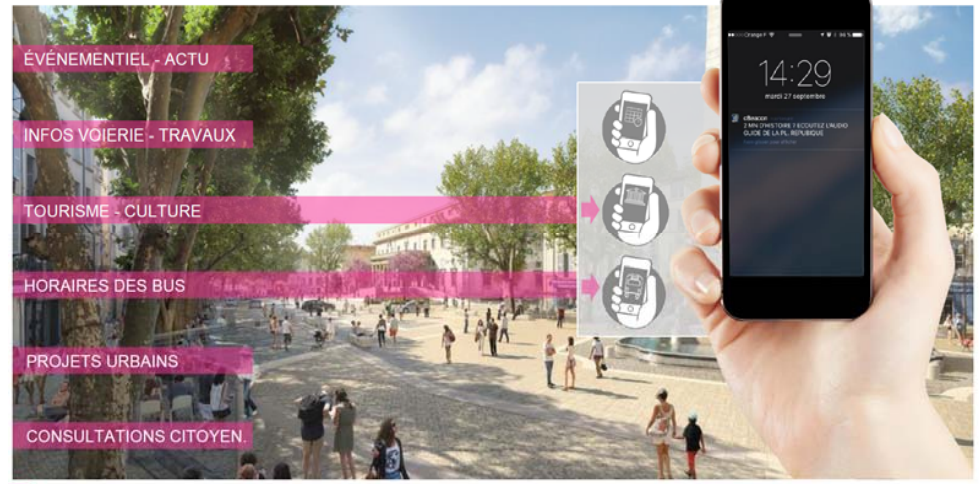




Aix Living Places

Connected places



A unique project to draw future's places with a demonstrator (Living Lab) in the historic center and capitalizing on the existing smart city equipment; public network wifi, mobile applications, network beacons, digital totems,





Strategy / Aims / Ecosystem



For AIX-EN-PROVENCE CITY :

- This smartcity project was started two years ago. The aim of this project is to create the future's place around the courthouse as one of the most connected and high tech places in the world in 2019. This experiment will be based on using all existing digital realisations : AIXMAVILLE mobile applications, Wi-Fi network, fiber optic network, digital totems, In order to Optimize maintenance and services, improve residents' quality of life (less pollution, less stress, etc.). a showcase for innovation and sustainable development.
- It aims at making the city more pleasant, more fluid and more attractive in differents domains like cultural, sporting and social in order to manage the population growth, the highways saturation and pollution in the city center in the future years.
- It uses a set of outdoor sensors connected with Lora technology to optimize the existing equipment of the city for the four existing places (City Hall, Cardeurs, les Allées and Richelme).

We have planned seven cases grouped in three themes (improve city functioning, better quality of life, pedestrian city) - the seven cases are :

- Intelligent lighting (to regulate street lighting with the presence of a passer-by),
- Reduce pollution
- Reduce noise pollution
- Stabilize city temperature
- urbain logistic
- City cleanliness
- pedestrian flux

- New services for smartphone users, wifi application with beacon alerts and interactive totems. We can see on totems the historical city timelife. This project will help the city to implement a multi-services platform to improve energy consumption, optimize public spendings and collect data to make it accessible on the city open data platform and answer to legal regulations.





Strategy / Aims / Ecosystem



For Cisco (Infra) / VINCI Energies (Axians) / Jaguar Network (Data center) / Bittle (big data–Open data) :



- Demonstrate how communication networks and data analysis can improve the quality and the management of city services.
- Tools for communication on experimentation.










• For thecamp :

- Provide a playground for startups, partners, citizens, ... Evaluate the impact and utility of new technologies and citizens quality of life and provide support for decisions and planning public health policies.

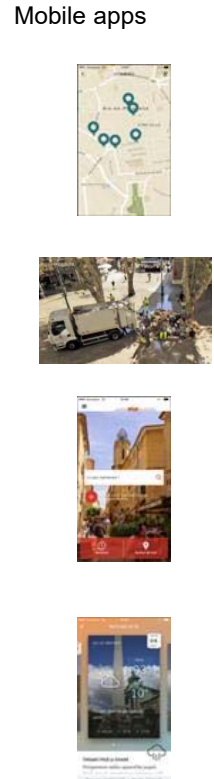
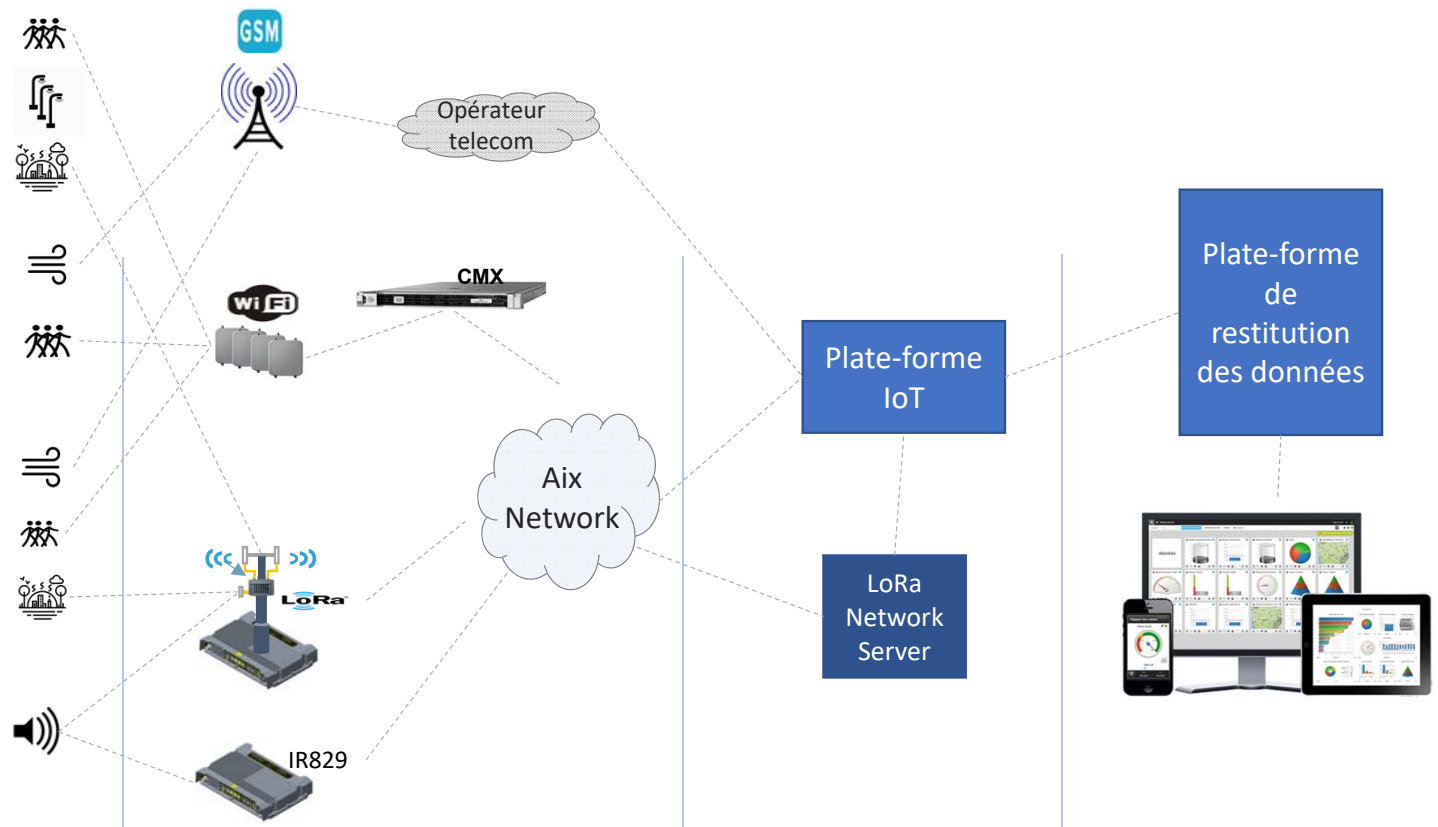
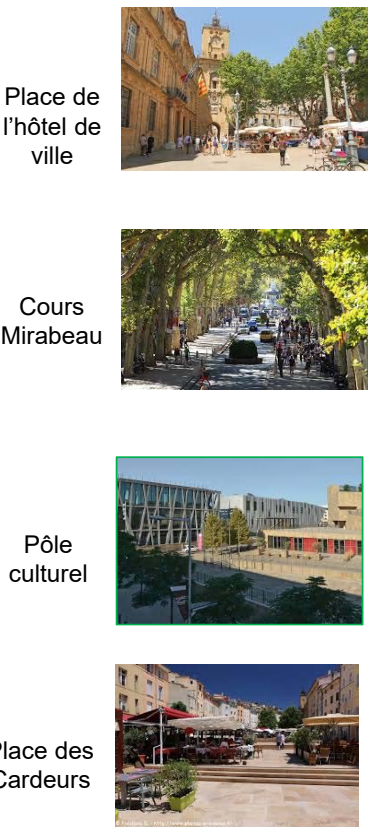
• Other partners working on the project with the city :



8 use cases – Aix Living Places

Theme	Aims	Services involved	Solution Partners	Places	
<p>Improve the functioning of the city</p>    	<p>1. measure pedestrian flux</p> <ul style="list-style-type: none"> Evaluate the impact of pedestrianization in the city center Identify people's gatherings Fluidify flows by acting on traffic lights Understand the decline in business activity (attendance diagnosis + analysis of causes) 	<ul style="list-style-type: none"> Trade Direction PC Circulation PC Security SEMEPA 	<ul style="list-style-type: none"> CISCO 	<ul style="list-style-type: none"> Cours Mirabeau Place de la Mairie Pôle culturel 	
	<p>2. Intelligent lighting</p> <ul style="list-style-type: none"> Optimize street lighting and reduce energy costs Improve the comfort and safety of the citizens 	<ul style="list-style-type: none"> Environment Direction Infrastructure Direction 	<ul style="list-style-type: none"> ComNetwork 	<ul style="list-style-type: none"> Place de la Mairie 	
	<p>3. Intelligent watering</p> <ul style="list-style-type: none"> Optimize the watering on the places Establishment of intelligent irrigation network 	<ul style="list-style-type: none"> Green spaces Direction Cleaning Direction 	<ul style="list-style-type: none"> Rain Bird 	<ul style="list-style-type: none"> Place Richelme BHNS 	
	<p>4 connected bins</p>	<ul style="list-style-type: none"> Know in real time the filling of bins 	<ul style="list-style-type: none"> Mission user Relationship Cleaning Direction 	<ul style="list-style-type: none"> Mios 	<ul style="list-style-type: none"> Place de la Mairie
	<p>5. Urban logistics</p>	<ul style="list-style-type: none"> Optimization goods transport 	<ul style="list-style-type: none"> Environment Direction 	<ul style="list-style-type: none"> La poste 	<ul style="list-style-type: none"> Centre ville
<p>Improve quality of life</p>   	<p>6. Mesure noise pollution</p> <ul style="list-style-type: none"> Improve the measurement of air quality by strengthening the device already implemented by AirPACA Analyze / moderate data by involving health experts Identify the sources of pollution. Inform / give advice to citizens 	<ul style="list-style-type: none"> Environment Direction Public Health Direction Aix's hospital 	<ul style="list-style-type: none"> TERA AirPACA Netsystem Digital 	<ul style="list-style-type: none"> Place de la mairie Cours Mirabeau Pôle culturel Place d'art 	
	<p>7. Mesure noise</p> <ul style="list-style-type: none"> Measure noise in the noisiest places in the city Inform / alert when thresholds are exceeded Improve the comfort of citizens 	<ul style="list-style-type: none"> Police municipale Direction santé publique GEP 	<ul style="list-style-type: none"> Jaguar Network acouicité 	<ul style="list-style-type: none"> Place des cardeurs 	
	<p>8. Stabilize city temperature</p> <ul style="list-style-type: none"> Identify heat islands and identify the causes Take steps to combat heat islands 	<ul style="list-style-type: none"> Environment Direction 	<ul style="list-style-type: none"> AMU 	<ul style="list-style-type: none"> Place de la Mairie Pôle culturel 	

Experimental infrastructure



Macro planning of projet

PHASE 1

May 2017 → November 2019

Establishment of the technical base of experimentation and the first 7 cases

Definition of use cases /
scope of
experimentation

Specification of use cases

Specification data's
flux

Specification data's
visualize

Installing / Configuring the IoT
Infrastructure

Installing Network server +
Cloud for data storage

Render and Integration Engine
Installation

Sensor installation

Datavisualization
platform implementation

PHASE 2

End 2017 → End 2019

Use of collected data to provide solutions to problems raised by the city
and its population

A living lab will be set up at the Méjanes library to:
Share, explain the experience in the city of Aix and Collect
ideas, opinions, comments on the project.

Find innovating start-up to develop the project and find
solution to future problems

Organize a hakathon to find new useful services for the
citizens

An existing study on the behaviour of bees in connected
hives allowing to see the quality of environment, example :
air quality

Expected benefits : Citizens are at the heart of the experience

CONCLUSION :

- A living lab will be set up at the Méjanes library to share, explain the experience in the city of Aix and Collect ideas, opinions and comments on the project.
- This space will be composed of a digital interactive table offering: A 3D digital map of the city of Aix showing the measured data.



The open-air 'Living Lab' experiment will allow the city to create an open multiservices, multi-purposes, multi-sensors, multi-protocol communication platform and answers various challenges:

- Gather as much information as possible for city's services : heritage, urbanism, infrastructure, transport, green spaces, environment, public health, ...
- Create new use cases without creating a new technical infrastructure
- It's possible to integrate existing sensors such as Wi-Fi terminals in the city, or a network of cameras already established
- To make an easy implementation for service (pedestrian flow optimization and create trade observatory, assistance to the pedestrian policy of the city center, management parking control, clean-up strategy, mapping of city temperature, ...), and for citizens (hotspot connections, geolocated informations and services, ...)

Possibility to duplicate this project for the new place that will be born and become the largest square in Aix-en-Provence by spring 2019, or can be used in other cities of the world.

