech sectors. Regarding this subject, the main technology industrial sectors and companies (including Huawei and Alibaba) are protected from the competition of foreign companies.

In pursuit of sustainable growth, the Asian country works with a commitment to become one of the world leaders in emerging strategic industries such as information technology, mobile telephony, integrated circuits, new sources of energies and materials as well as biomedicine. According to data released by the China Academy of Information and Communications Technology (CAICT), until 2019 the number of smart cities in China has reached about 305, covering 100% of the provincial and sub-provincial cities; 71% of the prefecture-level

cities, and 24% of the county-level cities, enhancing the quality of life of the Chinese population.

As an example of the benefits that Chinese citizens have experienced with the use of technology, the Guandong provincial public affairs case was discussed by the participants. The city has adopted a WeChat based program to integrate the government services, which are accessible for the citizens by mobile. It is a one-stop online service that covers 800 public services in multi-domains such as education, public security, etc. There are over 13 million users and nine million pages visited per day. If someone needs to apply to any service, this person does not have to go in person, face to face to a government department to solve it.

Especially in Brazil, the implementation of digital city technology requires a previous preparation due to social inequality and limited access to digital facilities. As consequence, Brazil strongly needs a previous digital inclusion program to prepare the base of the social pyramid for technological future benefits.

“It is really important to know the human conditions in the cities as a complexity experience. We are not talking about a planned city like Brasilia, but we are talking about cities that were developed over time and created by history. This means that our human relations and physical relations are a very complex system and maybe that’s why digital perspective, even the machine learning, and deep learning technologies could help us to improve our citizenship experience”, highlighted architect Washington Fajardo.

Meanwhile, Fajardo point out that alternative and simple digital solutions can be effective and have been already contributing to the quality of life in urban spaces, like the City Hall program “Downtown for all”, which took place in Rio de Janeiro in 2014. The objective of this program was to improve services in public spaces. Basically, with the support of WhatsApp groups, fast communication was implemented, allowing dwellers, local business owners as well as groups of the public administration to quickly address demands and solve problems related to cleaning services, cutting trees, public lightning, among other important services in the city.

Taking this measure, technology has helped to create not only bottom-up communication with the authorities but also better top-down communication. The initiative ended up being a public digital space in which people could trust and share the problems of the city. As a result, when people finally

got together, they have already known each other and shared their visions about the city, being able to build a more trustful and better quality of public conversation.

“People’s complaints about the quality of the public service were addressed by the City Hall in a fast way. It was somehow a kind of public digital space in which people could trust and share the problems of the city. During this period, I started as well to broadcast my walks in the city. And once again it was a fascinating experience! By doing these broadcasts, we had digital conversations that improved our physical conversations”, remarked Fajardo.

Moreover, digital solutions are an important layer of the urban infraestructure, improving services and helping the administration to reach abandoned urban areas. Overall, the main purpose of the city, according to the participants, is to provide something good or useful for the individuals’ lives, their families, and communities.

Concluding, technology and digital tools can help to improve the quality of life in developing cities in Brazil and China. By investing in digital infrastructure and tools, it is possible to implement better solutions and basically to overcome lack of infrastructure by having a deep comprehension of informal and formal urban areas.

In Rio de Janeiro, as another example of a digital solution, the City Hall has created an operation center to strategically deal with the massive transformation of the urban space for the Olympic Games 2016. The operation center, which is based on data analysis, was crucial to control traffic conditions and as well to predict some problems regarding the construction of new infrastructure, allowing citizens and authorities to have better information.

Unfortunately, the disorderly growth of the urban spaces in Brazil jeopardizes its capacity to sustainable growth and is the cause of many problems that authorities struggle to deal with complex urban ecosystems. The everyday life in the cities is influenced not only by their physical conditions but also by the people relations between themselves and their everyday life interactions with the urban spaces.

Finally, Marcelo Motta reminded that smart city applications can be used in many ways, such as waste discharge detection; intrusion detection; garbage dump detection; vehicle emission detection; smoke detection, fire detection are direct related to high connectivity and the internet of things (IOT). But to implement these services, a previous infrastructure is essential.

“The key drives for a connected society are sensors, man machines interfaces, connectivity, Cloud computing, Big Data, and AI. The foundation is connectivity. I had the opportunity to compare the 4G broadband prices for the pre-paid mobile users in Brazil and China last year. And these prices were at a similar level. This is quite good. But regarding Brazil infrastructure, if you compare the number of base stations for the 3G, 4G, 5G coverage, China has five times more infrastructure. For sure, this impacts the digital inclusion in China. The access to applications, has moved their society quicker towards a more efficient economy.”, said Marcelo Motta, Director of Solutions and Cybersecurity at Huawei´s Global Cyber Security and Privacy Protection Office.

In summary, the implementation of digital infrastructure to support high connectivity is a mandatory precondition to make possible the development of applications that can transform Brazilian cities into safe, cleaner, and more intelligent spaces for the public good and its sustainable growth.

3. Can Brazil learn from China and overstep a lack of basic infrastructure as a historic problem and then successfully implement the digital revolution?

The ongoing economic and social development in China is happening on a large scale and on a fast path with an urbanization rate that has raised from 17% in 1978 to about 60% in 2019. According to the China Academy of Information and Communications Technology (CAICT), the number of cities in the Asian country has increased by 193 to 675 in the last years. More than 200 cities with over 1 million people are in the country such as Shanghai, Guandong, Beijing, Wuhan among others. Today, twenty-five of the 100's largest cities in the world are in China.

On the other hand, many problems occur in these cities, which motivated the Chinese public authorities to create a new model of city development that was called 'smart city' or digital city: the four's layer model. As a first step, the Federal government has changed the way to administrate the city from a former model composed to the ministries promoting development to an inter-ministry coordinated promoting program. In the past few years ministries separately have pushed forward to the construction of the cities, but today China has already set up the inter-ministry coordinated workgroup, including 25 ministries walking together with commitment to solving the conflicts from different organizations and administrations at the local level with the support of some Big Data bureaus.

"We can further promote our cooperation in the field of the digital city between China and Brazil. First, we can hold China and Brazil best cases sharing seminars to provide an industrial, academic and governmental platform for the smart city to exchange current policies and experience; promote technology and solutions in cooperation with research and industrial projects", suggested Chen Cai, Senior Engineer and Director of Information Technology Department of Planning at the Institute of China Academy of Information and Communications Technology (CAICT).

In China, the smart cities architecture can be summarized in the following layers, according to the China Academy of Information and Communications

Technology (CAICT): 1) The bottom layer of the smart city integrates all physical and cyberspace through the sensors, smart terminals, and so on. 2) The second layer, which is called the network layer is where the smart city can realize the information's interconnections and the data sharing through high-speed internet networks – such as IOT, 5G broadband. 3) The third layer is the application support layer. This layer has some accurate platforms that work in partnership with human management regarding integration and intercommunication of multiple systems such as the Cloud computing platform and intelligence operation center that can be also named as the 'smart city brain'. 4) The top layer is the application layer. The application layer is composed of smart transportation, a smart medical system, and so on. In summary, at this level, there are four core fields: urban management; public services; government services, and the digital economy. Overall, each of these layers has some practical examples.

In urban management, the smart city brain occupies a central role. The city brain can have many innovating applications like city events perception; intelligent information processing, intelligent image recognition, ensuring urban security as well as improving the traffic conditions. In Hangzhou, a Xiaoshan district, for example, the transportation time was reduced by 15% with the support of the city brain. As an additional example of the utility of the city brain, its automatic system connects 245 hospitals in Hangzhou, facilitating the access of the population to the health units.

"Smart city construction should be sustainable and profitable for all parts involved. We have investments from the government, but we also need investments from the enterprises. Through our government guidance, we encourage corporations among government, private sector and social participants in many innovate fields, like the smart light that it is also a 5G antenna, where the enterprises can advertise", added Chen Cai.

Brazil and China's cooperation on digital cities

China's government system refers to the collection of services for strategic uses and applications, which are only possible using mobile phones, laptop computers, personal digital assistants (PDAs), and wireless internet infrastructure. In this context, participants highlighted the importance of cooperation between China and Brazil to promote digital inclusion and the development of digital cities.

As alternatives to this issue, some suggestions were presented to boost the bilateral relations on this topic: a) Establish a regular exchange mechanism between China and Brazil to regular organize industry matchmaking, a joint application for Sino-foreign R&D projects and promote bilateral exchange visits; b) Carry out pilot cooperation on China-Brazil smart cities; select key cities and promote the implementation of cooperation projects; c) Establish a China-Brazil expert group on smart cities, jointly conduct researches on key issues concerning smart cities; d) Jointly promote the construction and the development of smart cities in the developing countries with the participation of the municipalities, state governments as well as the third sector.

Currently, a key limitation for Brazil, according to participants, is a lack of a comprehensive federal policy vision towards a digital, smart environment. Brazilian chapter for smart cities that was recently published by the federal government[2] is a well intentional document that brings a letter of principles on this topic, but still, it is a document without detailed means to achieve those objectives, participants pointed out. In conclusion, a sense of urgency is required to implement public policies for digital cities, not only on a federal level but comprising other government levels as well as civil society. Otherwise, Brazil will not have the conditions to move faster and consistently in a domain that currently is the central driver of economic and social development in the world.

2. Note: About Brazilian Letter of Intention for Smart Cities is to be launched after public consultation. Read more: https://www.gov.br/mdr/pt-br/noticias/oficina-debate-a-carta-brasileira-para-cidades-inteligentes

Thematic Guidelines

In the contemporary world, countries and cities seek efficiency, enhanced public safety, and sustainable growth through technologies as means to manage everything from government to private services. The collective term for these technology solutions has become 'smart cities'. First coined in the 1990s, the term 'smart cities' refer to an entire urban ecosystem employing digital city principles or to the constituent technologies and applications that make up that ecosystem.

While there is no standard list of 'smart cities' technologies and applications, the term is usually used to refers to digital technology that collects and shares data about municipal operations that had been previously unavailable, allowing for improved municipal management and services. Successful development and deployment of smart cities technologies are likely to have major social and economic impacts as massive amounts of data are collected and used to improve efficiency in daily life and optimize or automate previously burdensome or inefficient governance tasks.

Brazilian metropolis faces one of the same problems of Chinese overpopulation. But in the case of China, the implementation of infrastructure, in many cases, comes before urbanization. For example, it happened in Pudong and Shanghai. In Brazil, it is the opposite. The population came to urban areas without any kind of infrastructure. The development of urban infrastructure is always running behind the increase in population.

"From the late 1970s onwards, in the context of the Third Industrial Revolution, China emerged as an economic power, thanks to its capacity to attract and absorb massive investment and technology from the US and the West in the wake of the open door policy of 1978", Philip Yang remarked. In this context, Yang further expressed his wish that "now with the ongoing Fourth Industrial Revolution, Brazil finds its way to attract Chinese investment and technologies for urban infrastructure, in the same scale that China was skillfully able to do in its relations with the US and the West in the past recent decades."

This would mean a strategic partnership with China leading to massive Chinese investment in cities, infrastructure, and urban technologies. Such a partnership, Yang continued, would be based on mutual interests. From the Chinese perspective, Brazil would offer food and energy security, and a sizeable market for the export of digital products and services. From the Brazilian point of view, Chinese investment and technologies for the digital city would place Brazil on the path of Industry 4.0 and onto a new reality of economic efficiency and social inclusion.

China has become a global leader in smart city initiatives, combining embedded sensors, metering devices, cameras, and other monitoring technologies with Big Data processing and AI analysis to help manage its cities and public spaces. Its leadership has signaled the importance of smart city development, elevating it to a national strategy, and has poured government resources into furthering its growth.

Over the last few years, it was possible to identify some steps of the 'smart cities' technology development in China: cameras, face recognition, data analysis, development of sensors, devices, and apps. While the improvement of municipal infrastructure is ostensibly benign, the pace, scale, and application of China's smart cities development pose a new scenario and paradigm to the world.

As briefly introduced above, the role of digital cities in the development of the countries is crucial. It also implies concerns about confidentiality, the privacy of the information, and the sovereignty of the countries. With these implications in mind and considering the long and positive bilateral relations between Brazil and China, we invited our speakers and audience to address the session's main theme and hereby suggested a few aspects to be discussed:

- How can Brazil learn from China and overstep a historical delay in basic infrastructure, a scenario of social inequality, and a lack of digital inclusion to implement the digital revolution?
- How Covid-19 pandemic impacts the plans of full implementation of the smart cities program throughout China? Will it face any kind of delay or the country can catch up with the project?
- Considering the social inequality and current limitations in Brazil, how digital technology can help Brazilian's authorities to reach ungoverned territories and improve the quality of public services?
- What are the alternatives to work in partnership with China on the development of digital cities in the context of a growing lack of confidence and polarization between individuals and nations?

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Clarissa Lins
Daniela Lerda
Denise Nogueira Gregory
Diego Bonomo
Evangelina Seiler
Fabrizio Sardelli Panzini
Fernanda Guardado
Fernanda Magnotta
Hussein Kalout
Izabella Teixeira
Larissa Wachholz
Leandro Rothmuller
Lia Valls Pereira
Mário Ripper
Matias Spektor
Miguel Correa do Lago
Monica Herz
Patrícia Campos Mello
Paulo Sergio Melo de Carvalho
Pedro da Motta Veiga
Philip Yang
Ricardo Sennes
Rogerio Studart
Sandra Rios
Tatiana Rosito
Vera Thorstensen
Victor do Prado

CEBRI Team

CEBRI CEO
Julia Dias Leite

Director of Institutional Relations and Communications
Carla Duarte

Director of Projects
Luciana Gama Muniz

Projects

Projects Manager
Lara Azevedo

Consultants
Cintia Hoskinson
Marianna Albuquerque

Interns
Gustavo Berlie
Larissa Vejarano

Institutional Relations and Events

Institutional Relations and Events Manager
Barbara Brant

Consultants
Caio Vidal
Nana Villa Verde

Intern
Lucas Bilheiro

Communications

Consultant
Gabriella Cavalcanti

Intern
Henrique Kress

Administrative and Financial

Administrative-Financial Coordinator
Fernanda Sancier

Assistant
Kelly C. Lima

BRAZILIAN CENTER FOR
INTERNATIONAL RELATIONS

WHERE WE ARE:

Rua Marquês de São Vicente, 336
Gávea, Rio de Janeiro – RJ - Brazil
22451-044

+55 (21) 2206-4400

cebri@cebri.org.br

www.cebri.org