



**EUROPEAN UNION**



# EU MISSIONS

**CLIMATE-NEUTRAL & SMART CITIES**



## ANGERS LOIRE METROPOLE

European Week of Regions and Cities side event  
Delivering 100 Smart and Climate Neutral Cities by 2030

17-10-2022

#EUmissions #HorizonEU #MissionCities





# GREEN TRANSITION AT THE HEART OF ANGERS LOIRE METROPOLE



- ❑ 29 municipalities
- ❑ 290 000 inhabitants
- ❑ 43 000 students

**Voted best place to live in France, 2019**

**The greenest city in France, 2020**



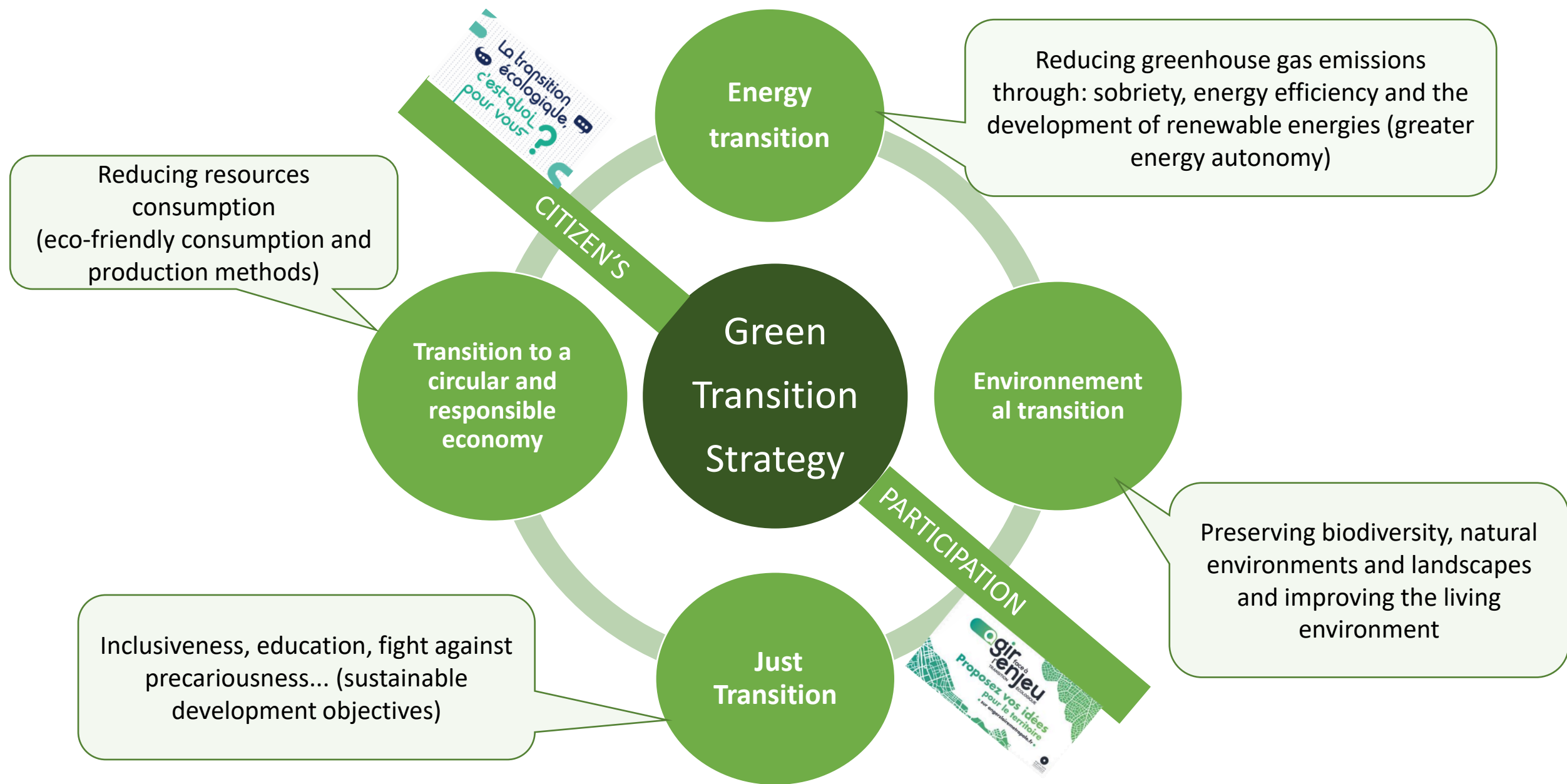
**Observatoire des villes vertes**



**Convention des Maires pour le Climat et l'Énergie**

**Cit'ergie**  
European Energy Award®

# An ambitious strategy to become a climate neutral and smart city :





# Declined into an ambitious action plan and concrete actions...



## Improving sobriety and efficiency in the built heritage

**Buildings renovation:** urban renewal of 2 neighborhoods (2700 homes); **Platform 'Mieux chez Moi'** (advice and financing offer); **30 000 street lights renovated** (-66% of consumption) ; **Energy master plan for public buildings** (2.4 M€ / year)...



## Sober transportation, using new energies and alternative mobility offer

**2 new tramway lines in 2022** (10 km of new tracks for more than 100 000 inhabitants); **Green vehicle fleet** (130 electric vehicles); **public network buses running on biogas** ; **Cycling Master plan** (250 km to be created); **Green loops, lowering speed limits** (30 km maximum), **a low-emission city center by 2025...**



## Accelerate the development of renewable energies

**Photovoltaic solar power stations** , **biogas production at the wastewater treatment plant** (€1.8 million/year in revenue reinvested in ecological projects), **waste-to-energy conversion** (50,000 tonnes/year); **4 public heating networks** (69 km network, 16,000 households heated, **72% renewable energy** (wood))



## Urban planning

**A reviewed Local Urbanism Plan:** net zero artificialization objective; exemplary urban renewal operations...



## Adaptation to climate change

**A climate adaptation plan:** resilience of environment, essential resources and infrastructure; preserve natural ecosystems, basic production (agricultural and water) and ensure the resilience of individuals and communities

...and with the help of an ambitious smart territory project:

## Angers Loire Métropole SMART TERRITORY

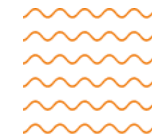
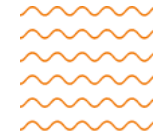




# ANGERS, CAPITAL OF PLANTS

Végépolys-Valley  
Global competitiveness  
cluster

Campus du végétal  
France's leading centre  
for training, research and  
innovation



**OCVV**

Office Communautaire des Variétés Végétales



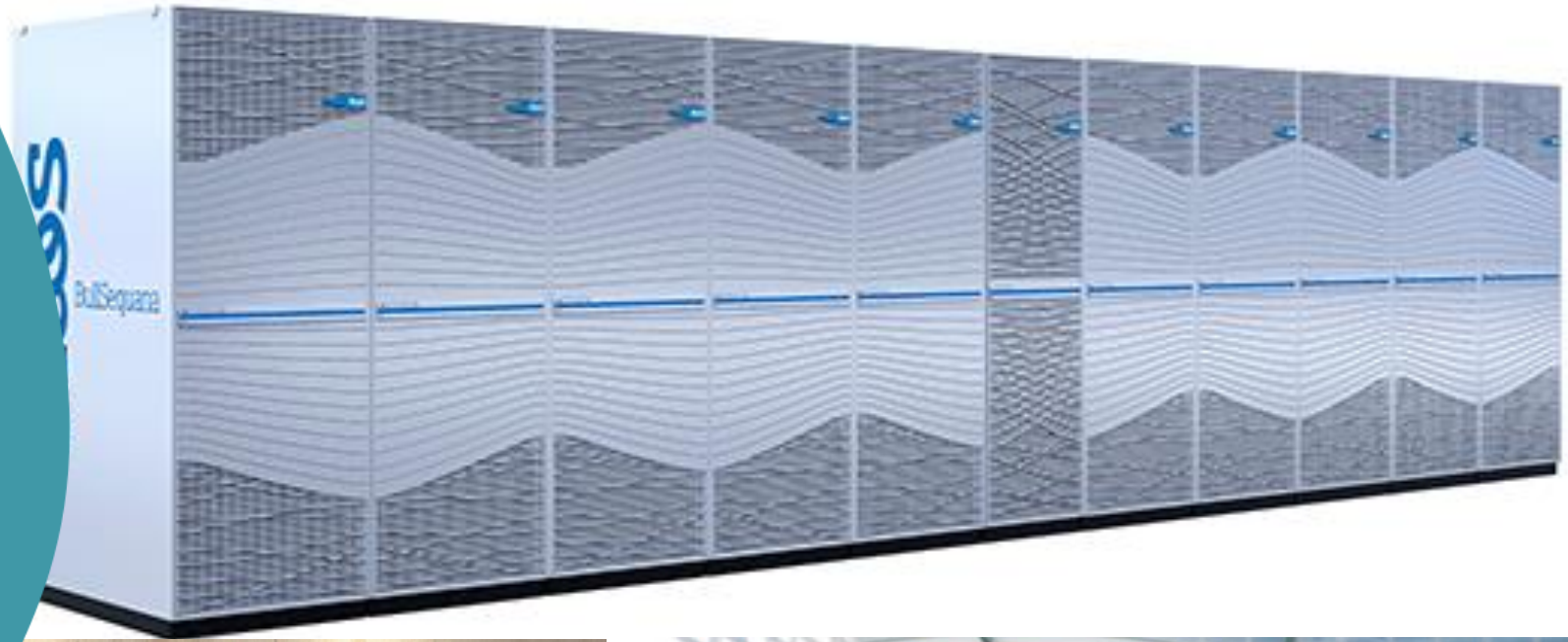


# ANGERS, ELECTRONIC CAPITAL

Technocampus  
We-Network

Angers French Tech  
ecosystem

IoT at SmartWorld







# HOW TO REMAIN THE BEST PLACE TO LIVE FOR TOMORROW?

- >Environmental emergency
- >Public finance constraints
- >Link between public services and service users to be reinvented







# SMART CITY

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Accelerating our  
Ecological  
Transition



## Three objectives:



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Save resources by relying  
on technological  
innovations



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Innovate together in  
order to propose  
new services to  
inhabitants



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Lead better  
to anticipate  
better

# OUR SMART CITY PROJECT

« Investing today for tomorrow »



## Investment of 178M€ over 12 years

- Binding part: €121.2 M excluding tax
- Optional parts: €22.8 M excluding tax
- Order scenario: €34.0 M excluding tax



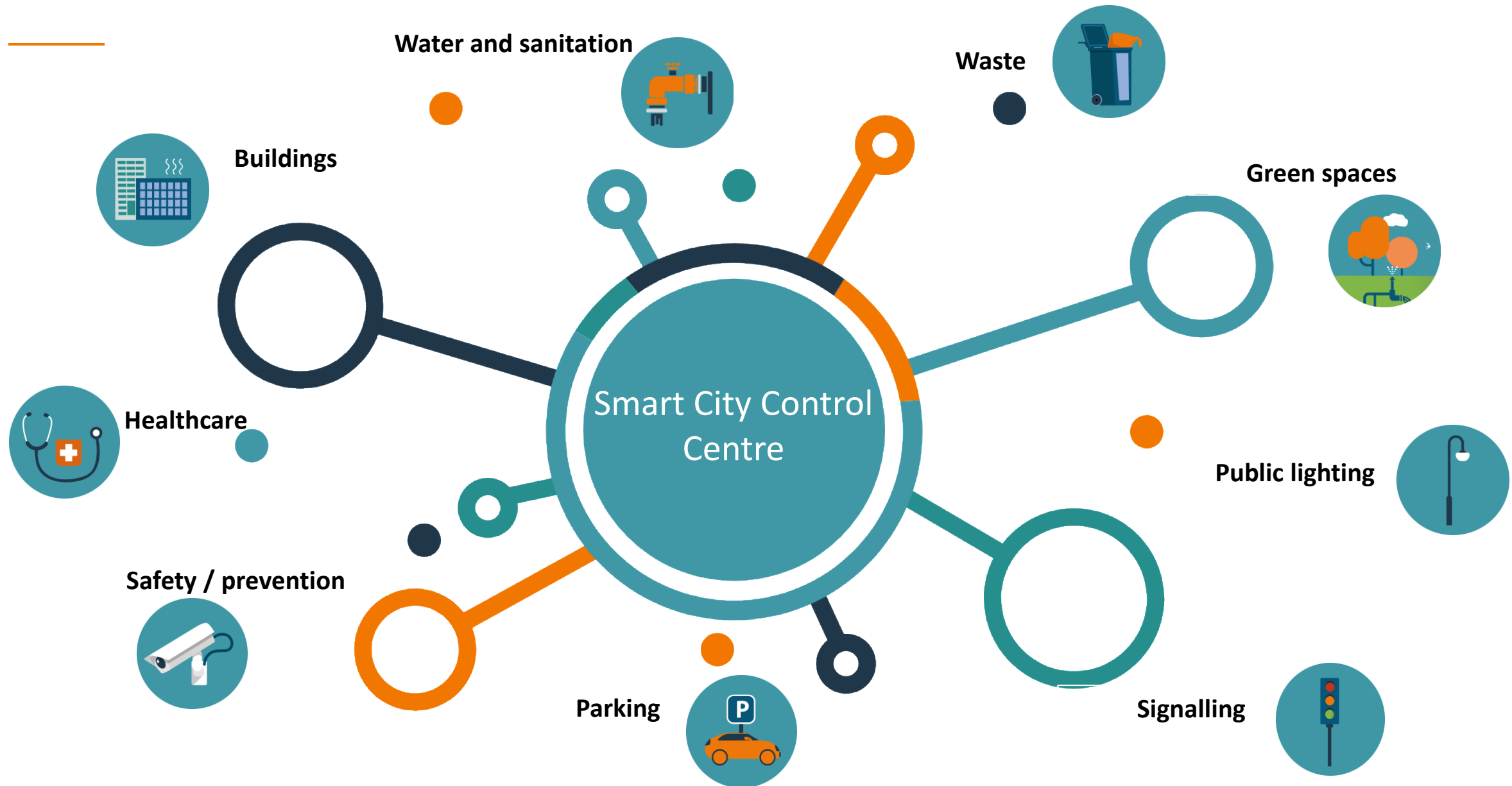
## Projection of €100M savings over 25 years

- Renovation of public park lighting and optimisation of use
- Thermal renovation and better use of buildings
- Smart watering systems in green spaces
- Etc.





# A 360°LOOK INTO A UNIQUE PROJECT



# A project at the heart of the transformations

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Ecological  
Transition

**Smart City  
Global Performance  
Contract**

Economic and  
attractiveness  
development

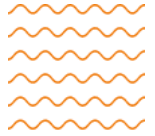
Digital User  
Relationship



«A real internal  
transformation of  
our organization  
beyond a  
technological  
revolution»



# OUR SMART CITY PROJECT



## Aim

Reduce buildings energy use

Reduce water use in parks and gardens

Reduce public lighting use

Reduce the carbon footprint of departments

Optimise travel

## Methods

3500 water, electricity and gas sensors

Smart watering control thanks to 400 soil humidity sensors

30 000 LED light points and 3600 presence sensors

Optimise waste collection rounds

Analysis of traffic flow on 132 intersections

## Benefits

20% less energy use

30% less water use

66% less electricity use

10% savings on travel

A public space that is shared better

# OUR SMART CITY PROJECT

## THE TOOLS OF A SMART CITY



### Digital Platform

● A **Hypervisor connected to business supervisors**, based on a **data platform** which allows **services** to be displayed in order to encourage the development of **innovative uses**

### Control Centre

○ A **place**, an **organisation**, tools to **act and react** throughout the whole territory in connection with all the departments, but also to **measure and analyse** in order to improve

### Digital twin

● A **3D model** of the territory which is both a **data repository** and a **tool to help with decision making**

### The Forum

Place of **creation** and **influence** bringing together:  
Le Café Territoire  
Le City Store  
La Fabrique Numérique  
Le Centre d'Echanges International