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Working group synthesis

MOBILITIES

2019 - 2020

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EDITORIAL

Movement has become a fundamental value and a condition for change and progress. It comes to answer people's urge to choose their activity and to craft their life the way they want: this can mean movement of goods, of people and of capital linked to economic growth and globalization, physical movement and movement of information enabled by scientific and technical progress, movement of ideas and movement of people in increasingly urbanized societies.

It has become just as impossible to separate economic growth from movement of goods as it has to separate cultural development from people's mobility.

Our capacity to move defines the ways we inhabit places, the quality of social interactions, the possibility to study, access jobs, culture and hobbies. Mobility is made possible by the offer of services and infrastructures, the guarantee of accessibility, but also by everyone's ability to access tools of information and payment that allow an understanding of the offered systems

and services. In other words, mobility implies a learning process.

Topics such as climate emergency, traffic congestion, greater distances, or the complexity of networks are the common lot of all cities in the world. Taking into consideration their own specificities, they must invent social, organizational, technical and spatial solutions to allow everyone to move around freely, comfortably, efficiently while at the same time ensuring environmental quality and citizens' safety.

Ensuring sustainable mobility will imply the compatibility and complementarity of individual and collective transportation (inter-modality and multi-modality), the access to urban equipment and services, the architectural quality of spaces, the appropriate time of movement, and the use of communication and of information technologies.

The working group "Mobilities", brought together in the context of the PFVT, established the following document with this perspective and ambition in mind.

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PART 1

DEFINITION AND APPROACH

“Mobility is the time and space framework of human activity programs. It’s a vision organized around three systems: transportation system, activity system, location system. It is the way that activities, places and territorial equipment, with their respective activity systems, usages and practices, are organized.”

Jean-Marc Offner, General Manager of the Urban Planning Agency of Bordeaux Metropole.

The role of mobility is central in the efficient social and economic management of territories. Being able to move around is essential to enjoy resources of cities and territories (activities and amenities), and access to social connections on the territory. Mobility is all the more important as a access condition to jobs, housing, services or even culture. A system that is complex by nature, mobility is crucial in the organization of territories. It regards all at once goods, needed to feed people and business, people, who need to access their home, their work place or other activity, and information, needed to access this mobility.

Mobility : a key tool of social justice and social inclusion

Inequalities are increased by the spread of activities, the lack of adequation between the location of activities and of houses, the combination of urban sprawl, the lack of coordination with public transportation services, the cost of transportation, or the lack of information about how to use the transportation system. Yet urban and peri-urban mobility is a key for inclusion, to decrease socio-spatial inequalities and boost territories. The challenge consists in better planning the location of activities to decrease a mobility that’s imposed and not chosen, and in also guaranteeing equal access for all to transportation systems, while ensuring safe, viable and accessible transportation means for all.





Those challenges are particularly strong in developing countries where the combination of economic growth and massive urbanization leads to a strong increase of the mobility demand, which enhances the consequences of the motorization of daily commutes.

A challenge for public spaces and for the evolution of infrastructures

Mobility happens in the public space, and its organization structures the location and appearance of the cities: streets, lanes, intersections, hubs, bridges. Ces espaces relient et sont des lieux d'échanges, urban life, encounters, business activities or, on the contrary, separate, isolate, create divides between and within neighborhoods, between cities, between city and countryside, and be an obstacle to social life, exchanges and accessibility.

Infrastructures aren't rigid. They are meant to evolve, and we must be able to adapt them to ensure more diversity (for example, the new motorway connections à requalifier or train stations areas becoming service areas).

Mobility: an environmental challenge

Putting territories into movement can also be a source of disturbance. Congestion, noise pollution, spatial overuse of territories: these are possible malfunctions of mobility systems that the actors in charge try to control and limit today. The negative impacts of the transportation sector on the

environment is a major contributor to climate change. This means that being able to answer these challenges implies a profound transformation of our societies.

The transport of people and goods counts for 25% of greenhouse gas emissions. The use of transportation means producing carbon, cars in particular, is responsible for external negativities that societies have to pay a high price for in terms of greenhouse gas emissions, air pollution and congestion.

Mobility: challenge of digital transition

The raise of digital tools in our societies triggered many changes in the way our cities operate, by transforming the way we travel. Rather than revolutionizing cities, distances and the transportation demand, the digital environment incites us to transform and manage them in different ways. But it also creates new types of exclusion. Our ways of life and the reasons for our travels (amount, origin, destination, trip length) evolve through time and space.

Tools with the digital economy profoundly impacts the mobility sector. That individualizes people's behavior by modifying individual transportation and informal transport practices. The spread of digital technology within mobility-related matters creates the ambition to optimize flows and answer urban malfunctions. Transport on





demand, MaaS (mobility as a service) and autonomous vehicles are among the innovations that aim to help to rationalize transportation.

A governance and economic model challenge

Historically, mobility was a paradigm relying on a private offer, mostly individual cars and 2-wheelerss, and a public offer, mostly public transportation. New services born with and from the digital economy are now also a part of this landscape, providing services to the public.

Actors historically in charge of public transport, who used to incorporate the entire value chain of mobility (information, customer relation, ticketing, transportation), are now disrupted at one level or the other,

which results in a re-composition of mobility governance.

This shift in paradigm contributed also to transforming the approach favored by those historical actors, pushing them to turn to digital tools. It is thus important to provide local authorities with the right set of tools for them to work jointly and for them to coordinate their work with the new private actors involved in mobility data collection. All of this represents new challenges to be faced.

To answer those new challenges, the New Urban Agenda has set objectives for a clear a governance of mobility, for sustainable funding and for a planning of transportation systems articulated around urban planning and urban design.







PART 2

RECOMMENDATIONS AND EXAMPLES

Recommendation 1

Governance must be considered at all levels, based on a systemized approach.

Strengthen the role of authorities in charge of transport regulation

Political choices related to investment influence the transportations means.

It is thus necessary to consolidate the role of public authorities that regulate mobility :

- Give competences and means to local authorities at the adequate scale, beyond city limits, for them to coordinate their mobility policies.
- Develop tools to allow a long-term intermodal and systemic vision of the evolutions of mobility and of the different modes of transportation to be configured.
- Organize a coordinate the funding of publications.
- Support the organization and the professionalization of informal transportation.





Work with data actors

Include the world of production and promotion of data to public strategies and make it a tool to help decision-making.

In the context of the evolution of mobility governance, ensure that digital actors work in collaboration with regulating public authorities by means of public-private partnerships intended to make user-centered data available to actors of the urban sector.



TOOL

Do digital tools revolutionize urban mobility?

The digital environment appears like a supporting tool of mobility renewal via smartphone, especially through access to applications that offer new mobility services. They help, for example, with navigation and shared transportation bikes, shared ride...

Information and communication technologies induce to rethink mobility, as they contribute to modify certain movements, with more and more activities now done from a greater distance (e-commerce, remote work, social media).

The world of transportation is being profoundly transformed today by the digital environment and by the arrival of new private actors. New competences arise, needed to regulate and increase the quality of services and logistics. It appears necessary to invest in digital infrastructures et to give the State and public services the capacity to foster a more connected and accessible mobility. Authorities must therefore be enabled to plan and ensure the deployment of new infrastructures and to work in coordination with data-collectors, who for the most belong to the private sector.

The arrival of new actors invites us to rethink their rules of usage as well as the interaction between the movement of people and the movement of good.

www.ifsttar.fr/en/

www.lafabriquedesmobilités.fr/en/



Recommendation 2

Bridge urban planning and transportation planning.

Planning at various levels

Facilitate the articulation and the coherence between global city planning and transportation planning. To do so, organize the location of areas bringing together homes, work and services in a way that avoids unnecessary travels.

Work on mobility challenges at different scales, starting from usage and demand; from the street, areas and neighborhoods, to the metropolitan scale, as well as transportation corridors.

PROJECT

Articulating urbanism and transportation

In the context of the decentralized cooperation between the Grand Lyon and Ouagadougou, the Lyon Urban Planning Agency was asked to implement a plan to support mobility, a strategy shared between urban planning and mobility planning. A campaign of road counts, a road network database, a mapping of infrastructure projects on the municipal territory and a mobility monitoring were realized. A communal policy articulating

urban planning and transportation was also formalized. (Ouagadougou - BURKINA FASO)



www.urbalyon.org



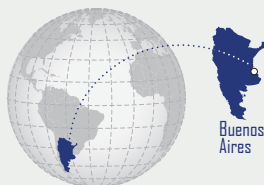


PROJECT

The “Ville Lisible” project in Buenos Aires

The “Ville Lisible” project (readable city), initiated by IVM - Institute of the City in Movement (Institut de la Ville en Mouvement) in coordination with the city of Buenos Aires, the federal government and coach companies, developed an urban and multimodal study about bus lines in the city. It includes elements of design, architectural and web culture to elaborate and draw information from public transportation systems from the user’s viewpoint. They improve the city’s readability by providing users with enough information to make the most adapted travel decisions, at any time, and anywhere. The system identifies shared codes and it facilitates common references between big Latin-American cities. In Buenos Aires, Rio de

Janeiro, Porto Alegre or Lima, the point is to each time develop and reinforce a particular and unique interface. The specificities of each city are thereby considered, whether they have to do with urban planning, mobility organization, or each society’s culture.
(Buenos Aires - ARGENTINA)



www.ville-en-mouvement.com/en

Construction, deconstruction, requalification of infrastructures

Develop and transform adaptable, multifunctional and multimodal infrastructures by insisting on the blend of uses, connectivity and management of the temporality of infrastructures. To do so, take into consideration the uses and the interactions at all territory scales, relying on urban quality (comfort, security, efficiency, well-being, urban life).

We must be careful, however, that infrastructures do not result in fragmenting cities. In southern countries, the goal is to build the new road infrastructures which will organize the modes of transportation, as well as the urban structure and future developments. In northern countries, the goal is rather to redefine the role and place of road infrastructures in order to integrate them better in the city and to avoid negative nuisances.

In both cases, the multi-modality and the evolution of uses need to be considered.



PROJECT

Infrastructures creation

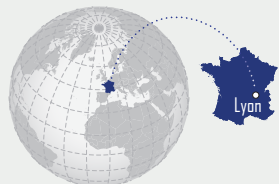


Brainstorm sessions were led by CODATU for the implementation of a tramway, a mode of transportation less capacitary than the metro but more adapted to medium-sized cities like Kochi. The development of this mode of transportation is part of a context where the 'smart city' has become the new acceleration and transformation factor for cities.

(Kochi - INDIA)

[www.codatu.org /?lang=en_us](http://www.codatu.org/?lang=en_us)

Infrastructures requalification



In the context of a global reflection about mobility in the cities, the Grand Lyon metropolis planned to assign a new function to the A7 highway and make it a new green urban boulevard to facilitate public transportation, taxis, shared rides and active types of mobility. (Lyon - FRANCE)

www.grandlyon.com

Reconsider the role of road infrastructures in peri-urban spaces

In peri-urban spaces, road mobility relies mostly on cars, given that public transportation has difficulties convincing people due to an insufficient population density. By considering its role, roads can support the development of public transports and car-pooling, while answering the increasing mobility needs of inhabitants.





PROJECT

«Small scale changes (almost) everything»

In this project led among other by the IVM, passages are considered spaces of transition for the 21st century city. Escalators, gateways, tunnels, urban funiculars are essentials chain links for a sustainable mobility, needed for the quality of our daily commutes and for the design of an integrated mobility system.

Even though they facilitate transition between various modes of transportations, those

passages, however, are little considered in large-scale urban planning projects. Yet it is through small scale change, locally, that we can build the basis for large-scale transformation. Several actions were initiated (professional contest, student workshops), among which a call to innovation and a guideline to help with the conception of tomorrow's mobility spaces.

www.ville-en-mouvement.com/en

Design the streets and public spaces

Design mobility spaces like spaces of coexistence and organize the divide transportation means in the public space between motorized vehicles, bikes, pedestrians and social life.



PROJECT

Infrastructures and public space

In the context of its candidacy to the Smart Cities program, launched in 100 Indian cities, the urban planning agency of Lyon intervened with the city of Nagpur to implement a project meant to improve an ill-equipped peripheric neighborhood undergoing urban densification, and served by a future metro station. This support consisted in identifying urban projects to be developed in strategic

locations, connected to the major stations of the metro lines. (Nagpur - INDIA)



www.urbalyon.org





Use digital data to optimize mobility

Use data exploitation and digital tools to optimize and facilitate transportation, especially by studying the link between congestion and digital tools on highways and on temporality, to avoid a maximum of travels, especially during rush hours.

But while they facilitate infrastructure management, new technologies also create some forms of exclusion :

- By making local authorities more dependent on the commercial approaches of private companies that control urban data;
- By excluding people who don't have access to digital tools or don't know how to use them (elderlies, under-privileged).

It is crucial to educate and inform local authorities and individuals about how to use those tools and to establish a data governance that allows to share them, always in a regulated way.



TOOL

Artificial intelligence and mobility management

Entropy, a startup born from the works of VEDECOM, assesses travels in real time and at the lowest costs and analyzes the mobility needs on a given territory. Thanks to AI, the

company can model fluxes, regulate traffic and assess the urban planning needs or necessary services without requiring a field survey.

www.vedecom.fr/?lang=en

Warning: digital tools and mobility

Let's dare to ask ourselves an important question ! Can mobility issues be reinforced by digital tools? In the road sector, digital solutions have in some aspect contributed to more traffic and congestions, rather than they have helped to increase the situation.

A study by "La Fabrique de la Cité" showed that in many cities, the arrival of new digital players born with the digital economy, especially route planners and "tourism vehicle with chauffeur" (VTC), has actually contributed to densifying traffic.

Furthermore, oppositions arise between big cities and key actors of the digital economy while mobility issues persist and strengthen. It is necessary to withdraw from this sterile opposition and to use digital tools instead to find solutions that have a proven efficacy on the improvement of travel conditions.





Recommendation 3

Promote the right to mobility as a fundamental stake of inclusion and social link.

A social and spatial justice challenge

It is necessary to support chosen forms of mobility and reduce imposed forms of mobility, and avoid the fragmentation and the exclusion. To do so, transportation means must be implemented, accessible in terms of:

- Service offer, especially adapted to underprivileged areas;
- Information accessible to all;
- Prices affordable by all.



PROJECT

Mobility has to be learned!

Works developed by the Institute of the City in Movement (IVM) about ways to learn about mobility, lead to the realization of “En route !”, an educational video game aiming to develop a range of actions and to improve people's mobility autonomy, whether for socially or economically vulnerable adults or for youth involved in a learning phase.

“En Route!” was developed in partnership with experts in the fields of city planning, digital creation, mobility, insertion, training and from the university sphere, based on a research

about the psychological, social and cognitive obstacles to mobility. The program was co-developed with people involved themselves in a process of social and professional inclusion.

Today, the game is used by a wider public: middle school students, high school students, apprentices, and the general public interested in mobility. It is circulated by IVM-VEDECOM to non-profit organizations, mobility platforms, job centers, school networks of green mobility, etc.

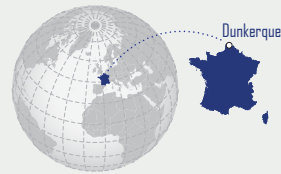
www.ville-en-mouvement.com/en



Free transportation

For one year an experimentation was implemented in Dunkerke. followed by an extension of free transportation to all bus lines. After one year, the first results showed very positive impacts for all users. Most of them, in fact, switched from individual cars to free bus rides, the free factor being the main trigger of change of transportation means for most of those users. Populations who wouldn't move around before, started going

around again. Buses became spaces of social connection. (Dunkerque - FRANCE)



www.ville-dunkerque.fr

Warning: On free public transportation

In more and more congested urban centers, where cars are still a prominent way to travel, cities are constantly on the look-out for ways to facilitate the switch from individual cars to public transportation. For several years now, cities have shown their motivation in enhancing free public transport.

Free transportation attracts cities which, with it, hoping to fulfill several objectives. On top of decreasing the use of cars, free transportation is an incentive to use – and thereby fill up – underused public transports. Tightly related to the modal shift toward public transport, free transportation intends to improve air quality while at the same aiming for a social intention, being particularly needed by vulnerable or underprivileged users.

In the transportation networks of small-to-medium size towns, if gratuity didn't have the devastating effects on public funds, in particular because ticketing represented revenues represented only a minor part of the network's budget. In Dunkerke, the loss was compensated by an increase of the transport payment rate from 1.05% to 1.55% (a participation to the funding of public transport by employers with 11 employees or more).

However, unlike in small cities, the regulating authority of public transport services in a city like Paris can't rely on the increase of the transport payment rate to compensate the shortage incurred by free transportation without threatening the competitiveness of companies.

Furthermore, based upon feasibility and efficiency studies led jointly by the Parisian transportation networks and by the city of Lyon, the experience of free transportation hasn't shown significant results on road traffic. On the long term, it can't ensure on the long term the development of public transport.

Lastly, free transportation can have negative secondary effects on the transport networks, for example through a degradation of the service quality. Likewise, it can incite non pertinent uses of public transport, for example for short distances, missing thereby its target audience and attracting instead pedestrian and bikers.



Recommendation 4

Insist on training local authorities and on the cooperation between them.

Process and empowerment

Train actors about how to use the previously mentioned tools (digital technologies, urban planning, social inclusion) to make the right decision about planning and transportation, management, and to encourage integration at all scale, from neighborhood to State level. Facilitate the crossing and interdisciplinarity between services.

Provide tools to hire private actors and to lend credibility to the financial backers. Organize the authorities in charge of mobility and create trainings intended for both public and private actors.



TOOL

A training program for local authorities about connected electric mobility

Decision-makers and actors of the territories are constantly solicited by the offer for new systems (digital application, start-ups or citizen-led initiatives, etc.) and by new mobility technologies (autonomous vehicles, new energy management systems, communicating infrastructures, etc.)

Faced with these multiple solicitations and with the imperative of modernity, those same actors are led to imagine, design and fund urban developments on their territories with an often limited knowledge of the offered system, of the adequacy between those systems and the reality of the territory and of their adequacy with the prospective wishes of their users.

VEDECOM and CEREMA joined forces, backed by the Paris Region Institute, to propose a program dedicated to the role and responsibilities of local authorities regarding electric and connected mobilities.

The program targets experts of the urban development and mobility field and aims to explain the impact of innovating solutions and to think about their compatibility with the context of each territory.

The targeted objectives are:

- To understand the stakes related to electric and connected vehicles
- To grasp the roles and competences of local authorities
- To integrate electric and connected vehicles into public mobility policies.

www.vedecom.fr/?lang=en



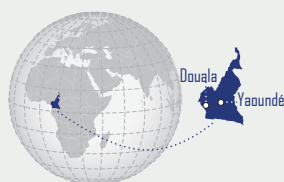
PROJECT

Mobilize Your City

The initiative led by Mobilize your city, supported by French and German development banks, (respectively AFD and GIZ), aims to guide local and national government about ways to improve urban mobility to decrease greenhouse gas emissions caused by travels by 2050. This guidance helps to strengthen governance competences and mobility planning. This includes, among other things, the creation of authorities to regulate mobility and transportation, as well as sustainable

urban mobility plans (PMUS – “Plans de Mobilité Urbaine Soutenable”).
(Douala and Yaounde - CAMEROON)

www.mobiliseyourcity.net



Recommendation 5

Establish an adapted and diversified economic system that enables the funding of infrastructures and of public transportation.

Funding

Define diversified funding means which mobilize various actors: resources or loans from local communities, or funds from international source of credits, transportation system rate or a participation to users' travels, and crowdfunding.





TOOL

« Who pays what? »

In its Good practices manual for public transport funding guide manual, CODATU gives directions to find solutions to fund an urban transportation system relying on innovating experiences in both developing

and developed countries. This explicative document is a brainstorm basis meant to develop funding adapted to the needs and specificities of the targeted city.

www.codatu.org/?lang=en_us

Support new economic systems

Consider urban logistics at neighborhood level by fostering the presence of small-scale logistics hubs and re-think logistics spaces for neighborhood supply by acting directly on land and property management.



PROJECT

The international Chapelle logistics hotel in Paris

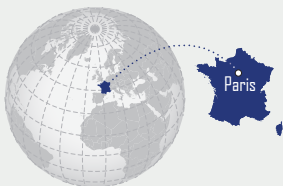
This project is a joint initiative of Sogaris, Paris City Council, Haropa, the Caisse des Dépôts, SNCF (French national railway company), Caisse d'Epargne bank, CIC bank, the Greater Paris region.

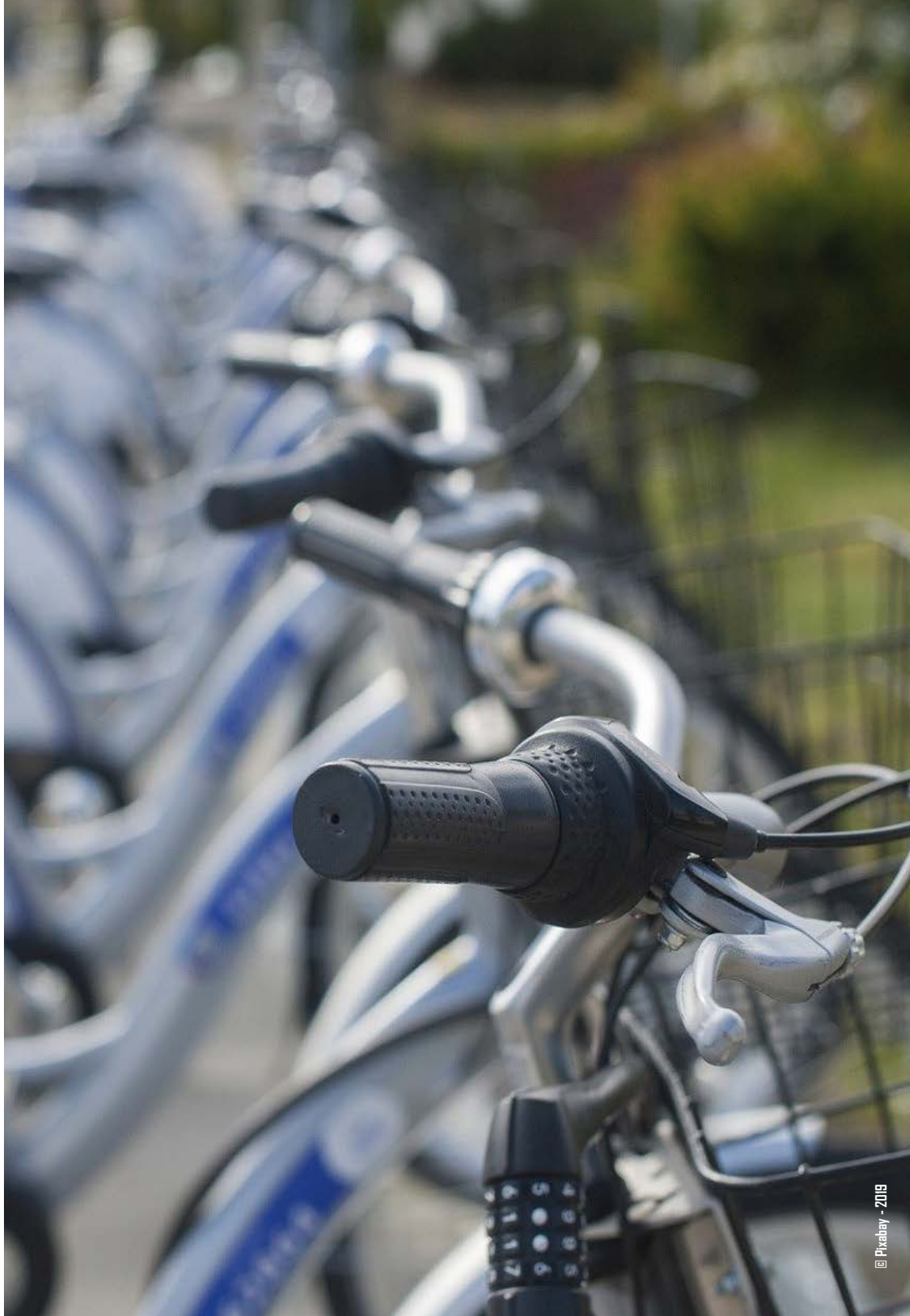
The project is a 35 000 m² ensemble that includes 10 000 m² intended for logistics use (up to 240 urban mobile boxes can be handled daily). It contains a datacenter of

which the energy will be used to heat up the future living units of the neighboring towers.

The project also includes a 5th façade of one hectare, managed by the Paris City Council, split between a wide space dedicated to urban farming, and sports fields. Farmers who will make use of the greenhouse of this 5th façade will be provided with a specifically assigned freight elevator meant to channel in the raw materials needed to grow crops and to channel out their own production.
(Paris - FRANCE)

www.chapelleinternational.sncf.com

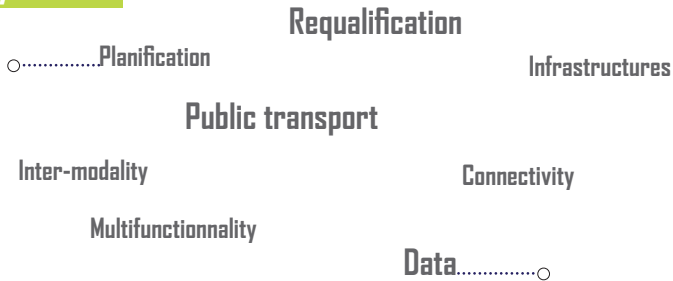






CONCLUSION

Key-words



Memo

Building a complex approach of mobility-related challenges

How will we move around tomorrow? Thinking about this question almost automatically calls out to the abundant imaginary about tomorrow's transportation means. Whether they will be flying, autonomous, connected and personalized and as revolutionary as we picture them, these new means feed the cities inhabitants' hopes to make their going around easier, quicker and more comfortable.

Today, urban spaces are the stage of this transformation process and of the reinvention of the transportation means. Not a day goes by without the promise being made that this most wanted

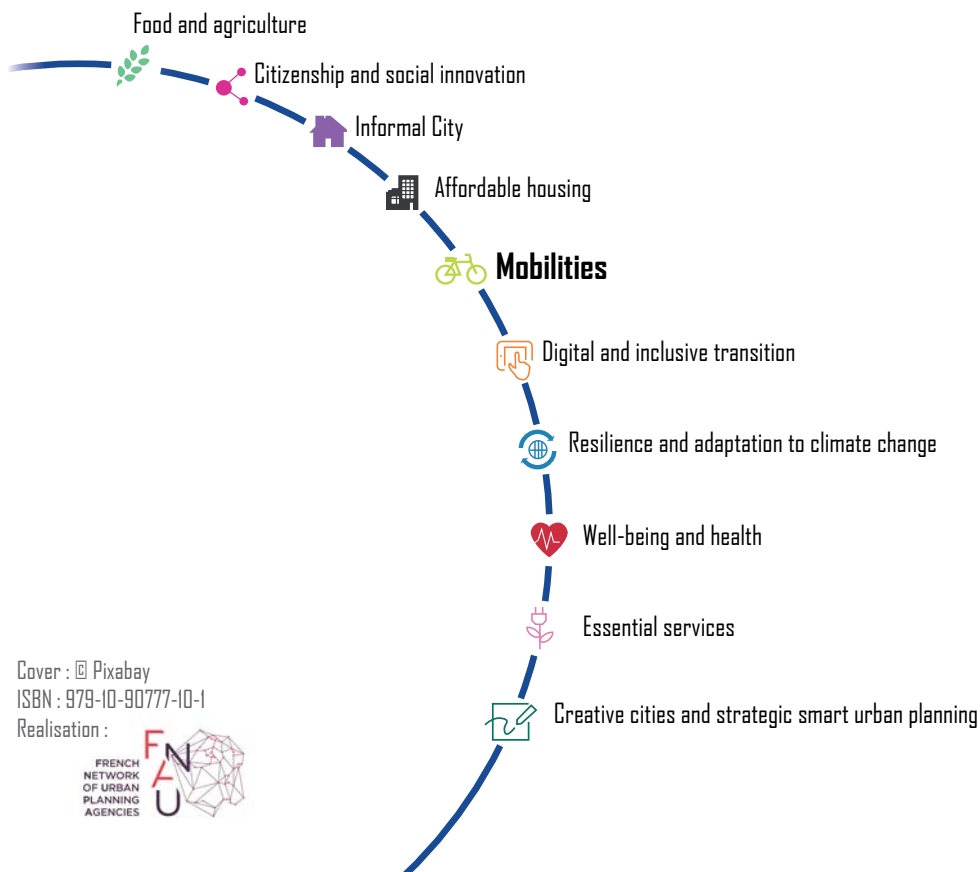
mobility revolution will happen soon. These innovations intend to answer the complex challenge of urban mobility.

Environmental, sanitary, economic, spatial, social: those challenges are multi-sided and complex. But let's be sure of one thing: to answer the diversity of these challenges, a miracle solution doesn't exist. This answer will have to be as complex as the issues themselves but the range of tools and solutions is wide. The adapted answer will imply a reflection on the means themselves, on the way we share information, on the organization and on the economic model of mobility.





Started in 2011, the **French partnership for cities and territories (PFVT – Partenariat Français pour la Ville et les Territoires)** is a platform meant for the exchange and valorization of the French urban actor's expertise at the international level. It is a multi-actor partnership headed by Hubert Julien-Laferrière, Member of Parliament, supported by the Ministry of Europe and of foreign affairs, the Ministry of territorial cohesion, the Ministry of the ecologic and fair transition, and the Ministry of culture. It brings together close to 200 organizations representing the diversity of the French expertise, contributing to the construction of a shared French vision based on a capitalization of exchanges and of innovative and sustainable experiences.



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Realisation :

