

MONTPELLIER MÉDITERRANÉE MÉTROPOLE

A TERRITORY FOR GROWTH

458,000
RESIDENTS
in the Montpellier
Méditerranée
area
(43% of whom are under
30 years of age)

72,000
STUDENTS
including 15% from abroad

#1
DEMOGRAPHIC
GROWTH
of all French metropolises

7th
LARGEST CITY
IN FRANCE
with 8,000 new
residents per year

#2
RANKED INCUBATOR
WORLDWIDE
UBI Global
2018 ranking

#1
RANKED IN ECOLOGY
WORLDWIDE
Shanghai Global
Ranking of Academic
Subjects 2018

OUR PUBLICATIONS



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MONTPELLIER SMART CITY



MONTPELLIER, THE #1 SMART CITY IN FRANCE AFTER PARIS

Montpellier Méditerranée Métropole plans and builds the digital and sustainable city every day by inventing its own Smart City project in cooperation with territorial stakeholders.

Recognized internationally as a driving force, Montpellier Méditerranée Métropole has been implementing and experimenting with the Smart City concept since 2011. Public authorities leverage their territorial expertise by focusing on cross-disciplinary aspects – enabled by the use of digital data – between often-compartmentalized urban services.

In partnership with companies, universities, research organizations and national operators, Montpellier Méditerranée Métropole is developing digital solutions to improve services and applications to the benefit of its users and citizens. A powerful springboard for elaborating public action to manage usage, digital technology must make it possible to provide citizens a better quality of life while accelerating energy, ecological, and demographic transitions and guaranteeing personal freedom.

The Smart City thus reinforces innovation momentum, notably with respect to adapting to climate change, and actively contributes to sustainable economic development for our territory.



Philippe Saurel
Mayor, City of Montpellier
President of Montpellier Méditerranée Métropole



Chantal Marion
Vice President of Montpellier Méditerranée Métropole
in charge of economic development, higher education and
research, innovation, French Tech, and artisan trades
Operational planning and urbanism

> 45
PROJECTS IN PROGRESS
currently being deployed
or under development

2,500
HECTARES
to experiment with Smart City
concepts in the "ÉcoCité" space

12
APPLICATION
FIELDS

habitat, health, energy, waste, mobility,
urban logistics, tourism, water, culture,
risk management, citizen engagement,
and social cohesion

40
HECTARES
in the Eurêka district to focus on
helping people age well

#1
SMART CITY AFTER PARIS

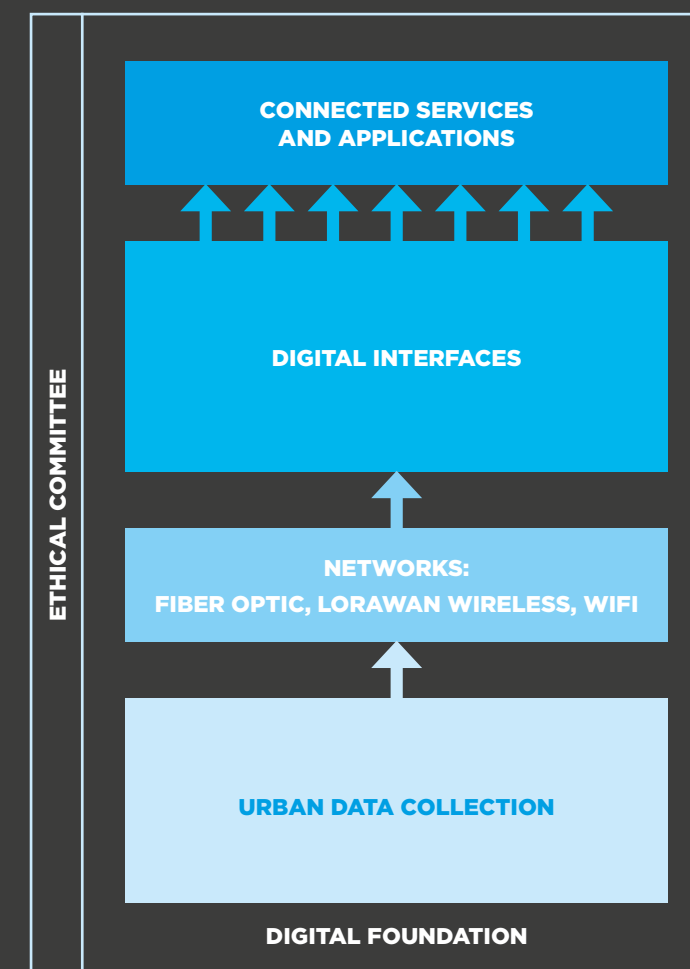
Source: Roland Berger consultancy, 2017

PHILIPPE SAUREL
MAYOR OF MONTPELLIER
PRESIDENT OF
GREATER MONTPELLIER



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SMART CITY STRUCTURE IN MONTPELLIER



MONTPELLIER #1 SMART CITY IN FRANCE AFTER PARIS*

Founding principles of the Smart City:

- ◆ Public policy revolving around urban data
- ◆ Building partnerships and collaboration
- ◆ Non-proprietary, open, and interoperable urban ICT platform
- ◆ Encouraging public participation
- ◆ Agile horizontal organizational process

* "French-style Smart Cities", Roland Berger consultancy, August 2017

FAVORABLE ENVIRONMENT FOR ALL TYPES OF INNOVATION

Favorable for the emergence of structural projects related to the main aspects of urban life, the environment benefiting from the Smart City program in Montpellier includes **five key components**:

- ◆ **Major development initiatives** offering a living laboratory within the scope of the ÉcoCité project and in pilot sectors such as the Mantilla city block and Eurêka district.

- ◆ **Innovative services for users and citizens**, including Emma, "Ville en alerte" (*City on Alert*), and Fabre and the City.
- ◆ **High-capacity IoT infrastructure**, including the LoRaWAN wireless network and WonderWare platform.

- ◆ **Mechanisms to support and boost technological projects**, including "Challenge Numérique" (*Digital Challenge*) in association with the Aerospace Valley Competitiveness Cluster and Toulouse Métropole.

- ◆ **Innovative research projects: Montpellier France Health Hub, HUT (HUMAN at home projecT), and more.**

MODERNIZED PUBLIC ACTION

Advances in the connected city pave the way for **continued progress regarding services provided to residents**. With a **community platform for shared remote services**, all residents already benefit from their own **user account** to connect to the e-administration and access a variety of electronic services, including those offered by local multimedia libraries and conservatories. People can also use their account to pay bills online, notably for water services at this time, and much more coming soon. **In connection with France's digital identity system, France Connect**, expanding this functionality is one of the roadmap priorities for the Montpellier Méditerranée Métropole Smart City project.

Fostering digital inclusion

Led by the Montpellier CCAS (Center for Communal Social Action), with a friendly and adapted reception space, the **Center for Experimentation and Social Innovation** leverages digital tools to support inclusion. Its offering includes **four mechanisms, including: Vill@ges Connectés** to help people with their online tasks; **Unis'Vers** to actively assist job seekers; a **budgetary independence test platform** with advice about micro-credit and debt reduction solutions; and a **health platform** with group workshops on preventive and proactive health care.

Protecting civic ethics

Raising questions concerning the **respect for privacy and personal liberties**, the emergence of a smart city, as well as all the applications involved with its progression, leads to a vast field of discussion that is only partially technological and requires a greater level of investment by all users of new services. The **Smart City Ethical Committee** makes sense in this context, providing essential insight into encountered issues – with its role bring to help territorial stakeholders make informed choices and objectively examine public authorities' involvement within the scope of the digital city.

DATA

Data, the key resource for the Smart City: the Smart City leverages well-structured public policy regarding urban data with the goal both to provide a driver for economic aspects and to pursue transparent and modern public action.

1,015 data sets covering **13 themes**: Environment, health, economy, tourism and heritage, city planning, equipment, transport, sports, culture, finance and administration, citizenship.

Leveraging data to observe the territory

For monitoring public policy related to territorial development, urban management, transportation, climate, agriculture, and resource management, Montpellier Méditerranée Métropole works with CNES INSPACE to operate spatial solutions that supply our Geographical Information Systems with georeferenced data.

Linked with historical and land registry data, the system makes it possible to view urban development, construction

sites, compliance with land-use laws, crop management, and respect for the environment, as well as to detect major changes.

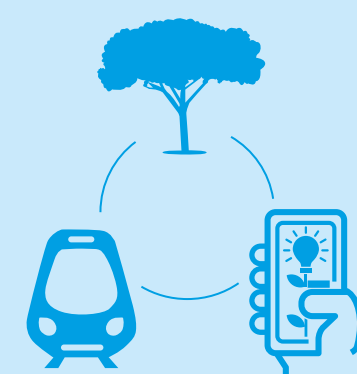
Developed with support from research centers and startups associated with Booster NOVA and ESA BIC Sud de France, the possibilities are astonishing.

SOLID DIGITAL FOUNDATION

Above, what makes the Montpellier Smart City approach different is the implementation of a **high-capacity digital framework** able to collect and present all types of data from a variety of different managed urban areas, in particular data provided by all the smart objects connected to the metropolitan LoRaWAN wireless network.

It is also a supervision tool that provides a global view of incoming data and subsequent processing, thus serving as a real-world observatory.

An open Big Data database collects, aggregates, and redistributes information daily for unlimited urban uses, such as measuring and evaluating air quality, managing waste, predicting and preventing flood risks, optimizing energy consumption in buildings, detecting available parking spaces, managing street traffic, and geolocating self-service bicycles.



Better energy management with the Mantilla city block

Covering an area of 33,000 m² in Montpellier's Port Marianne – Jacques Coeur district, the Mantilla city block implements a data exchange system that enables residents to individually manage their energy consumption to reduce their bill. The system also makes it easier to manage the block's energy supply, provided by an environmentally friendly wood-based power plant that produces heat, cooling, and electricity.

Mantilla partners: Montpellier Méditerranée Métropole, City of Montpellier, SERM, ÉcoCité, Programme d'Investissement d'Avenir, Caisse des Dépôts et Consignations, ACM, Betso, E3D Environnement, METEnergie, Pragma, Sogeprom, Bouygues Immobilier.



TaM application – simplifying public transportation

Available on the App Store and Google Play platforms, the mobile application for users of transport and parking solutions handled by TaM (the Montpellier Transport Authority) also facilitates travel around the metropolitan area, with 35,000 tickets loaded and 18,000 visitors per day.

TaM app partners: Montpellier Méditerranée Métropole, L'Europe s'engage en Région, Région Occitanie, ÉcoCité, Investments for the Future Program, Caisse des Dépôts et Consignations, City of Montpellier, TaM, Transdev



Emma, making it easier to get around

Emma is a multimodal solution that uses a single subscription card to access various transportation services, including tramway, bus, parking lots, 'Vélomagg' self-services bikes, and car sharing solutions. Operational and modular, the application informs people in real-time when the next tramway will arrive, helps them locate available parking, and more.

EMMA partners: Montpellier Méditerranée Métropole, L'Europe s'engage en Région, Région Occitanie, ÉcoCité, Investments for the Future Program, Caisse des Dépôts et Consignations, City of Montpellier, TaM, Transdev

"Ville en Alerte" (City on Alert) – for better management of storm and flood risks

The Montpellier Méditerranée Métropole area is confronted with various water-related hazards, including flooding waterways, urban runoff, and coastal flooding. To cope with these hazards, the "Ville en Alerte" city alert system cross-matches data from different sources, integrating weather forecasts, risk maps predicting affected areas, flood monitoring, real-time data transmission, storage, and processing. It serves as a collaboration tool between crisis management stakeholders to reinforce support provided by Predict Services to the 31 cities in the Montpellier Mediterranean Metropolitan area.

Ville en Alerte partners: the Egis-Eau/Synapse association, with support from Ceneau and Comatis.



"Captez l'air du temps" – collecting ambient temperature and humidity data in real-time

Innovative environment sensors are being tested at metropolitan bus and tramway stops, using a passive low-cost device with contactless RFID technology to measure temperature and humidity in the urban environment. The devices do not require a power supply, as the tiny amount of energy needed to read data is provided by the smartphone



of the person using the service. The data collected by the application is displayed instantaneously. The same application anonymizes the data and pushes it to the Cloud. Montpellier Méditerranée Métropole thus benefits from accurate real-time mapping of several environment parameters.



Eco-solidarity and an intergenerational focus with Eurêka / My Eurêka

In the Eurêka pilot district, with its mixed vocation and focus on positive energy in Castelnau le Lez on Montpellier's east side, experimentation with the My Eurêka platform seeks to make daily activities easier for people, in particular for seniors and people with reduced mobility, by leveraging digital innovations to help everyone live together and grow older under the best possible conditions.

Eurêka/My Eurêka partners: Montpellier Méditerranée Métropole, SERM, ENGIE, CCAS de Castelnau-le-Lez.