

GEOPOLITICS OF SMART CITIES: EXPRESSION OF SOFT POWER AND NEW ORDER

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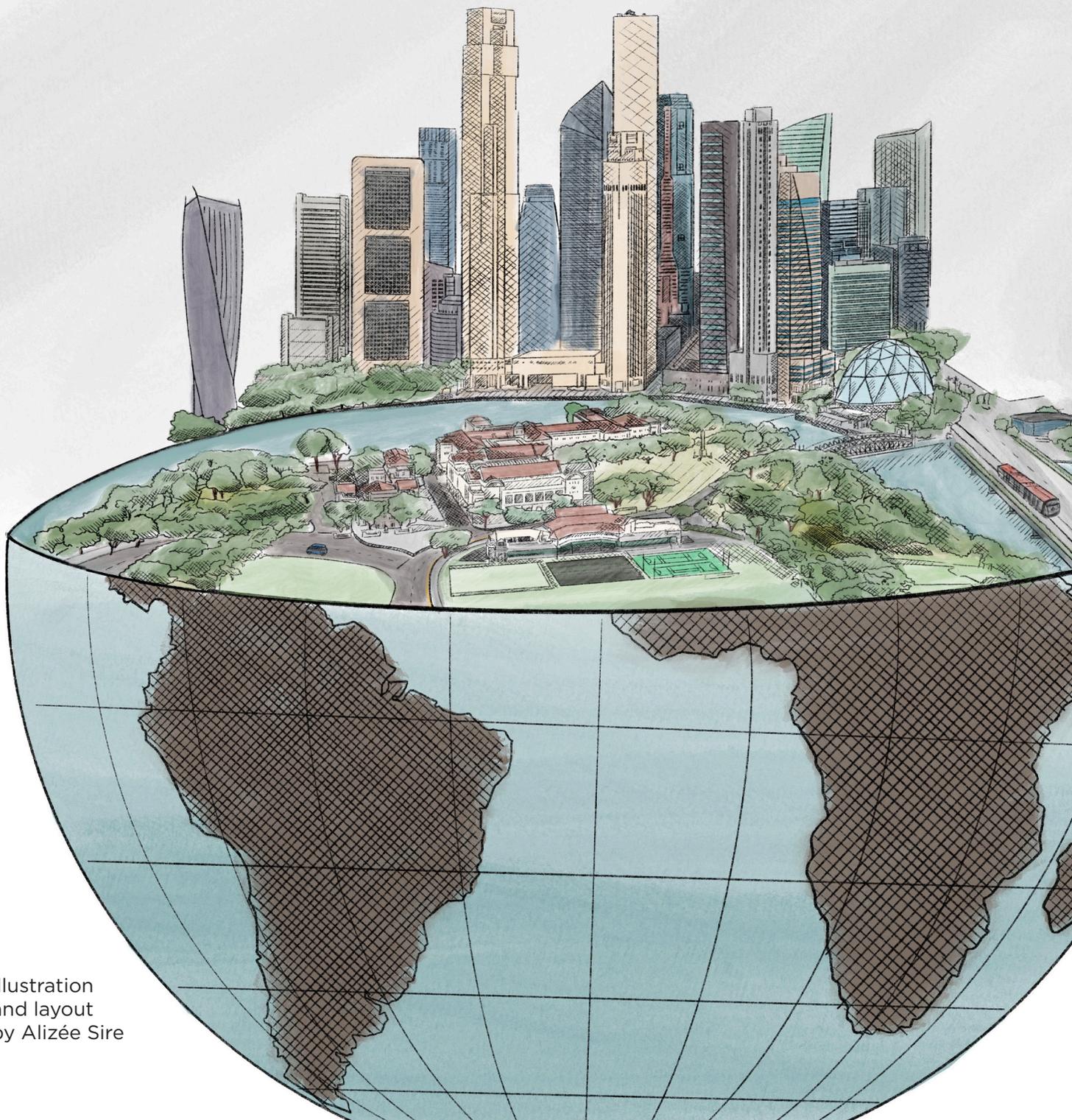


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Lastly, we thank Leonard for assistance with the elaboration of the report and Pierre-Marie Gouédard for valuable and constructive suggestions during the planning and development of this report.

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- Sixiao Yang**, Public Affairs and Communications Manager, Huawei
- Theo Blackwell**, City of London, Chief Digital Officer
- A Top Manager** from the European Commission who refuses to disclose his/her name

METHODOLOGY



This report is a result of gathering information from multiple sources in various ways throughout one year. While we started working on the paper with desk research, it grew into bigger project:

1. We interviewed 16 experts in different domains and organizations internationally to understand their first-hand experience and insights into the topic;
2. We organized and participated in three events to present our work while the work was in process and we received valuable feedback from event participants too. This feedback has been fed into our paper in order to improve our narrative and make our message more concise to wider audiences. The questions asked during the events have been vital to address the gaps in our research and reflect on them;
3. We additionally organized an online webinar session to further share final results and receive further feedback.
4. We have additionally shared the document with the Urban AI Community experts for peer-review.

We plan to undertake the second part of this research to better understand strategic narratives around urban technologies and their implications for geopolitical developments and we welcome collaboration opportunities to further expand our sources of knowledge both geographically as well as multidisciplinary.

EXECUTIVE SUMMARY



As civilian technologies, urban technologies are most often considered neutral and relatively harmless. Though, and because of the recent geopolitical transformations, urban technologies are more and more weaponized and used as instruments of soft power. They are becoming geopolitical and strategic assets in international conflicts. For this purpose, States and transnational organizations are deploying important means to massively export and influence the development of these technologies. In this context, as well as because of the growing USA-China rivalry, this report argues that “Smart Cities” and “Safe Cities” are actually strategic narratives respectively elaborated by American stakeholders and China to win this UrbanTech War and become leaders in this field. Lastly, this report also highlights the role of the European Union in this geopolitical confrontation as well as its effort to develop its own strategic narrative around cities and urban technologies.

FOREWORD



When we talk about “smart” or new technologies, it is easy to focus on the dazzling technological advances of the last few decades. An understandable point of view when we look at the technological profusion in all areas: artificial intelligence, the Internet of Things which is being applied in a growing number of areas - urban, industrial -, new energies, new mobility, etc. Nevertheless, this vision is fragmentary compared to the diversity of problems arising from the new modern technologies.

In fact, every technology should be considered as an answer to a problem identified by a political or economic actor. From design, technologies carry visions of the world. Both of the problems that plague it and of the solutions to be found. Several major innovation poles, notably in the United States and China, but also in the European Union, lead to several distinct technological systems. They are the result of the socio-political context in which they have emerged, but also of cultural differences and the logic of private and public actors behind them. These differences are particularly visible in the uses we make of these various technologies, as well as in the limits we set for them.

Let us not be naïve and content with a purely technical analysis of new technologies. Intentions of the actors at the origin of new technologies are rarely neutral. Smart cities are not smart, their inhabitants and designers are. To understand them, we need to study their cultural, (geo)political and economic paradigm. The example of urban technologies is particularly eloquent and clearly contradicts this point of view. Long limited to the idea of the smart city, urban technologies have seen the emergence of several distinct models in the last decade, notably in China, focused on control and security, and in the US, focused on optimizing public services and reducing costs. Between the two, Europe must promote a model that combines innovation, environmental protection, and citizen involvement.

Each of these technological models is therefore intrinsically the bearer of a vision of the world, which must be understood to avoid the temptation of naivety. These visions of the world are most often assumed in the political and marketing discourses of the actors - economic or otherwise - who promote these technologies. It is up to us to decipher them to understand the strong changes underway and not be surprised by the struggles that ensue. Indeed, each of these models can lead to a form of path dependency, hence the need to export them to make technological models an instrument of soft power.

Therefore, Leonard has decided to partner with Urban AI and AdalanAI in the design and promotion of this report, which seeks to define the different strategic narratives around urban technologies. In doing so, it provides us with the keys to understanding the often-underestimated international challenges of urban technologies.

By Julien Vilallongue, Managing Director of Leonard (Vinci)

00

INTRODUCTION



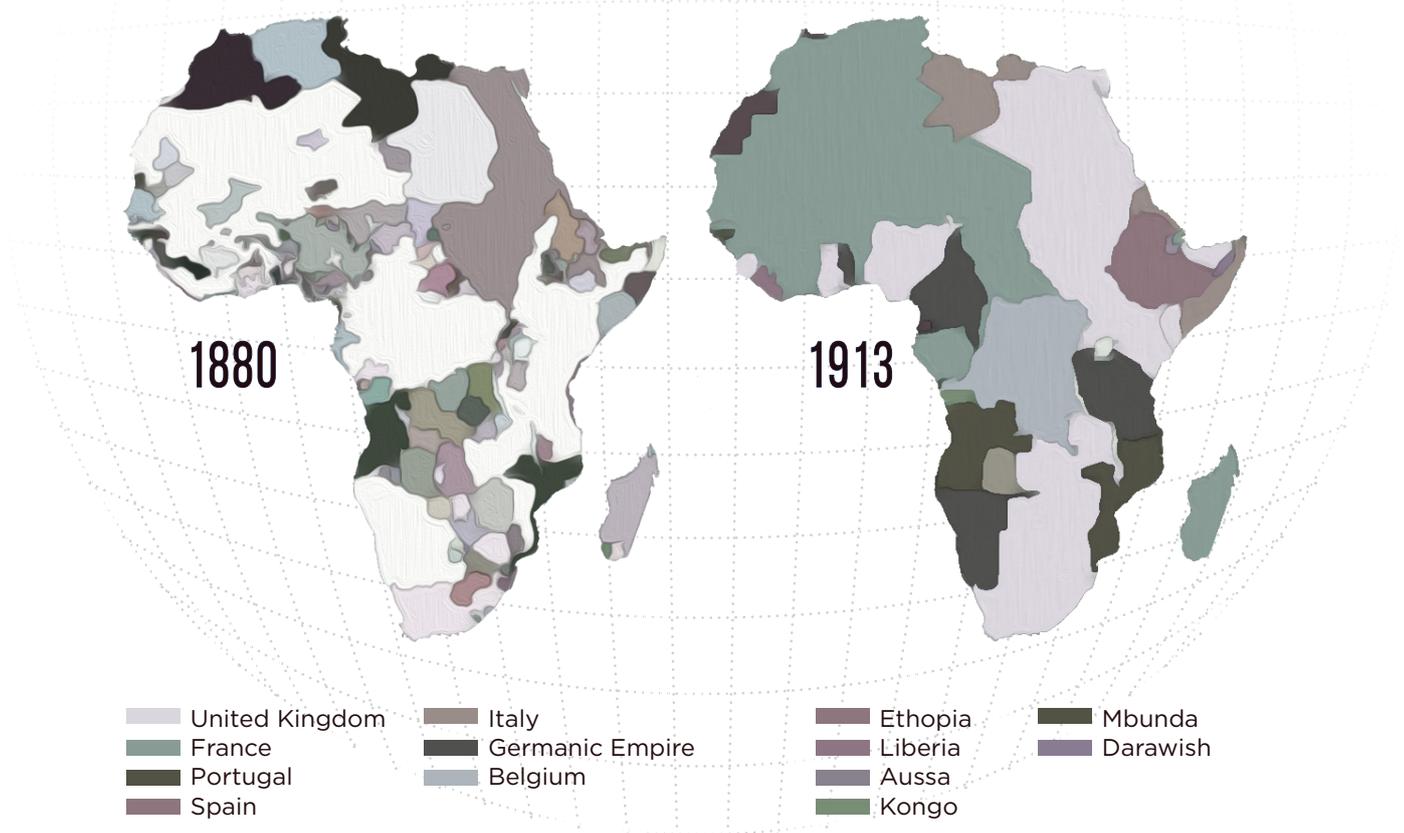
TOWARDS A NEW ORDER





Geopolitics has historically been defined as “the practice of states controlling and competing for territory” [1]. As an example, the scramble for Africa perfectly fits with this definition. During the New Imperialism (1881-1914), European states (France, Germany, UK, Italy,...) openly competed through military and economic confrontations for African territories. The rest of the 20th century extended and intensified this geopolitical composition. With World War I, World War II, and the Cold War, for the first time in history, worldwide countries entered a global conflict. The alliances and the modalities of confrontation changed during those periods, but the geopolitical reality remained the same: states competing for territories.

COMPARISON OF AFRICA IN THE YEARS 1880 AND 1913



Source: Wikipedia

However, since the end of the Cold War, deep geopolitical mutations have been observed. States are no longer the only stakeholders of international conflicts. Cities, organizations, and corporations are also fighting for territories. This can be better understood as soon as we (re)define territories. Traditionally, “territories” have been embodied through four domains of operations: Land, Sea, Air, and Space. Recently,

Cyberspace has also been conceptualized as a "fifth domain" [2]. Cyberspace is usually defined as the aggregation of three interconnected layers:

1. The physical layer: This is all the infrastructures that provide the foundation for the digital world and information technologies. It includes data centers, antennae, submarine cables but also sensors, and smartphones.

2. The logical — or network — layer: This is "the central nervous system of cyberspace". It includes protocols and software (the "building blocks") through which data can be processed, aggregated, and exchanged.

3. The social layer: This is where human beings and organizations consume and produce information through platforms, applications, or websites. This is basically how we commonly interact with cyberspace.

This latter layer is so important that it has led some scholars to conceptualize a sixth domain: the Cognitive one [3]. It can be described as the use of information to shape opinions and influence behaviors: "While actions taken in the five domains are executed in order to have an effect on the human domain, cognitive warfare's objective is to make everyone a weapon." (NATO).

THE THREE LAYERS OF CYBERSPACE

PHYSICAL LAYER

Geographic
Components

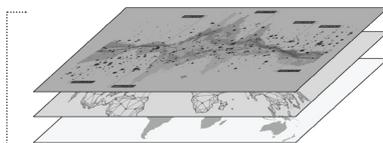


Physical
Network
Components



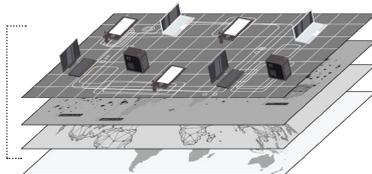
LOGICAL LAYER

Logical
Network
Components

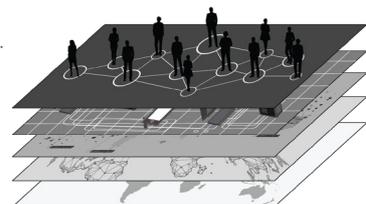


SOCIAL LAYER

Persona
Components



Cyber
Persona
Components



Those two new domains are especially important because they introduce a new dimension to contemporary Geopolitics. It's no longer about controlling and competing only for territory, but also *for people*. This element also involves new forms of control. If the four traditional geopolitical domains were usually conquered through military occupation or economic imperialism, cyberspaces and cognitive domains can be controlled with unconventional instruments such as cyberattacks and digital propaganda.

It is interesting to note that those two domains of operation also characterize a new international order where “the role of nonmilitary means of achieving political and strategic goals has grown, and, in many cases, [...] have exceeded the power of force of weapons in their effectiveness” (General Valery Gerasimov). This phenomenon, reinforced by the convergence of several factors (including the rising pricing of making war, the growing interdependence of world's economies, digital interconnectivity...), led to what the international analyst Mark Leonard calls “the age of unpeace”. In this new geopolitical era that opened with the 21st century, international actors exploit their interdependencies (digital, economic, logistical,...) to increase their power. In these “connectivity wars”, devices and tactics aimed at occupying unconventional spaces (such as cyberspace and the cognitive domain) are preferred to armed and traditional conflicts to conquer traditional territories (such as land, sea and air).





Those elements allow us to update and extend the traditional definition of Geopolitics. This new Geopolitics is characterized by the emergence of multiple stakeholders, the addition of two domains of operation (Cyberspace and Cognitive space), and the use of unconventional weapons to control those territories.

In this new Geopolitics, urban technologies have a very specific role. Urban technologies are at the intersection of bits and atoms. They describe the use of data and information technologies to transform cities and the urban environment. As such, they are “hybrid technologies”. Indeed, by operating in cities as well as digital spaces, they can be used in (at least) four domain operations: Lands, Air, Cyberspace, and People (cognitive domains). From a geopolitical perspective, it means that they are multidimensional instruments.

This multidimensional capacity is the first important element to better understand the increasing role of urban technologies in the geopolitical landscape. This phenomenon is reinforced by what Saskia Sassen conceptualized as the urbanization of war^[4]. This means that cities are increasingly becoming theaters of international conflicts: “when national states go to war in the name of national security, nowadays major cities are likely to become a key frontline space”. This is obviously true for conventional and open wars but also for asymmetric ones, i.e., “the encounter between conventional and unconventional forces”. In all these cases, the city becomes a “technology of war”^[5].

The convergence of those elements helps us understand the strategic importance of urban technologies in the new Geopolitics — at least at a conceptual level. But concretely, what does it mean? And how can urban technologies become vehicles of power?

01

CHAPTER



URBAN TECHNOLOGIES AS INSTRUMENTS OF POWER





HISTORY & DEFINITION

Cities have started using ICT technologies to solve urban problems since the late 1990s. The pioneer city governments were San Diego (US), Ottawa (Canada), Southampton (UK), and Brisbane (Australia). The need to use new technological solutions arose from cities' growing population and public budget cuts. This coincided with a period of rapid technological advancement in the sector. The initial idea was to connect human and technological capital to improve the quality of city life, well-being, social inclusion, and quality of the environment.

From a historical perspective, there was a shift in how urban technologies were deployed. At first, it was mainly a top-down approach, when highly centralized governments were initiators to adopt ICT technologies with the help of big IT companies and citizens were not seen as equal actors. For instance, Cisco worked with the city of San Francisco to pioneer e-government services via the cloud. IBM was part of the solutions from the beginning in the US and became the main actor in global cloud-computing infrastructure - an essential part of smart cities. Despite the highly centralized approach, some departments, such as transportation or environment, still had high authority, depending on the main priority. The top-down approach made it easy for governments to control better and was seen as a more secure and efficient administration.

In parallel, urban inhabitants' interest developed to start using ICT in their initiatives for improving their quality of life. This citizen-driven, community-based model is rooted in ideas of democratic governance. The bottom-up approach was based on citizen empowerment and engagement in the policymaking process, actively supported by open-source movements, individuals, and self-organizing groups. The first digital bottom-up initiative was created in the 1990s, when Dodgeball, an online crowdsourced city guide, allowed citizens to find and write reviews about places in New York. However, the bottom-up approach became possible for the masses only recently, after 2008, through the invention of Wi-Fi technology. A high increase followed in mobile cellular subscribers, the emergence of social media, mass use of smartphones (the 2000s), government open-data initiatives (early 2010s) and most recently, Internet of Things. This technological development provided basic elements of the bottom-up approach: crowdsourcing, social networks, and wireless connectivity. Social media and Web 2.0 allowed people to share ideas and create virtual communities to solve urban problems through Internet-based applications in an interactive and fast way.

In both approaches, Artificial Intelligence and Machine Learning tools play a key

role. AI tools and techniques are already being applied to urban projects around the world. These are the systems that are able to perform tasks normally requiring human intelligence such as visual perception, speech recognition, decision-making or natural language processing. In recent years development of AI has been largely enabled through the availability of vast amounts of data digitally. This trend converges towards the emergence of “Urban Artificial Intelligence” (Urban AI). “Urban AI refers to any system that incorporates data derived from the urban environment, which is then processed by algorithms, the result of which has useful applications in the socio-spatial nexus of the city” (Sarah Popelka et al., 2023). More broadly, urban technologies can be defined as the use of information technologies to make cities and urban spaces more connected, livable and efficient. In this context, UrbanTech designates this constellation of technologies as well as these ecosystems of stakeholders that support and drive it.

THE WEAPONIZATION OF URBAN TECHNOLOGIES

We easily see how urban technologies can be used to coerce States and populations, for example by holding hostage of urban infrastructures, taking advantage of geolocalized data during a military conflict, or attacking buildings with kamikaze drones. To this end, the increasing use of autonomous technologies in cities will generate new tactics and attacks. In 2016, the journalist Reeves Wiedeman published a fictional article about a cyber attack that hit New York. He imagined that, although the terrorists conducted the attack remotely, the autonomous cars were running into walls and hitting pedestrians. Paralyzed by a computer virus, the New York hospitals are incapable of responding to the urgent situation while the rest of the city has no access to electricity. Though fictional, this article emphasizes how drones, autonomous vehicles, and delivery robots could be instrumentalized to collect data or damage cities. Aware of this threat, the US government added DJI, the largest Chinese drone manufacturer, as well as 60 other Chinese firms (such as Huawei) on military ties blacklist.

In the Cognitive domain, Urban Artificial Intelligence can also be used to turn urban dwellers into weapons. In order to have more foresight on such technological threats, The Army Cyber Institute imagined several cognitive attack scenarios. In one of them, a maintenance engineer was manipulated by terrorists who used AI to identify his personality, indoctrinate him (with fake news and personalized messages) and finally, persuade him to give them access to urban infrastructures that he was supposed to be protecting. Though fictional, the Army Cyber Institute's scenario is based on several real elements, one of which being the Cambridge Analytica scandal, and highlights how urban technologies could weaponize people.



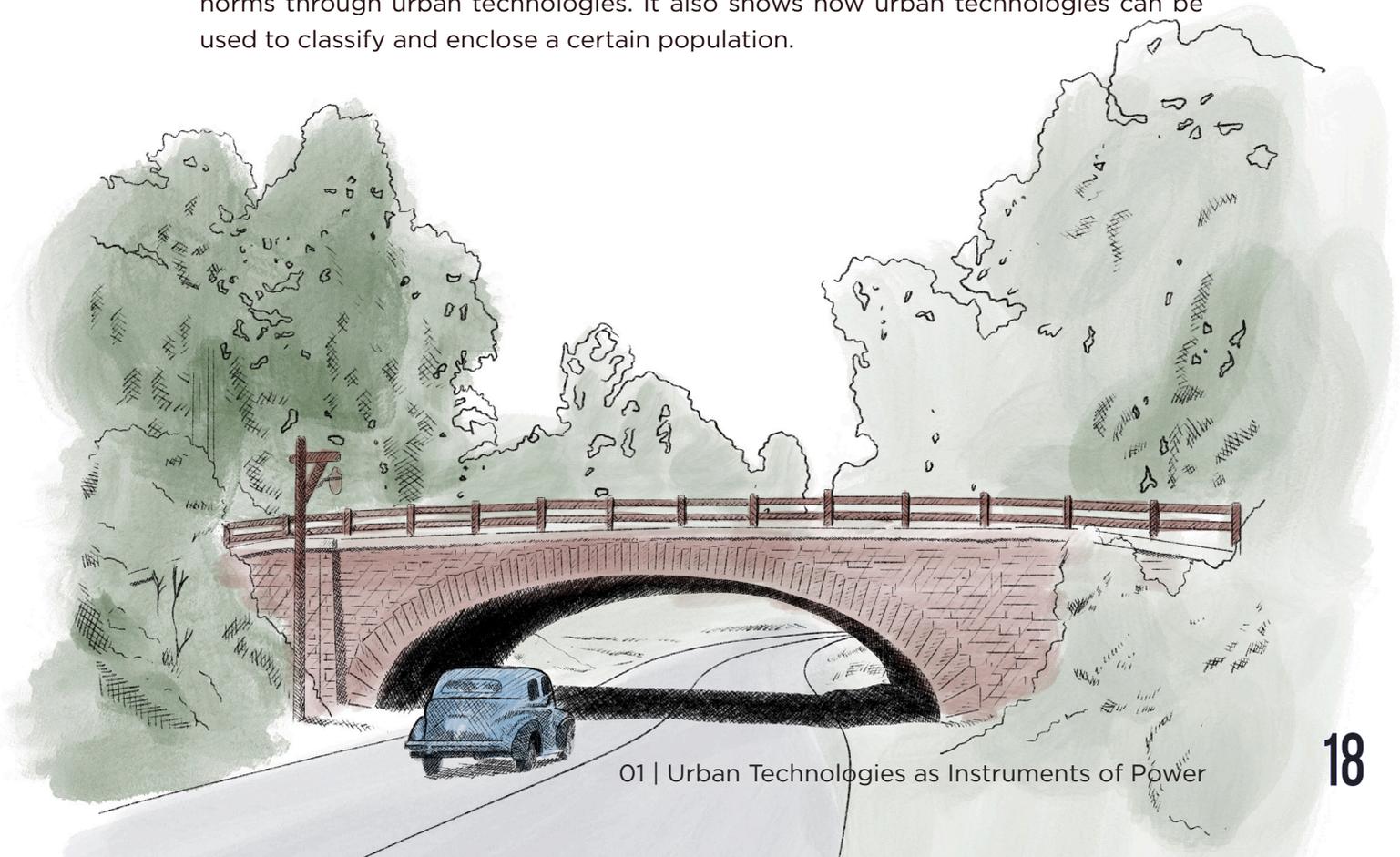
But urban technologies can also be used in a softer ways to exert control in cities . Softwares and data can regulate urban behaviors and reshape spatial organization of cities. Thus, social norms, forms of power, and even economic systems can be embedded in urban technologies.

EMBEDDING SOCIAL NORMS: FROM MOSES' BRIDGES TO PREDICTIVE POLICING

In 1980, Langdon Winner famously asked: *Do Artifacts Have Politics?*. In this essay, Winner investigates under what conditions technologies can contain political properties. But what could it mean for urban technologies to “have politics”?

The first example shared by Winner to illustrate that artifacts can have politics is Robert Moses' overpasses. Robert Moses was an American urban planner in charge of several urban interventions in New York during the middle of the XXe century. Some of them include dozens of overpasses on Long Island that are extremely low. As explained by Winner, this architectural specificity was actually designed on purpose to make it impossible for buses to go through them and reach Long Island [1]. By excluding public transit access, low-income minorities (including black populations) were also kept away from this urban area. In this example, “[...]structures of concrete and steel embody a systematic social inequality, a way of engineering relationships” (Langdon Winner) [6].

Similarly, urban technologies can shape behaviors and exclude some populations. In 2011, the PredPol startup launched a collaboration with the LAPD (Los Angeles Police Department) to implement predictive policing. This project aimed to identify in the City of Los Angeles hotspots in order to better distribute the police force on the territory. However, because of the data on which PredPol trained its algorithms, it turned out that their software mainly targeted low-income neighborhoods as well as Black and Latino communities. While this social outcome didn't emanate from a deliberate strategy, it still highlights how embedded biases can systematize social norms through urban technologies. It also shows how urban technologies can be used to classify and enclose a certain population.



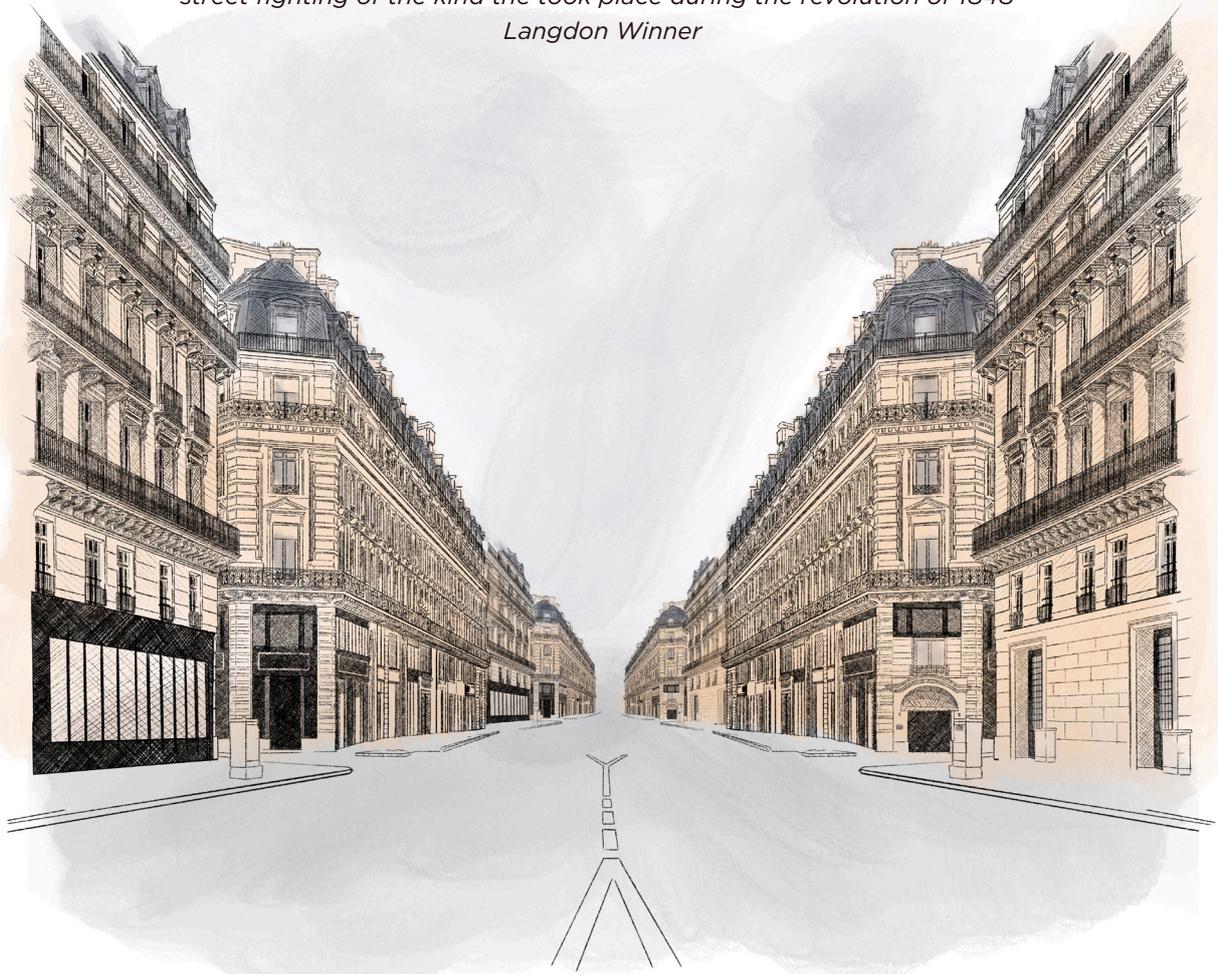
ENGINEERING FORMS OF POWER: FROM HAUSSMANN'S RENOVATION TO SURVEILLANCE TECHNOLOGIES

Another example shared by Winner to illustrate his point is Haussmann's urban transformation. In the middle of the 19th century, Napoleon III commissioned Baron Haussmann to transform the City of Paris. Officially, this urban policy aimed to make Paris a modern city (more hygienic and innovative), but another goal of this transformation was to consolidate Napoleon III's authority. Indeed, during the decades that preceded his reign, the City of Paris had been the place of several social uprisings that led to political revolutions (such as in 1789, 1830, and 1848). During those revolutions, citizens used to build barricades to occupy public spaces and fight military forces. As the City of Paris had narrow streets, this strategy was especially efficient and contributed to the success of those revolutions. Aware of those elements, Napoléon III enlisted Baron Haussmann to design broad thoroughfares - not only to demonstrate Paris' greatness but also to better contain possible revolutions. In addition to making it much more complicated to build and defend barricades, broad avenues allowed Naopoléon to use modern artillery. By providing a strategic advantage to military forces, this urban design reinforced a political system and an authoritarian power.



//////

“ One can point to Baron Haussmann’s broad Parisian thoroughfares, engineered at Louis Napoleon’s direction to prevent any recurrence of street fighting of the kind the took place during the revolution of 1848”
Langdon Winner



Urban technologies can also be used for very similar purposes. In China, the massive deployment of CCTV cameras combined with computer vision and the implementation of social credit scores contribute to monitor and discipline citizens. In a manner similar to Haussmann’s renovation, the Chinese technical system makes it virtually impossible — or at least very complicated — to publicly challenge political power and fight authorities.

REINFORCING ECONOMICS SYSTEMS: FROM THE TOMATO HARVESTING MACHINE TO DIGITAL PLATFORMS

The proliferation of politics in the every day does not end at urban design. In many other realms, such as economics, private stakeholders have increasing importance in the architecture of power through their own artifacts and technologies.

In the 1940s, the University of California invented a mechanical tomato harvester. This machine made it much more efficient and less costly to collect and sort tomatoes. However, since its price was high (50 000£/unity), only a few companies were able to integrate it into their production line. Thanks to this innovation, those corporations improved their productivity and, by becoming more competitive and cost-efficient, gradually increased their market share. In the twenty years following this invention, the number of tomato growers declined from four thousand to six hundred. As explained by Winner: “What we see here is an ongoing social process in which scientific knowledge, technological invention, and corporate profit reinforce each other in deeply entrenched patterns that bear the unmistakable stamp of political and economic power”.

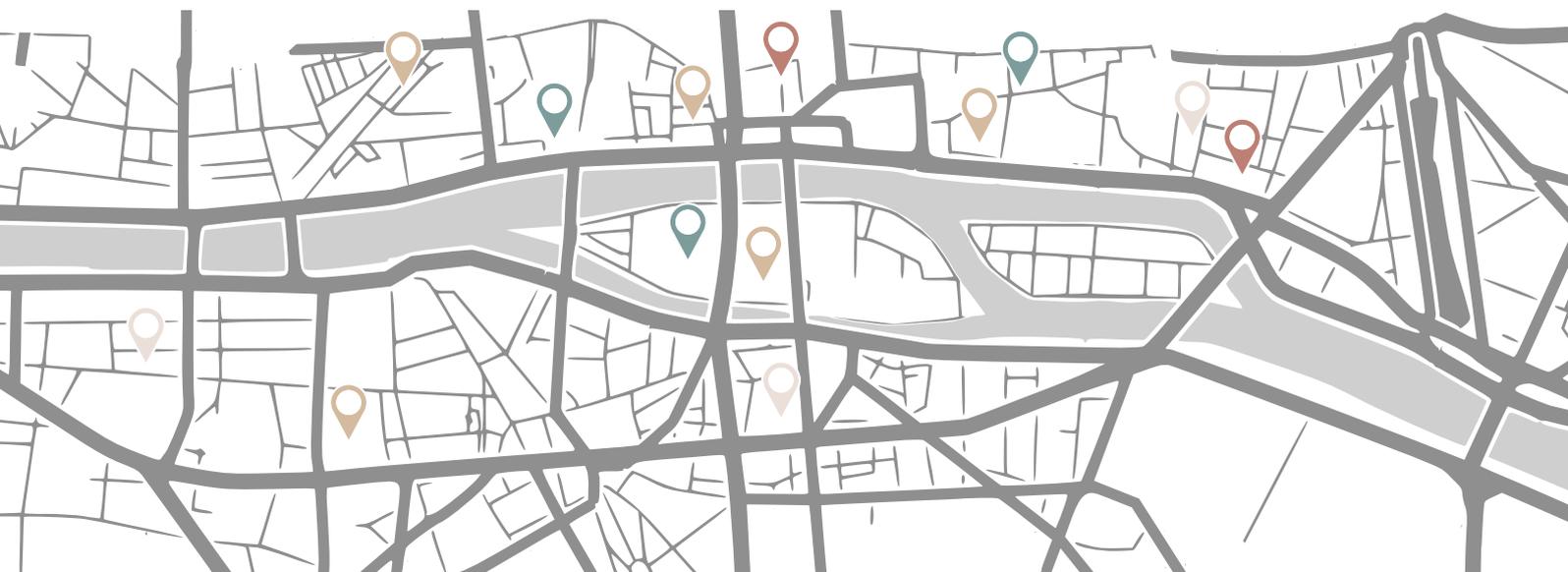


“[...] A jump in productivity to the benefit of very large growers has occurred at a sacrifice to other rural agricultural communities. [...] What we see here is an ongoing social process in which scientific knowledge, technological invention, and corporate profit reinforce each other in deeply entrenched patterns that bear the unmistakable stamp of political and economic power”

Langton Winner

////// A very similar phenomenon can be observed with digital urban platforms where a winner-takes-all dynamic prevails. This is particularly apparent with ride-hailing and web mapping platforms. In both cases, technical innovations iterated in a capitalistic economy reinforce concentration. Such a system tends towards a monopolistic structure. This does not necessarily occur as a result of a deliberate strategy but rather due to a set of interconnected and multidimensional (financial, legal, technological,...) elements that facilitate this dynamic (for example through economies of scale, tax optimizations, network effects,...)^[7].

The examples cited are mainly at a national level. But Urban Tech markets are international, and cities are growingly interconnected. Thus, urban technologies can be used by international stakeholders as vehicles of economic policy and social influence. This is what happens when Google Maps creates new urban centralities in European cities or when ride-hailing apps reshape informal spaces in Asia. At another level, the massive use of surveillance technologies in some European cities directly challenges the legacy of the Enlightenment. In this cultural paradigm, the individual develops himself by cultivating his own “secret garden” ^[8] (meaning his liberty and intimacy). Such ethics is obviously in contradiction with an urban ideal where behaviors could be predicted or where people have “nowhere to hide” (Huawei).



“The pedestrianized quays of the Seine in Paris, though very busy, will never be put forward as a “area of interest” in Google Map because they are not bordered by private land (only by barges and temporary structures that do not appear in the cadastre)”

Source: Vraiment Vraiment

In those latter cases, urban technologies challenge traditional territorialities. It is not only software or hardware that are exported but also cultures and governances. Here, the issue is not that urban technologies are building order — which is one of their principal functions — but that they impose a foreign one. In this context, they become instruments of soft power.

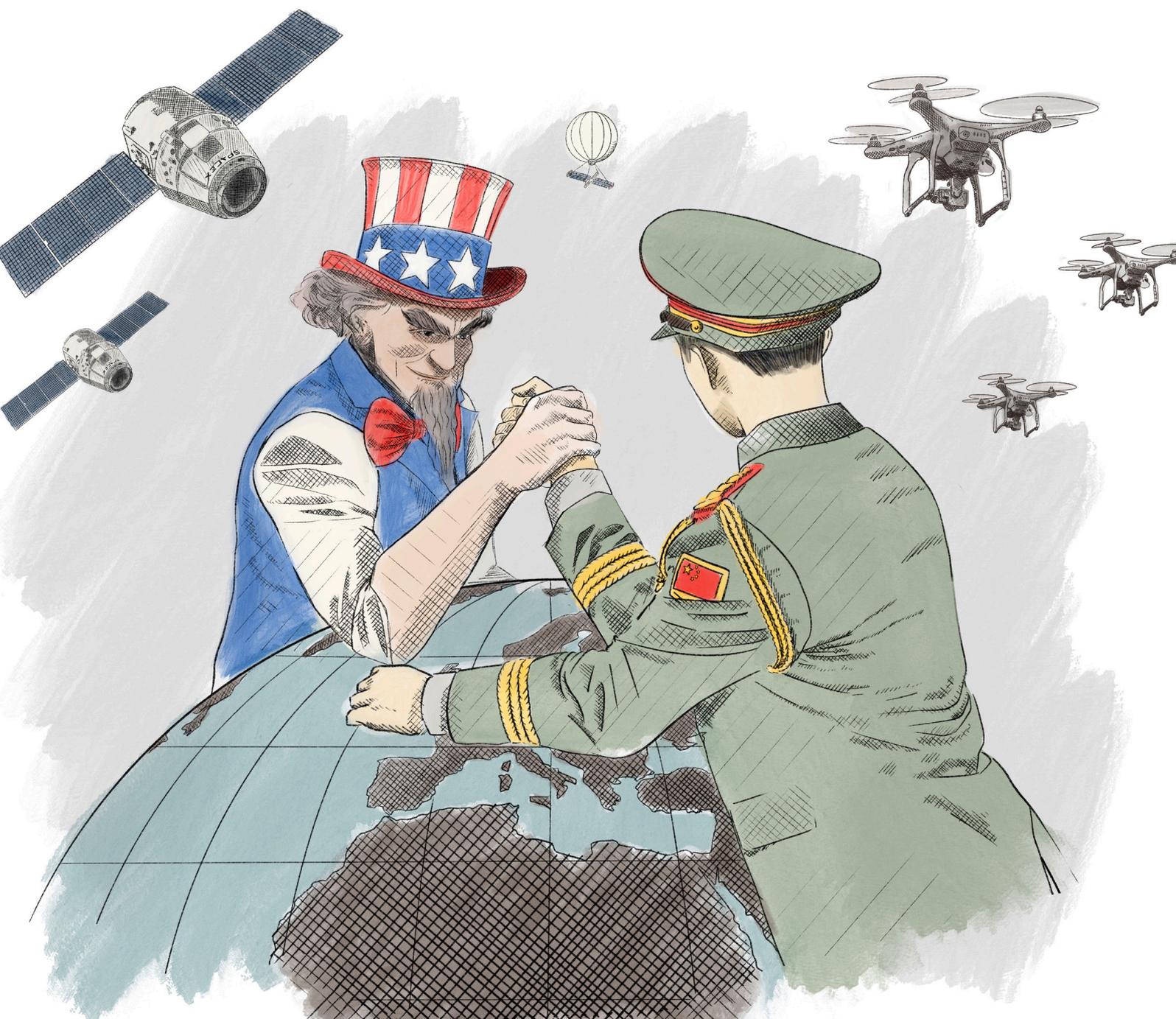
02

CHAPTER



THE URBANTECH WAR

URBAN TECHNOLOGIES AT THE HEART OF THE
CHINA-USA RIVALRY





We saw that urban technologies can be weaponized and become instruments of soft power. Meaning that they can be used by States or organizations to coerce other international stakeholders or to influence their behavior.

Those considerations highlight why stakeholders have a strategic incentive to lead this ecosystem. In the context of the growing Sino-American rivalry, this incentive is reinforced by the fact that China sees technological advancement as the sphere where it most adequately can challenge the US's global power without direct confrontation. Thus, China is exporting urban technologies as a source of gaining additional geopolitical power, future cooperation and influence in the framework of the "belt and road initiative" and beyond.

More than 18 countries - including Zimbabwe, Uzbekistan, Pakistan, Kenya, the United Arab Emirates and Germany are using chinese-made intelligent monitoring systems and around 36 countries got training in topics such as "public opinion guidance". An example of a Chinese model exporting itself is in Ecuador, Latin America. The police and domestic intelligence agencies examine 4 300 cameras to capture footage, which uses a Chinese surveillance system. The system was installed back in 2011 and is armed with joysticks and police can zoom in if they spy on something. It's an example of how technology built for China's political system is now applied by other governments. Even though Europe has been the most active critic of the Chinese social credit system, the idea of social scoring has found its way there too. Italy experimentally launched the "Smart citizen Wallet system" in Rome which is thought to be the first European social credit system. It gives points and rewards to the citizens for 'good behavior' such as recycling, using public transport or managing energy consumption well. Although the city mayor highlights the application is voluntary, its similarity to the most criticized Chinese surveillance system raises concerns about Chinese influence even in European countries.

CHINESE COMPANIES SELL 'SMART CITY' PROJECTS ALL OVER THE WORLD

Number of 'smart city' and 'safe city' project deals involving Chinese companies since 2013 (by region)



While it is a well-known fact that Silicon Valley technologies have been spreading globally in the last couple of decades, China is quietly emerging as a global supplier of urban technologies, especially those powered with Computer Vision.

However, Ben Gardner, President at the Northeast Group in the US argues that data does not back the claims about China's increasing influence in technology standards setting and urban technologies competitiveness in the world. "In the largest urban tech segment, that of smart street lighting — the only one that has scaled into the millions of endpoints — the Chinese are far behind. Projects and standards are dominated by American and European vendors" - he argues - Americans and Europeans have also proved their global competitive advantage in the automation of municipal functions.

The USA is a global leader in technology innovation, with Silicon Valley being home to most of the tech startups and technologies worldwide so far. US-based technological companies and their products have long been seen as a source of spreading US influence and maintaining its role as a tech leader. When it comes to Urban Tech initiatives, the US smart city model follows the line and is based on a bottom-up approach, largely dependent on private companies. IBM and Cisco are the major players in smart city initiatives alongside the local authorities, and their reputation is used to boost smart city initiatives worldwide. On the other hand, this is an opportunity for private companies to present their smart city vision to a wider audience, strengthen their role and even act as geopolitical actors. Entrepreneurial attitude toward innovation and development of new technology gives U.S. companies an advantage over foreign competitors. USA's competition-oriented policy finds its way into smart city initiatives, such as local cities participating in national level competitions to get funding for implementing urban technologies. One of the most acclaimed smart city projects the US built is a smart city of San Jose which aims to serve as a mecha for civil innovation. However, the US cities barely rank among the world's top smart cities, New York succeeding the most. Some of the reasons behind this may lie in the high cost of implementing IoT networks and the USA's challenge to provide affordable and convenient public transportation as well as to deploy inclusive and equitable technologies.

In this new confrontation, both countries started to adopt trade sanctions against each other, reflecting the trend of depicting technology as an arena for interstate battle rather than a neutral global market. In this context, over the last four years, The U.S. introduced "defensive" as well as "offensive" measures against China. The Foreign Investment Risk Review Modernization Act (FIRRMA) of 2018 and the Executive Order on Information and Communications Technology and Services (ICTS) of 2019 can be seen as defensive measures designed to shield US companies, technology, and critical infrastructure from Chinese investors and suppliers. The Entity List, the export blacklist designed by the U.S. Government that includes the biggest Chinese companies, and Export Control Reform Act (ECRA) are considered to be the offensive measures aimed at preventing China from acquiring new technologies for military purposes. China responded to this attack by announcing

that it will also issue a blacklist of “unreliable foreign firms”. In addition to that, China set out to devise a plan to replace American and foreign technology. China’s quasi-government body, Information Technology Application Innovation Working Committee, is in charge of creating the “IT Application Innovation” plan that will facilitate China’s shift to technological self-reliance.

At the city level, such divergences and mutual sanctions led Alice Ekman and Cristina de Esperanzo Picardo to talk about an “urban decoupling”. Meaning that cities equipped with American urban technologies will differ from Chinese ones not only in terms of technical environment but also urban governance. Indeed, the above elements helped us better understand how social norms, political models and economic systems are embedded in urban technologies. It also highlights that the American camp and China are actually competing for territories and resources through this Urban Tech confrontation. Thus, this “urban decoupling” echoes a new geopolitical order and the emergence of new battlefields where everything can be weaponized. Starting with cities.

THE “SAFE CITY” AND THE “SMART CITY” AS STRATEGIC NARRATIVES

American stakeholders and China are competing to win the UrbanTech Leadership. Gaining this confrontation can involve economic sanctions. But it can also be achieved by monopolizing economic markets, having a key role in the production of certain technologies, guiding standards and international discussions on the topic, or by concentrating knowledge and know-how in this field. Here, we would like to elaborate that “Smart Cities” and “Safe Cities” are strategic narratives respectively initiated by American stakeholders and China to achieve those multidimensional objectives.

The concept of “strategic narrative” is defined as a communicative tool through which states and transnational organizations can articulate their interests, values and aspirations for the international order [9]. In other words, strategic narratives aim to construct a shared meaning to shape the behavior of political agents. A great illustration of this concept is Volodymyr Zelensky’s communication during the Ukrainian-Russian war. His almost daily social media usage, his discourses and his physical proximity with his soldiers on the battlefield contributed to a “Ukrainian narrative of struggle, sacrifice and pride”. In addition, his speeches on freedom and independence deeply echo Western values and history. In response to this targeted communication campaign, the West massively supported Ukraine. This example highlights that strategic narratives have a “representational force” ^[10] — meaning a “nonphysical but nevertheless coercive form of power that is exercised through language” (Janice Bially Mattern). To keep the Ukrainian example: Zelensky’s narrative directly tapped into the British defense mission to be a “force for good in the world”. Therefore, the UK had no choice but to respond and support Ukraine. If

it had not done so, the British government would have undermined its own narrative and contradicted its political reality.

The power of strategic narrative can first be explained by anthropological reasons. Civilizations have always created stories, such as myths, to explain and structure the world ^[11]. By building a *cosmos*, myths allowed human beings to share meaning and reality. Similarly, today, narratives are used “for ordering the chaos” and the complexities of our societies to make them liveable ^[12]. Narratives are sociolinguistic constructions through which we collectively dwell in the world.

At the individual level, it’s also interesting to note that narrative is the process through which we can make sense of events and coherently assemble our experiences. Stories are the privileged medium to share subjectivity. Indeed, the best way to explain who you are is very often to describe what you did. Thus, the narrative offers “permanence in time” ^[13]. In other words, an *identity* — what Paul Ricoeur called a “narrative identity”.

We currently live in an Information Age. Communication technologies make it cheap and easy to massively build and share stories. Meaning to instrumentalize and distribute narratives. At a geopolitical level, this has led to an information war where social media, fake news and memes are weaponized — which characterizes the Cognitive domain we described earlier. Hegemony and victories depend upon “whose story wins” (Joseph S. Nye JR) as much as military successes.



THE CHINESE NARRATIVE: THE SAFE CITY



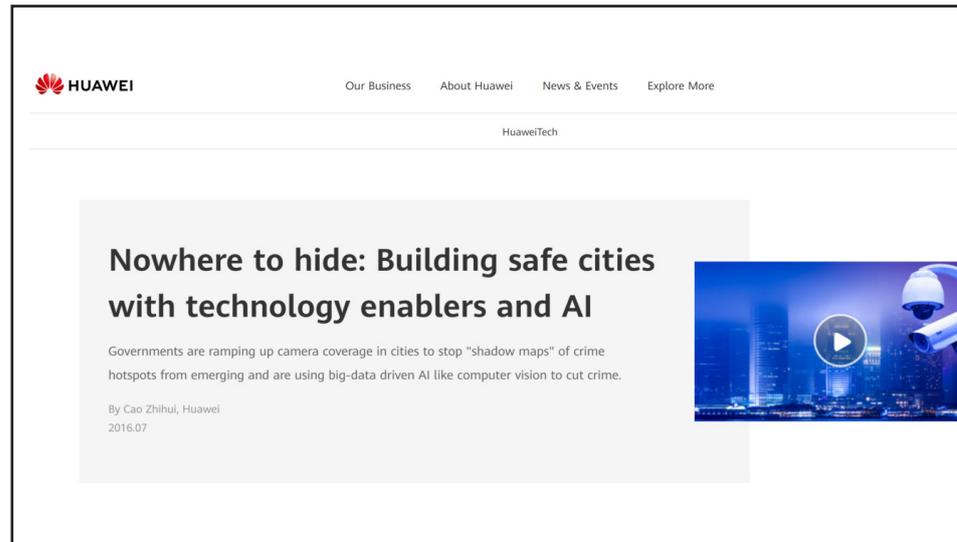
In this context, geopolitical confrontations around urban technologies are also a confrontation of strategic narratives. China's development of the "Safe City" is much about narrative as it is about technology. This narrative could be summarized as follows: *"In a world increasingly unstable and risky, Safe Cities can bring order and security"*. In this paradigm, urban technologies have two main advantages:

1. Ensuring political order and social harmony by avoiding political uprising or social manifestation and confrontations ("social chaos").

2. Offering safety and security. This could be done by reducing crime rate but also by offering better protection against health threats (such as pandemics).

The “Safe City” narrative was initiated around 2018. It gained momentum with the COVID crisis [14] and has since continued to grow and massively propagate around the globe. In this context, computer vision and CCTV cameras are presented as key technologies to promote political order and security [15].

“
WHEN LEARNING
IS DEEP, DATA
IS BIG, AND
SURVEILLANCE
IS WIDE
”



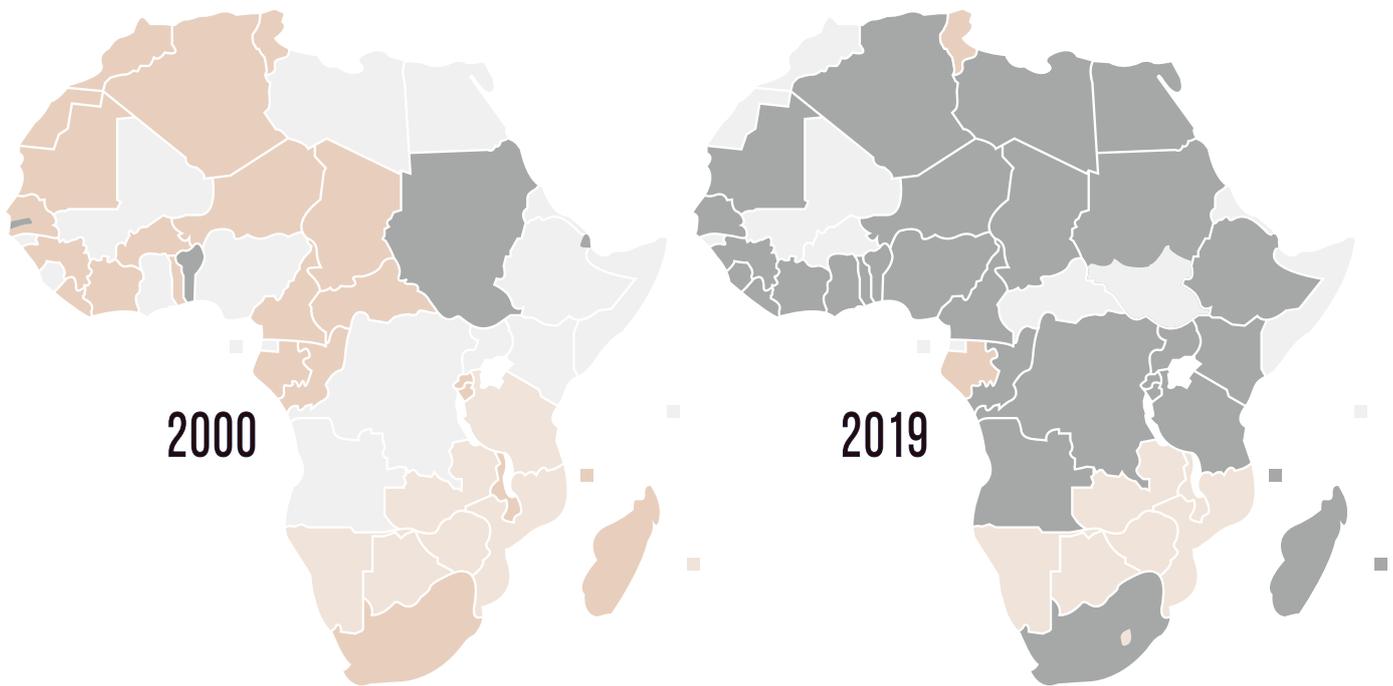
Source: Huawei Website

The “Safe City” narrative is quite powerful because it leverages various mechanisms to reach stakeholders with different concerns or issues. Political order can be very appealing for emerging countries or authoritarian States. But simultaneously, safety and security are also key values for western populations and can echo rising feelings of insecurity among democratic countries.

Those elements might explain the global success of the Safe City narrative — especially in African countries. This success can obviously be quantified through Chinese exportations of urban technologies but it can also be measured by considering the stakeholders who own this narrative as with the City of Nice’s launch of its SafeCity project. Even if such cities do not buy technologies from BATX or Huawei, they import values and meaning that emanate from the Chinese narrative. And this, as we saw earlier, can be as coercive as hard power.

CHINA'S AFRICAN TRADE TAKEOVER

Top source country for imports in African countries*



* Based on share of total value of imports.
South Sudan became independent from Sudan in 2011.
Source: DEC, World Bank, Statista Research

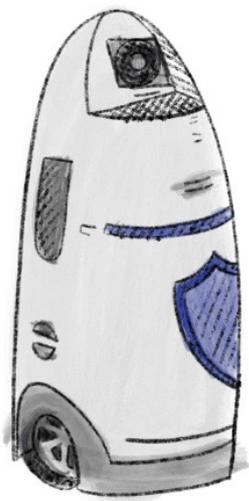
France
China
South Africa
Other

It's interesting to highlight that the Safe City's narrative deeply echoes China's technological development. Indeed, the country is well-known for having the world's largest surveillance AI system, with significant investments in surveillance cameras, computer vision and facial recognition technologies. The Chinese surveillance system relies on citizens' adoption of smartphones, using it for payments, transportation, chat - the more data they create, the better. Surveillance cameras and facial recognition technology create data so that "machine intelligence" can predict human behavior and even shape it. IoT, Network infrastructure, cloud computing and 5G networks are being tested and implemented in various cities. 5G infrastructure research and development has been at high speed since 2012, with [IMT-2020\(5G\) Promotion Group](#) being an official 5G organization from China and Huawei being at the forefront. The 5G telecommunications network is part safe city infrastructure development from airport management and traffic optimization, such as in [V2X](#) (Vehicle-to-everything) communications to streamlined city governance.

Lastly, it's also interesting to note that this narrative mainly emanates from the central Chinese government. Indeed, in contrast to the EU and USA, the Chinese urban planning model is centralized, meaning that safe city initiatives are top-down, mostly initiated by central governance but private companies have a crucial role in developing technological solutions for smart initiatives. One of the examples is AI chatbot for public service developed by Lenovo. According to Feyn Lu, it addresses the problem of difficulty to get government services because of the long queues and waiting times to get responses: *"it just transfers or extends public service from the municipal staff windows of the government home to their living, those nearby, and the people"*. Additionally, according to the Chinese national intelligence law from 2017, companies are compelled to collaborate with the government, whether it's sharing personal data or supporting Chinese government initiatives. For example, China has entered the Southeast Asian market through the help of tech giant - Huawei. The company is the most active in the region to create ecosystems for the digital economy. When exporting smart city initiatives, private companies play an important role. Huawei follows the country's key priority and promotes its projects as safety solutions for safe cities. For instance, Ecuador's system ECU-911 - surveillance cameras - is made by state controlled C.E.I.E.C and Huawei. However, in their statement to the New York Times, Huawei declared that Huawei provides technology to support smart and safe cities but doesn't get involved in how public authorities use the technology

Shenzhen: The Safe City

The case of Shenzhen is especially relevant because it embodies "The Safe City" narrative. Once a rural area of agriculture and fishing that became China's first special economic zone in 1980 and then quickly developed into a technological metropolis, the city of Shenzhen epitomizes China's relentless pursuit of economic success and technological development.



The defining principle of the Shenzhen Smart City Project is public security and stability. All digital networks and technological infrastructures are designed to ensure this principle through effective communication, mass surveillance and total control. In order to expand its surveillance capabilities, the police department in the southern part of Shenzhen has already signed an agreement with China Electronics Technology Group, a Chinese state-owned defense conglomerate, to purchase and implement a surveillance system similar to the one in Xinjiang, the city known for its high-tech policing. Shenzhen follows the general trend in China, using smart city surveillance technologies to carry out repressive policies and exert full control over the population

////// The city government created the intelligent transportation system with the active engagement of Huawei. The system supports the traffic management department in monitoring and managing the traffic in the peak time and enables police departments to detect traffic violations. The intelligent transportation system is also being introduced at Shenzhen International Airport, where a special facial recognition system is deployed. The system makes registration and security procedures easier and faster. According to the report, “From check-in to boarding, passengers need to present their passports only once.” The ultimate goal of the city government is to create multi-networked, AI-based, fast and secure transportation architecture with ubiquitous 5G coverage and cloudization.

Shenzhen is the leading “Safe City” in China, outperforming other similar projects at home and abroad. In February 2019, the Central Committee of the Communist Party of China and the State Council named Shenzhen the leading city in building a regionally integrated safe city cluster leaving the giants such as Shanghai, Hangzhou and Beijing behind. Another indication of Shenzhen’s success is that It won Global Enabling Technologies Award in 2020.

Interestingly, Shenzhen has not only been shaped by the “safe city” narrative, but has also reinforced it. As Shenzhen is massively used by China to promote its know-how and expertise in the field Urban Technologies, it becomes itself an element of a larger strategic narrative. As such, “The Safe City of Shenzhen ” is made as much of concrete and metals as words and images.

THE AMERICAN NARRATIVE: THE SMART CITY



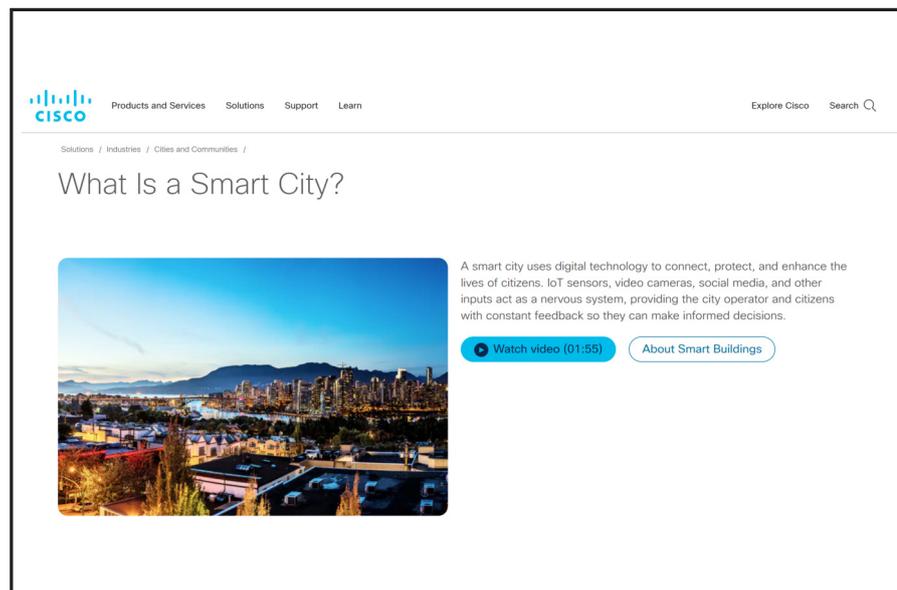
On their hand, American stakeholders built another narrative around the “Smart City” and that could be summarized as follows: *“Smart Cities can improve the quality of life of citizens and optimize cities while reducing the operating cost of urban stakeholders”*. This narrative was mainly initiated in 2008 by American Big Tech companies. At that time, it sounded very attractive for two reasons:

1. In a context of economic crisis and budget cuts, Smart Cities offered to do more with less: information technologies could better manage services and optimize urban flow (mobility, waste, water, energy), allowing cities to stretch their limited resources further.

2. In this paradigm, quality of life is mainly quantified through the number of urban services and goods that a citizen can access. This aligns with performance-based governance as well as the economic structure and the materialistic culture that characterize the West since the early 20th century.

Quote from “A vision of smarter cities: How cities can lead the way into a prosperous and sustainable future” (IBM)

“
CITY SERVICES:
FROM GREATER
INDIVIDUALIZATION
TO FISCAL
CONSTRAINTS,
CITY SERVICES
ARE COMING
UNDER INCREASING
PRESSURE
”



Source: Cisco Website

It's first interesting to note that contrary to China, the American camp is far from homogeneous and monolithic. It is composed of several companies that can be competitors and public stakeholders whose interests may occasionally be misaligned.

Indeed, the US private sector has a valuable function as a smart city project initiator, provider of financial resources, and client. Based on taxonomic analysis of Smart City Projects 32% of smart city initiatives are promoted by the private sector, 24% result from public-private partnerships, and the public sector is responsible for 44%. **US's pro-business and entrepreneurial strategies** make it easier for companies like IBM and Cisco to act as agenda-setters in smart city development. While private corporations develop smart city initiatives in all models, the research reveals that private companies are more involved in the United States than in Europe.

U.S. Department of Transportation is also a key player as Transportation and mobility are one of key priorities for US smart cities. Indeed, US smart cities adopt a bottom-up approach and initiatives come from local authorities rather than federal governments. The USA's hyper-local neighbourhood level initiatives make it easier to reflect local context, meet community needs and create human-centred smart city initiatives. On the other hand, local city governments are centered on enhancing public services to attract private companies for a collaborative approach to constructing digital infrastructure. Cities adopt strategies such as the creation of innovation districts and the promotion of policies for creating demonstration cities, where city spaces are reimaged as a laboratory for the most transformative technologies that could shape how we live in the future.

In the context of a widening range of actors involved in the provision of public services, the responsibility of the government is to “act as the guarantor of public values” (Docherty et al). The state plays a key role in correcting market failures to provide for the public good in the American political context. Technological innovation has led to a transition in the role of government within various sectors of urban services (Emery & Trist). For example, in the mobility sector, the government now takes on a managerial role instead of operating exclusively as a direct service provider.

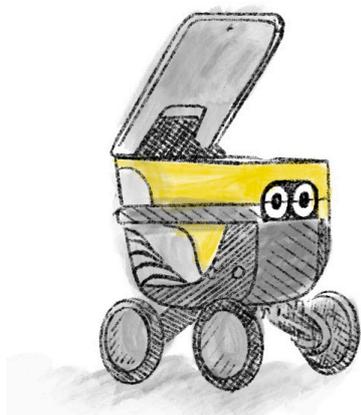
Despite this growing number of stakeholders, they commonly have a shared meaning (a collective narrative) and technology companies remain “instruments of foreign policy” on which the American state “implicitly and explicitly build [its] supremacy” (Mohamed Benabid, [16]). Thus, the Smart City narrative also contributes to domestic unity.

This Smart City narrative also takes root in a very specific technical-cultural background. Indeed, The United States emphasizes the possibilities of new technologies, ICT and big data as the central paradigm and starting point for smart cities. It applies a **technological point of view** to improve the intelligence, management, and quality of urban life. As Julia Glidden emphasized: “Public servants now recognise that shifting services to cloud helps them deliver smart services for society no matter where they are based, or who they need to collaborate with. Big Data, enabled by cloud, fuels real-time intelligence and decision making, and Artificial Intelligence, with its ability to reason over vast quantities of Big Data, can uncover deep insights and augment human expertise which helps inform better policy and the delivery of better services. Digital twin technology helps to visually simplify complex city processes and ensure the systemic impact of important planning decisions can be predicted and thoroughly analyzed and consulted on before implementation.”

It also reflects the notion of urban entrepreneurialism, theorized by David Harvey, which understands the role of the local government as fostering economic

development, often by competing with other cities to attract innovation and invest in the city. In this view, the smart city is an economically productive and technologically innovative city. In a context where cities face limited budgets due to economic challenges and limited funding from the national government, private actors play a key role in shaping the urban environment and providing urban services. Over time, the U.S. tech industry, rooted in Silicon Valley, has given rise to various smart city technologies and governance models.

IBM, for example, concentrates heavily on hard infrastructures, such as hardware manufacturing, ICT, and network infrastructure, to promote itself as a necessary step in the search for technological solutions. If the main solution is technology, the role and importance of big private tech companies are also raised. US political and economic context enables private companies such as IBM and Cisco to act as “thought leaders” and engage in “global smart city policymaking”. Dominique Bouillier proposes that the “Google City” emerged from the American context as a challenge to the IBM model, embodying a more adaptive data collection and governance model. In this model, platforms government and directly collect data on the user, as well as provide services. He also notes the emergence of the “Wiki-city” model, a more citizen-driven approach which favors open innovation. While the names and concepts might vary across time (according to “urban successes” or “companies’ momentums”), all those terms still emanate from a single story : the Smart City’s narrative. Indeed, the IBM model, the “Google City” and the “Wiki-city” all remain characterized by a high concentration of private companies, an entrepreneurial strategy and a service-oriented approach. At the end, the city is still seen as a platform that needs to be optimized [to cite: Undoing optimization].



The Smart City narrative prevailed for more than ten years until the abandonment of the Sidewalk Lab project in Toronto. This project and its outcome have crystalized an accumulation of deceptions and an increasing misunderstanding towards Smart Cities. Far from being an isolated case, it turned out that several very similar urban projects struggled to keep their promises. In some cases, these projects even made the problems they were supposed to solve worse.

Hudson Yards: The Smart City

The case of Hudson Yards is quite interesting because it perfectly illustrates the components of the Smart City’s narrative. Hudson Yards is a waterfront area in the far west side of Manhattan and one of the first truly built-up smart city projects in the US. Dr. Constantine Kontokosta of NYU’s Center for Urban Science and Progress described it as “the nation’s first ‘quantified community’”, while anthropologist Shannon Mattern named it “a testing ground for applied urban data science”.

Private investment is the driving force behind the Hudson Yards smart city project; it

is the largest private real-estate development in United States history, transforming a mixed-use residential, commercial, and recreational area. It has also focused on attracting tech companies to newly developed office towers, as well as cultivating innovation by inviting startups and opening a tech incubator on site.

The experimental aspect of Hudson Yards ranges from urban design to waste management to improved broadband connectivity; it is a “unique experimental environment” for testing “new physical and informatics technologies and analytics capabilities”, according to Mattern.

After several phases of development spanning the past 2 decades, the latest iteration of the Hudson Yards smart city project consists of 4 key aspects: “connected neighborhood, responsive neighborhood, clean and responsible neighborhood, reliable and efficient neighborhood”. In each of these cases, technology aims to bring efficiency while improving citizen’s quality of life by providing cost-effective urban services.

Lastly, Hudson Yards represents a pragmatic urban governance approach characteristic of former Mayor Mike Bloomberg who was a major advocate of the project, “redefining complex urban issues as a set of ‘problems’ to be ‘solved’ via the application of technical knowledge and evaluated via quantitative measurement”. These solutions range from biometric fingerprint sensors for entering office buildings, to efficient on-site energy co-generation and management.

03

CHAPTER



THE EUROPEAN UNION BETWEEN TWO RIVALRIES, USA AND CHINA





The EU's position in the light of the great power competition is far from being monolithic and homogeneous. It is increasingly complex as it tries to decide upon its geopolitical fate and role—whether the EU will be a key geostrategic actor, or merely a playground. The EU does not want to be completely reliant on the U.S. in foreign policy decision-making process. EU officials and the heads of member states showed different attitudes towards American export bans on China. Although Europe is eager to establish itself as a key sovereign geopolitical player, it will most likely sustain and build digital and technological alliances with U.S and and like-minded democratic countries to counter authoritarian powers of China and Russia.

The EU feels outweighed by competitors in technological innovations and is trying to get strategic autonomy, creating an independent European path to avoid technical dependency on the USA or China. In recent years the EU has made a European digital strategy to secure its position as a global actor in technology. The EU's privacy-oriented policy, specifically GDPR, has been enormously influential in strengthening the EU's role as a global standard-setter in data analytics technologies. The upcoming AI Act also serves as the EU trying to be agenda-setting, hoping that other nations will also have to follow its steps. It has been using its regulatory tools to control the internal digital markets and as a form of soft power for global political-economic influence, a practice known as the "Brussels Effect". Another important strategy is a European green deal, which highlights the EU's aim and decision to act as a standard-setter in sustainable infrastructure and development. Smart city initiatives are one of the main pillars of both strategies, and the EU is actively promoting its idea of a smart city - a sustainable smart city. It has officially declared its intention of using smart cities to increase the competitiveness of European cities and technological advancements. Also, at this very moment, the EU's energy sector is very dependent on other countries, and urban tech initiatives and energy-efficient policies can also be seen as a way to achieve European energy independence. However, European technological solutions are currently not as tech-savvy as in China, south-east Asia, and the USA. A lot is invested in European research and development projects to fill the gap.

At the same time the EU is also implementing various defensive and offensive mechanisms to secure its place between two rivalries US and China. Export controls are key to Europe's role in the US-Chinese technology competition as export licenses are based on the technological standards. Export control policies are used as a way to limit the spread of certain goods or services concerning national security or potentially repressive use. However, urban technologies are challenging export control regimes by form of intangible transfers: foreign direct investment, intercontinental research, mergers and acquisitions and transfer of data as well as technological solutions. Important question for the EU is to what extent should export controls be expanded given that Europe is facing fierce competition amidst growing US-China rivalry,

especially when the European values are at stake given characteristics of surveillance technologies.

The competitive advantages of Chinese industrial giants such as Huawei has sparked a debate in Europe as well. The EU also tries to protect member states from overly competitive Chinese companies. For example, the EU Commission's ten action plan that includes industrial policies provides a platform for sharing best practices between member states for investment arrangements with Chinese actors. In 2020 EU also adopted the EU Toolbox for 5G Security and EU Toolbox of Risk Mitigation Measures for cybersecurity of 5G networks which provide guidance on vendor risk mitigation. Individual member states can decide to implement the toolkit as they see fit.

At the same time the lack of harmonized EU rules adds additional costs to mitigating security or competition challenges. Thus, in 2019 the president of the European Commission, Ursula von der Leyen, pledged that completion of the EU's proposed digital single market is a priority. EU AI regulatory proposal is a continuation of attempts to harmonize rules across the bloc and ensure oversight.

The EU also has ongoing negotiations with China since 2013 that has been concluded in December and awaiting ratification after 2023 - the EU-China Comprehensive Agreement on Investment (CAI) which is seen as a 'a key tool in rebalancing investment relations and in securing fair and equal treatment for EU companies operating in China' including technology sector. On the one hand CAI grants EU market access to the Chinese telecommunications equipment sector and on the other hand, EU access to invest in Chinese technology sectors such as cloud services. The agreement also obliges signatory parties to increase transparency for subsidies to Chinese state-owned enterprises, prohibits forced technology transfers and other distortive practices, and allows European companies' access to Chinese standard setting bodies. This agreement signals to the US that the EU does not blindly follow US foreign policies and will continue to leverage diplomatic instruments with China.

In December 2020, the EU also published a transatlantic agenda, calling for US-EU economic coordination in regards with China. In 2019, an EU investment screening system entered into force. It covers intangible technology transfers as well as China's acquisition attempts of European undertakings that may have repercussions for critical infrastructure, technologies, infrastructure or any sensitive information. These initiatives give reassurance to the United States that the EU is equally concerned about Chinese market economic practices. To further strengthen the transatlantic agenda, the two sides, EU and US, have additionally launched Trade and Technology Council in 2021 "to foster cooperation on trade- and technology-related issues, based on shared democratic values".

PRIVACY, PARTICIPATION AND ECOLOGY: THE EMERGENCE OF A EUROPEAN NARRATIVE



In addition to the mentioned diplomatic arrangements and international economic policies, the EU is also starting to elaborate its own strategic narrative around cities and urban technologies. Such a narrative was first built around data-privacy and transparency. Taking roots in strong regulations such as the GDPR (General Data Protection Regulation), it has spilled over European cities through several urban policies including AI Registers (in Amsterdam and Helsinki) and Metropolitan Data Charters (in Nantes and Barcelona). Those privacy-oriented policies consider the challenges that arise when personal data is collected and processed with urban technologies, and is implemented through active collaboration with multiple stakeholders (including citizens). In this context, cities and municipalities are recommended to provide “high transparency” on Urban Tech projects and Integrate GDPR requirements in tendering

procedures for private companies. However non-AI specific EU regulations such as consumer protection law, antitrust law, competition law also cover the issues raised through urban technologies.

Some elements of the European narrative can also be seen as a response to the perceived shortcomings of the smart city one, namely its technocentric nature. While the US narrative was spearheaded by private actors, the European narrative has been ostensibly people-first and is challenging the smart city technological paradigm (for example through “low technologies” project and research on “degrowth”). They have also led what Luca Mora calls “an international trend towards more citizen-centric/human centric approaches - this comes from a realization that previous models weren’t working, and that citizens provide important knowledge”. The EU’s narrative on citizens participation and to what extent citizens are involved and want to be involved is materialized through several large-scale initiatives such as the Telraam Project and the EU-citizen.science which aims to involve the public in scientific research and “to bring together science, policy makers, and society as a whole in an impactful way”.

Lastly, the European narrative also articulates itself around ecology and environmental protection. Indeed, historically, sustainability and sustainable urban development is the central paradigm in the EU model, including highlighting the importance of green and resilient cities supported by sustainable economic growth and inclusion. As a result, the European Green Deal is the cornerstone of EU policy since 2019 and includes aims to reduce emission in different industries, adopt sustainable and affordable energy actions, zero pollution action plan, etc. This is especially clear and tangible through the New European Bauhaus. Launched in the autumn 2020 by European Commission President von der Leyen, this is an initiative to connect Cities with the European Green Deal. More precisely, the New European Bauhaus aims to bring the European Green Deal “to life in an attractive, innovative and human-centered way”. As such, it represents a new cultural project for Europe to “lead a whole systemic change with its own aesthetics, sustainability and inclusiveness”. It’s also interesting to note that several european-based initiatives (including the concept of “Internet of Nature” coined by Nadina Galle, the “TreesAI” project in Amsterdam and QTrees in Berlin) already echo and materialize elements of this narrative, where urban technology aims to better map and protect the environment. As Nicolas Planteau du Maroussem explained it, “EU is differentiated by its emphasis on sustainable urban development and environmental protection. This is undoubtedly one of its main characteristics, especially in comparison with China and the US. ”

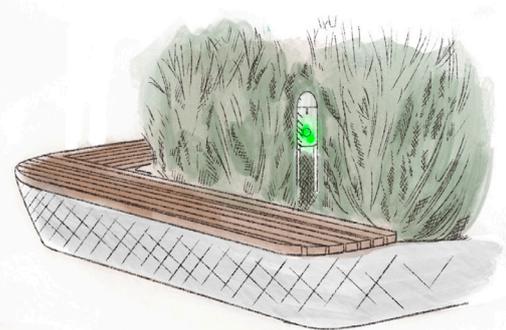
It’s interesting to note that some elements of this narrative are already exporting themselves worldwide and contribute to position the EU in the UrbanTech War. Indeed, by positioning itself as a leader in sustainable urban development, EU’s stakeholders are winning share markets in the UrbanTech field. This is for example what happened with the AFD (Agence Française de Développement) which has been commissioned by the Indian government to support 15 national “Smart City projects”. The privacy narrative also allowed several European stakeholders to export their technologies.

As an example, the french startup Upciti signed a partnership with the City of Albany (New York State) to deploy its “ethics by design” urban sensors. More broadly, GDPR is increasingly inspiring other regions such as California (with the California Privacy Right Act), Québec (with Law 25) and Brazil (with LGPD).

But despite having well-identified components (Privacy, Participation and Ecology), this European narrative still doesn’t have a name. Some titles have been proposed such as “Intelligent Cities” (as mentioned by Dana Eleftheriadou during our interview), “Sustainable Cities” or “Green Cities”, but they do not yet federate European stakeholders and do not crystallize a cultural imaginary. This firstly highlights that this narrative is not yet as mature as the American and the Chinese ones. Meaning that Europe is still looking for its own technical-urban paradigm, beyond the Smart City and the Safe City. While the mentioned components are emerging they still need to articulate themselves around a coherent and robust vision. This unnamed narrative also emphasizes the difficulty to federate the very great diversity of European stakeholders and cultures.

Though, the European Commission is actively working on this “third narrative”. Indeed, in addition to the New European Bauhaus, the EU is increasingly shaping its urban market with calls for projects and fostering collaboration with cities and between stakeholders. This is for example the case with the “100 Climate-neutral and Smart Cities by 2030” mission which aims to help European cities tackle climate change and to reach net-zero by 2030 through continental collaborations and crossed research. More broadly, strengthening the capacity of local authorities is part of the EU’s urban development goals towards good urban governance. Sharing experiences, best practices and lessons learned between the cities is also part of this process and aims to help European small cities that don’t have sufficient funds and face similar challenges solved in other cases. One example of knowledge sharing between stakeholders is the EuroCities project, which is today a network of more than 200 cities.

Public-private partnerships are also crucial in shaping this emerging European narrative. Large private companies are actively investing in urban digitisation projects, while European cities are getting increasingly mature on these topics. Few examples among many: the the City of Amsterdam has an ICT department in the city government which coordinates many urban projects while in Helsinki there is an independent entity, Forum Virium, which takes this responsibility, and the City of Barcelona recently co-created a Global Observatory on Urban Artificial Intelligence with several cities (including european ones).



All those actions and collaborations converge towards a third strategic narrative, beyond those of the American and the Chinese. It is only a matter of time before Europe finds its own urban and sociolinguistic paradigm. Its components are already here. A shared future is emerging around key issues (Privacy, Participation and Ecology) while a common legacy is already existing. Now, what needs to be done is to connect the dots and tell the story.

04 CONCLUSION

Through this report, we first saw that urban technologies play an increasingly major role in the geopolitical landscape. This phenomenon, reinforced by the USA-China rivalry, has resulted in a fierce UrbanTech War. In this context, we show that the “Smart City” and the “Safe City” are strategic narratives respectively deployed by American stakeholders and China to win this confrontation. On one side, the “Smart City” narrative has mainly been impelled by American companies. It is service-oriented and characterized by techno-solutionism and pragmatic urban governance. On the other hand, the “Safe City” narrative is developed by the Chinese government. It focuses on the use of urban technologies for security, political order and social harmony. Lastly, we also highlighted the emergence of a third narrative elaborated by the European Union and its stakeholders. Although it does not yet have a name, it is based on three components: Privacy, Participation and Ecology.

Those three strategic narratives are not only expressed by American stakeholders, China and the EU to position themselves and win the UrbanTech War. They also put words to cultural imaginaries and socio-technical paradigms. As such, those strategic narratives reflect development trajectories and social contracts. In other words, they express the way some of the most powerful regions want to inhabit the world.

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- [1]: *Introduction to Geopolitics*, Colin Flint
- [2]: *Cyberspace — The Fifth Operational Domain* by Gen. Larry D. Welch
- [3]: *Behind NATO's 'cognitive warfare': 'Battle for your brain' waged by Western militaries*, Ben Norton
- [4]: *Cities at War: Global Insecurity and Urban Resistance*, Mary Kaldor and Saskia Sassen
- [5]: *When the City Itself Becomes a Technology of War*, Saskia Sassen
- [6]: Some studies recently contested that Robert Moses designed these overpasses against specific communities. Those considerations don't affect our argument. Our point is not to discuss whether Robert Moses was racist or not, but to point out that his urban design incorporates a certain social norm (whether intentionally or not).
- [7]: We would like to note that those ways of building order are far from being unilateral. Urban technologies and their politics can be contested, as has happened during the PredPol experiment in Los Angeles or in the case of an American citizen who used several smartphones to create artificial congestion on Google Maps. It is also possible to conceal oneself from urban technologies: this is what some Hong Kong demonstrators did in 2019 by pointing lasers at cameras to confuse facial recognition algorithms. Lastly, people and organizations can adapt to this new order — for example by simultaneously using several ridesharing applications to have more clients. All those cases (contestation, dissimulation, adaptation) don't negate that urban technologies have politics. In fact, they emphasize it by showing similarities with how people can behave towards forms of power.
- [8]: *Candide*, Voltaire
- [9]: *Strategic narrative: A new means to understand soft power*, Laura Roselle and Alister Miskimmon and Ben O'Loughlin
- [10]: *Why Soft Power Isn't So Soft: Representational Force and the Sociolinguistic Construction of Attraction in World Politics*, Janice Bially Mattern
- [11]: *Myth and Meaning*, Claude Lévi-Strauss
- [12]: *Strategic narrative: A new means to understand soft power*, Laura Roselle and Alister Miskimmon and Ben O'Loughlin
- [13]: *Time and Narrative*, Paul Ricoeur
- [14]: *From smart to safe city, a (geo)political shift due to COVID-19?*, Raphaël Languillon
- [15]: *Towards Urban Decoupling? China's Smart City Ambitions At The Time of Covid-19*, Alice Ekman and Cristina de Esperanza Picardo
- [16]: *The Territorialization of Cyberspace and GAFAM Geopolitics: Driving Forces and New Risks in the Wake of the Ukrainian Crisis*, Mohamed Benabid