

The European Commission's  
**INTELLIGENT CITIES  
CHALLENGE**

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# Issy-les-Moulineaux: Intelligent City Transformation Overview

ICC Final Deliverable



## Executive summary

The city has grown significantly since its innovative and audacious beginnings. There was a 30% increase in the population. The city has chosen to put Digital at its heart, modernizing the public services for the citizens as well as the inner agents working everyday for the city. Schools have all been digitalised as well, with interactive videoprojectors, computers in the classes, web radios and tv projects.

Today a new environmental direction has been created challenging the urban city assets, its digital DNA and the energy consumption. A new dashboard has been created to look into the CO2 emissions of the city and showcase the different accomplishments made to reduce these consumptions.

Today the city needs to embrace digital, efficiency and energy. New energy and financial challenges arise and there is a need to be even more agile to overcome them.

In the following years, new energy projects are coming up, related to consumption but also to the ecogestes, intended to the people themselves, whether they are agents or citizens. We are all involved.

# The city of Issy-les-Moulineaux pursued an EU-supported transformation over four main stages, and this document details that journey by these sections

Overview to the city's journey and structure of this document



## 1 Preparation & assessment

5 months:  
September 2020 – January 2021



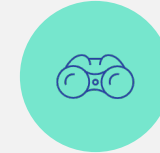
## 2 Ambition & roadmap

3 months:  
February 2021 – April 2021



## 3 Implementation

15 months  
May 2021 – July 2022



## 4 Review & way forward

2 months  
August 2022 – September 2022

*Reported as  
one section*

### Summary

Find out **where a city is, where it should go** and who in the ecosystem is going to **mobilise make things happen**

Develop a **concrete plan** to achieve **measured improvements**, collaborating with the community; push action with immediate benefits

Get “big moves” **done** and **see results**; take **action in partnership** with others

Measure success, and commit to **keep connections and improvements going**

Section

# 1

September 2020 to January  
2021

## Issy-les-Moulineaux : Preparation and assessment

ICC transformation



# Introduction



**69 277**  
Inhabitants in 2020



**45,9 €**  
Average debt per capita



**22,5 tons**  
Of food collection in 2019



**10 663**  
Students in public and private school in 2019



**13,5 days**  
To obtain a title (ID, Passeport) in 2019



**63,7%**  
Of food component in public canteens in 2019



**24,1%**  
Social housing in 2019



**6 622**  
Subscription to Issy sport association



**16 047**  
Subscribers to the city social media

See more Issy data on the city portal : <https://data.issy.com/pages/tableaux-de-bord-issy/>

# City needs: State of the city overview

## Ecosystem

72.000 jobs (60% in ICT)

About 150 ICT companies

About 180 companies with more 25 employees

7% of unemployment

100% of schools with FTTH

95% of buildings with FTTH

100% of the City with FTTH

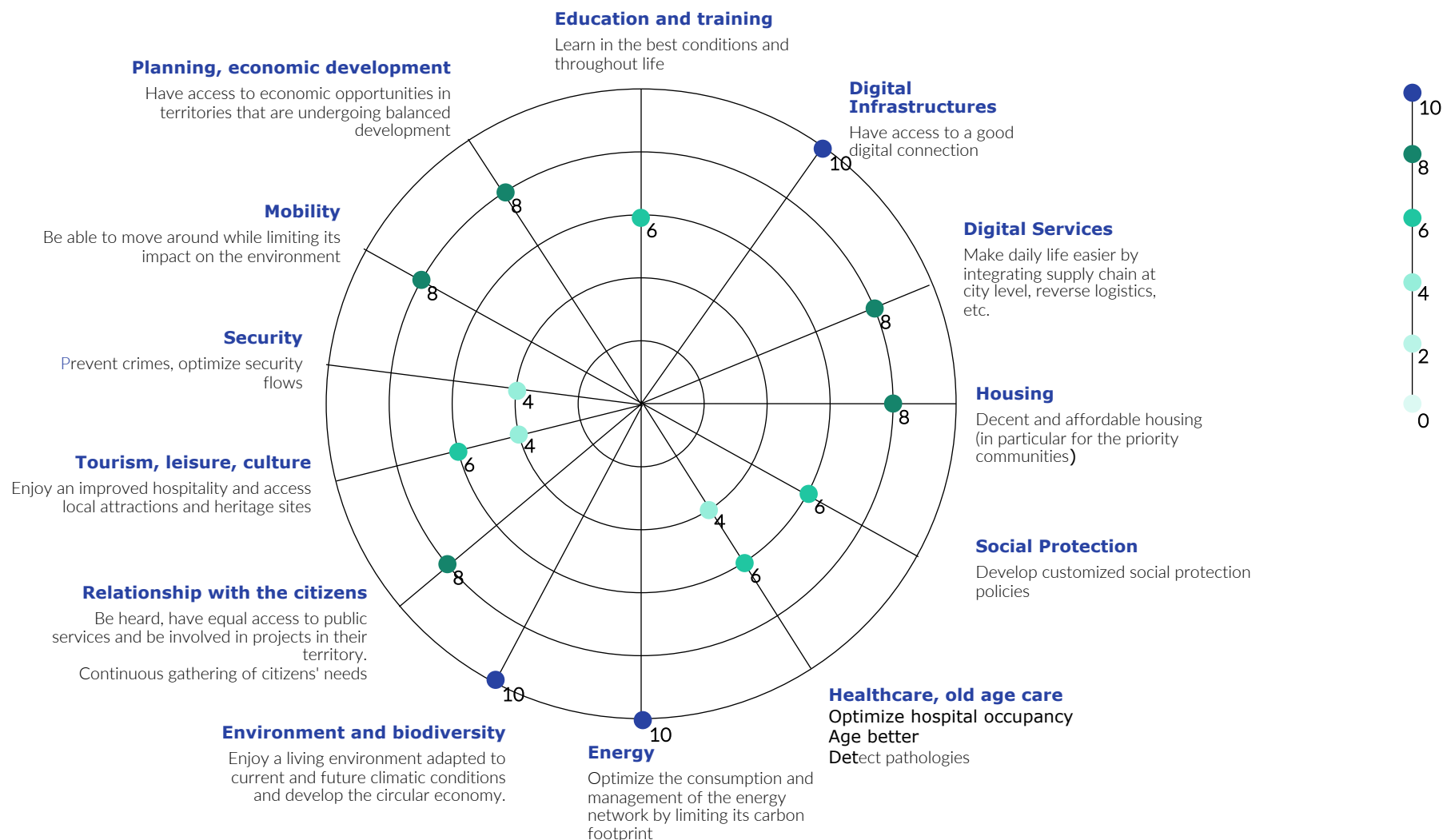
The City of Issy-les-Moulineaux has various main assets:

- a clear vision of the city of tomorrow from the mayor, André Santini, who has been elected since 1980 and who has just been re-elected with 60% of the votes in the first round of the municipal elections on 15 March 2020 for a new 6-year term;
- a recognized vision: André Santini was awarded in 2009 the "Visionary of the Year" trophy by Intelligent Community Forum (ICF) in New York;
- a shared vision: Issy-les-Moulineaux has been involved in several European projects over the last twenty years on digital city topics (open data, big data, 5G, Li-Fi, smart mobility, culture 2.0, etc).
- a dynamic and specialized ecosystem with about 150 IT/Media companies (Microsoft, Cisco, Capgemini, Orange, etc) and start-ups carrying the French Tech flag; More than 50% of jobs in the city are in the digital sector.
- An ongoing open innovation strategy with the settlement of public-private consortia with local companies and some of the main French clusters. The most important recent examples are the IssyGrid and So Mobility projects.
- A high-level presence and collaboration with Academia, as Issy hosts a "Grande école", notably ISEP (Institut Supérieur d'Electronique de Paris), leading digital engineering school in France, which has a close partnership with Stanford University to host various Stanford interns every year.
- A long-term strategy to host important projects on last-generation connectivity, such as 5G, smartgrids, Li-Fi, 100% FTTH, public wifi in all the city's public establishments, etc.

# City Ecosystem

ACCORHOTELS	AMADEUS France	AXYUS
BNP PARIBAS REAL ESTATE	BOUYGUES IMMOBILIER	CANAL+
CAP GEMINI France	CEGOS	CISCO France
COCA-COLA SERVICES France	COLAS	CONIX
CPM FRANCE	ELSEVIER MASSON	EDENRED
EUROSPORT	EUTELSAT	EXTERION MEDIA (CBS OUTDOOR)
FRANCE MEDIA MONDE	FRANCE TELEVISION NUMERIQUE	GEOPOST
GLOBECAST FRANCE	GROUPE LA POSTE	ICADE
IDNOMIC	JANSSEN	JOHNSON & JOHNSON
LEYTON	MARIE CLAIRE	MEDIA TRANSPORTS
MEDIAMEETING	MICROSOFT France	NAGRA France
ORANGE	OXYA FRANCE	SAFRAN
SEQENS	SERVICE NOW	SIERRA WIRELESS
SODEXO	SOFTBANK ROBOTICS EUROPE	TINUBU SQUARE
TRANSDEV	VIDAL	WITHINGS
WOJO	YVES ROCHER	ZAMBON FRANCE

# ICC strategy: Needs assessment



# ICC strategy: Vision and ambition statements

## An intelligent and sustainable city

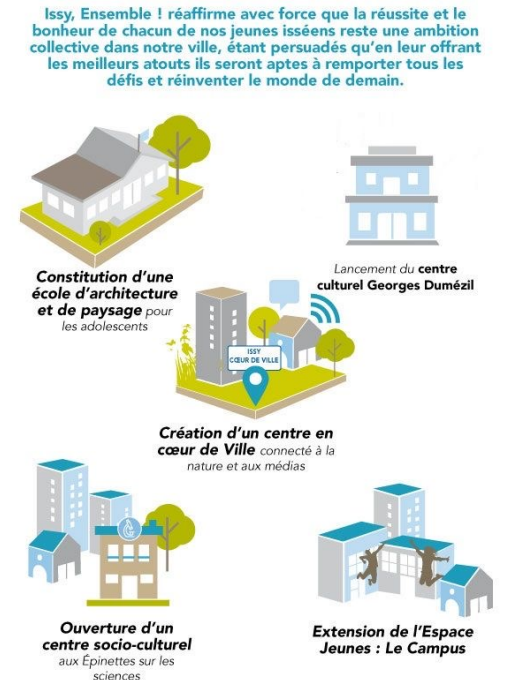
1. Pursue the ecological transition: use of renewable or non-polluting energy sources (geothermal energy, wastewater heat recovery, hydrogen, etc.) for heating, implementation of a district cooling network to replace the air conditioning systems used by businesses, switch the municipal fleet to 100% electric power, energy renovation of municipal buildings.
2. Developing soft mobility: adoption of a vast bicycle plan; development of terminals accessible to all electric vehicles, development of shared spaces and a network of river shuttles.
3. Extend line 12 to Sainte-Lucie - Meudon.
4. Adopt a "CO<sup>2</sup> Budget" each year, voted on by the municipal council, to monitor the evolution of the City's greenhouse gas reduction objectives.
5. Protecting nature and strengthening biodiversity: planting of 6,000 additional trees, increased greening of schoolyards, facades and roofs, creation of urban freshness islands, creation of a competition for flowering balconies.
6. Generalise the use of organic food in school restaurants and establishments for the elderly to ensure healthier food for all.



# ICC strategy: Vision and ambition statements

## A participatory and citizen-oriented city

7. Involve all citizens more and more in local life, via the Council bodies and all local associations, encourage participatory urban planning, and involve citizens in participatory budgets.
8. Launch a "Live the Games" operation: thanks to the "Land of Games" label for the Olympic and Paralympic Games, where every citizen, at any age, will be able to get involved in the event and (re)acquire a taste for sports.
9. Open up the city's major events to the public by inviting them to contribute to them and put them into action, like the Rues des Enfants and the "Rues pour tous", which will be extended as part of the neighbourhood activities.
10. To give our young people the means to open up to the world and to European citizenship, by further reinforcing school support in foreign languages, bilingual schools and trips to our twinned towns, and by creating a platform for "Internships, work experience and jobs for young people" in partnership with the City's companies.
11. Make the City's data even more accessible (open data) in order to improve understanding.



# ICC strategy: Vision and ambition statements

## A city of solidarity and conviviality

12. To make our city an inclusive city by further improving the accessibility of public spaces and supporting all people in fragile or disabled situations.
13. Strengthen the health offer by developing adapted responses according to the neighbourhoods and generalise the sport/health pathways for all in the City's parks.
14. Digitalising 100% of municipal services for connected Isséens and creating a large innovative digital space in the heart of the city, a true cultural and economic third place.
15. Enhance and revitalise the shops: set up solidarity shops and short circuit food shops; create new shopping streets and a cinema.



**3<sup>e</sup> place dans le palmarès  
Le Point / iFrap des villes  
les mieux gérées de France,**  
catégorie « Petites villes »



**51€ de dettes  
communales par habitant**  
contre 1 384 € en moyenne  
au niveau national



**Des impôts  
locaux très  
faibles :**

**9<sup>e</sup> taux**  
le plus bas  
de France pour  
la taxe d'habitation

**13<sup>e</sup> taux**  
le plus bas  
de France pour  
la taxe foncière



**69 M€**  
investis  
pour la future  
**Cité des  
Sports**



**Entretien et développement  
du patrimoine :**  
**64 M€** de dépenses  
d'équipement en 2019

# City strategy: justification

## OUR VISION BASED ON OUR OBJECTIVES



1

Write your priorities according to your main thematic of interest

Thematic

Greening the local economy

Thematic

Building innovative digital infrastructure

Thematic

Bringing the citizen at the center of the decision making process

Thematic

Ensuring smooth energy and carbon footprint transition in building management



2

Write one vision to cover it all

Involve, grow and protect citizen toward climate change.  
Building a human and resilient city leveraging the power of technology

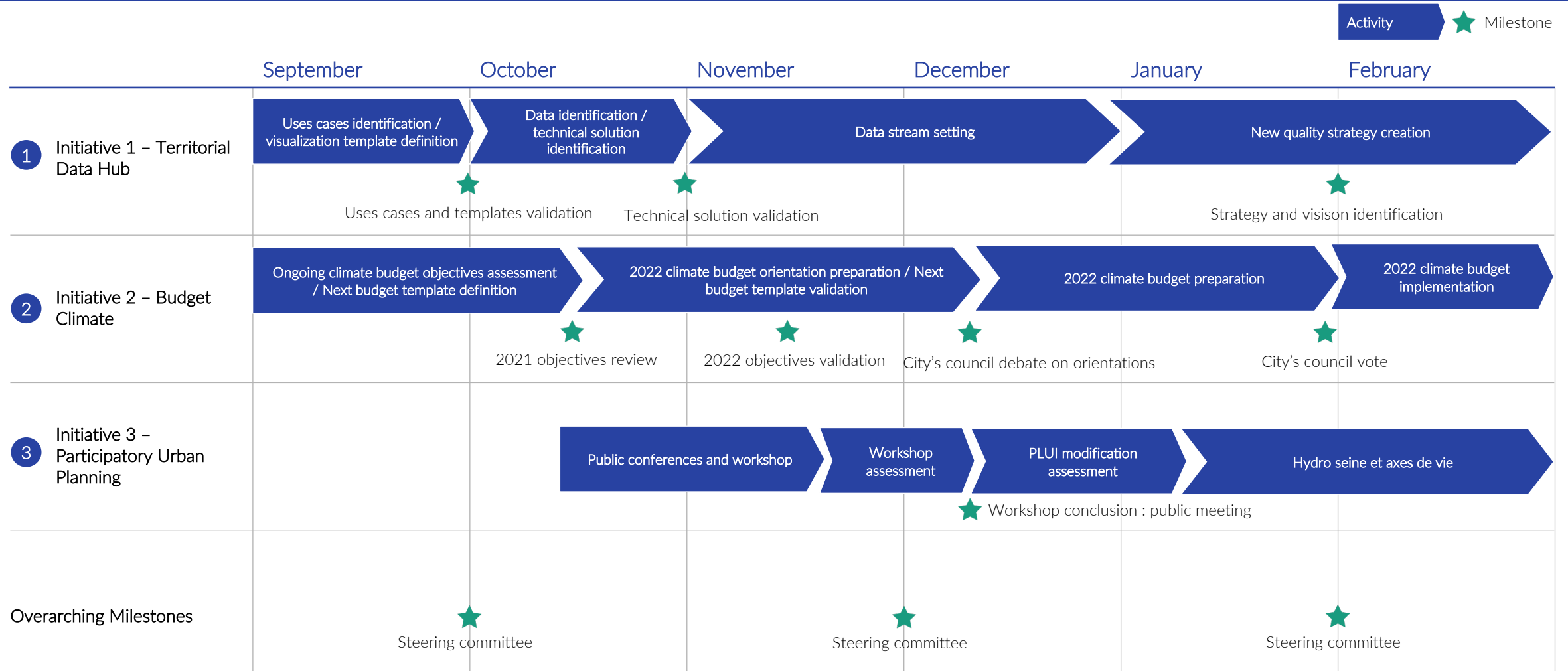
Section  
**2**

# Issy-les-Moulineaux : Ambition and roadmap

ICC Transformation

February 2021 to May 2021

# High level implementation roadmap ("10000m plan")



# Rationale to road map

Smart city agenda objectives for more than 20 years

1

Develop its territory and attract key digital players

2

Enhance the quality and the accessibility of public services

1

Enhance the overall living experience in the city

Numerous Smart City projects have been achieved in the period

## Digital administration

VILM launched its first website in **1997** and at the same time its first online formalities. **As of today**, a new digital platform based on Salesforce technology have been fully implemented and all public servants benefited from an upskilling program

## Digital education

The first experimentation started in 2008. **As of today**, all municipal schools are fully equipped with digital devices (laptop, tablet, digital whiteboard) and connected to very fast optic fiber

## Smart Grid

This experimentation held between 2012 and 2018 aimed at control and optimize energy production and needs on a district scale and integrate renewable energies as well as possible.

## So mobility

Launched in 2015, this initiative aim at applying Smart City to mobility issues (smart parking, carpooling, traffic management through data)

Capitalizing on all those initiatives, the recently elected municipality (March 2020) wishes to leverage the existant infrastructure and experiences accumulated by the city gov to implement an ambitious green city program.

# Territorial Data Hub – Initiative overview

## INITIATIVE OVERVIEW



Initiative name:

- Territorial Data Hub
- As a local government agent, I need a set of tools that could process the data generated by local activities to ensure that key public policies objectives are reached within the set parameters. As a policy makers, I need the data to back local government strategies and decision-making.



Initiative lead:

- Deputy-Major in charge.



Initiative working team:

- Core team members



Contributors:

- Green city division and GPSO

# Territorial Data Hub – Initiative content

## INITIATIVE CONTENT



Ultimate goal and scope of this initiative:

- **Purpose** : Deliver decision-making tools based on territorial data.
- **Underlying issue** : Lack of data backed policies implementation and evaluation
- **Total success** will be reached if local government implement new public policies or tune existing one based on data processed and lay out by the Data Hub tools. **Success factor** will be the capacity to deliver usable, reliable and pertinent tools to contribute to the decision-making process
- The City and the Territory (administrative entities that include the city)



Major milestones:

- Uses cases and visualization identification – By September
- Technical solution identification – By October
- Final validation by steering committee for identified uses cases – By January 2022
- New Quality Data strategy for 2023



Dependencies:

- More uses cases are to be defined but Climate Budget will be the first one and therefore, constitute a dependencies.
- If defined uses cases required proprietary data, API projects with the software editor will be needed



Key stakeholders:

- GPSO Territory
- Open Data Soft

# Territorial Data Hub – Initiative follow-up

## INITIATIVE FOLLOW-UP



### Impact and timing:

- The territorial Data Hub is expected to have an impact on decision-making process by 2022.
  - **City Performance KPI** : Number of public policy backed by data-viz / Share of civil servant trained to handle data
  - **Solution Maturity KPI** : % of local gov's business application connected by API / Number of Data-stream plugged into the Data Hub
  - **Activity Tracking KPI** : Amount of dashboard / Number of strategic planning backed by a data-hub dashboard



### Risks:

- **Operational risks** : Producing Irrelevant data-viz relative to policy-makers expectation
  - **Technology risks** : The technical solution will have to be fine tuned to achieve the objective without being out of reach of the operator's skill
  - **Resource risks** : Civil servant will have to acquire a general knowledge about data and how to handle the Data Hub
- Overall, usage of data-backed policy evaluation



### Support needed:

- What **funding** is necessary to ensure that the workstream is successful?
  - Short term : None (should be handled with internal infrastructure) / Long term : investments on territorial shared technical infrastructure and API development.
- What **other resources / investments** are necessary?
  - Specific upskill program
- **Who** does the team need support and input from? :
  - AMO

# Climate Budget – Initiative overview

## INITIATIVE OVERVIEW



Initiative name:

- City Climate budget
- As a local government I need tools to ensure that the city’s territory is on track with the international treaty of Paris. As a citizen, I need public data and documentation about public policies implemented by the city in line with local and national government engagements.



Initiative lead:

- Head of green city division, Deputy-Major in charge.



Initiative working team:



Contributors:

- GPSO – City’s Territory
- INDIGO - Consultant

# Climate Budget – Initiative content

## INITIATIVE CONTENT



Ultimate goal and scope of this initiative:

- The purpose of this initiative is to embodied local priorities for a greener city in a public and voted document that is considered at the same level as the financial budget.
- The underlying issue is the lack of a comprehensive evaluation and strategic document on the matter and the lack of importance given to the subject relative to other matters
- Ultimate success for the initiative would be to achieve a comprehensive document that cover the whole scope of CO2 consumption contribution on the city's territory, regardless of the CO2 producer (citizen, economic activities ... etc)



Major milestones:

- 2022 Template and KPI definition and Validation by November
- 2022 climate budget orientation debate at the city council in December
- 2022 climate budget validation by the city council in February



Dependencies:

- Climate budget is meant to be gradually assessed and evaluated based on data collected by the territorial hub. The document itself will have to be produced from the data hub visualization.



Key stakeholders:

- GPSO/MGP are competent on climate matters and each one produced strategic documentation that must be accounted for at the city level.
- All major CO2 producers on the city's territory / the Municipal council / GPSO PCAET

# Climate Budget – Initiative follow-up

## INITIATIVE FOLLOW-UP



Impact and timing:

- The first iteration of the climate budget is already in force and has been voted by the council in December 2020. Subsequent annual iteration of the budget will have to be gradually more comprehensive
  - **City Performance KPI** : CO2 consumption / Average energy efficiency rating of building stock / Air Quality
  - **Solution Maturity KPI** : % of climate budget indicator produced by the data-hub /
  - **Activity Tracking KPI** : Territory Stakeholders / Actors activity monitored by the climate budget



Risks:

- What are the **key risks** ?
  - **Operational risks** : inability to identify enough or pertinent data to reach assigned goals / **Cost risks** : Costs associated with specific private dataset / AMO dependencies **Resource risks** : resources growth needed as a follow up to the project development / **Communication risks** : inability to fully commit citizen on this initiative



Support needed:

- Climate budget rely on external data from multiple public et private sources.

# Participatory Urban Planning – Initiative overview

## INITIATIVE OVERVIEW



Initiative name:

- “Citizens' conversations”, a new approach to participatory democracy
- Drawing lessons from the Covid crisis, the Municipality wishes to organize a major consultation of the population in order to specify and deepen certain projects and to define its vision of the city of tomorrow.



Initiative lead:



Initiative working team:

- Members of Steering Committee of the Citizens' conversations : Deputy mayors in charge of urban planning and local democracy, senior officials in charge of different sectors.



Contributors:

- Euro2C Agency,
- OpinionWay

# Participatory Urban Planning – Initiative content

## INITIATIVE CONTENT



Ultimate goal and scope of this initiative:

- What is the **purpose** of this initiative? The health crisis has highlighted the major issues that require us to rethink our lifestyles, our ways of living together and our relationship to the long term, for our good and that of future generations.
- What is the **underlying issue** this initiative is solving? This major consultation should present, define or amend the numerous projects in progress, to ensure coordination and overall coherence between them for our city, while implementing them quickly, while respecting the expectations that will have been expressed by the inhabitants.
- How do we define **ultimate success** for this initiative? What are the **success factors**? More than 7,000 inhabitants responded to the consultation in writing (about 20% of the households)



Major milestones:

After a first phase of consultation which took place in the fall of 2020, it is planned to organize conferences and thematic workshops with the inhabitants between September and December 2021.

- September 20 – Carlos Moreno's conference about "the City of the quarter hour"
- October : Pierre-André de Chalendar's conference around his latest book, "French and the City of tomorrow".
- October-November : 2 simultaneous citizens workshops on Mobilities and on environment
- December : 1 concluding meeting



Key stakeholders:

ISSY MEDIA for the communication  
Participation Citoyenne solution

# Participatory Urban Planning – Initiative follow-up

## INITIATIVE FOLLOW-UP



### Impact and timing:

- First “citizen’s conversations” round is expected to take place late 2021. Conclusion should be taking into account in the next phase of urban planning reglementary documents revision that will occur from 2022 to 2025.
- **City performance KPI** : Total number of citizens participating to the event and workshop / Consistency of representation across the territory and sociology.  
**Activities KPI** : degree citizen’s input integrated into the urban planning / Amount of legal recourse formed against urban planning documents.



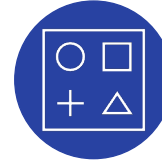
### Risks:

- What are the **key risks** ?
  - **Communication risks** : No citizen implication / Major misalignment between citizen and local gov about future urban project.

# All of three types of KPIs selected and with targets (where needed)



## City performance



## Solution maturity



## Activities

1

### Initiative 1 – Territorial Data Hub

- 15% public policy backed by data-viz
- 15% of civil servant trained to handle data
- 6 communications on data publications

- 20% of local gov's business application connected by API
- 4 Data-streams plugged into the Data Hub
- Usage of data among users

- 3 city chapters
- 4 dashboards in each
- 2 initiatives backed by a data-hub dashboard

2

### Initiative 2 – Budget Climate

- -10% of total climate budget indicator produced by the data-hub
- Green and healthy city label recognition

- -10% CO2 consumption per year
- Monitoring energy efficiency rating of building stock
- +10% Air Quality

- Territory Stakeholders Enhancement
- Actors activity monitored and consequences applied due to the climate budget

3

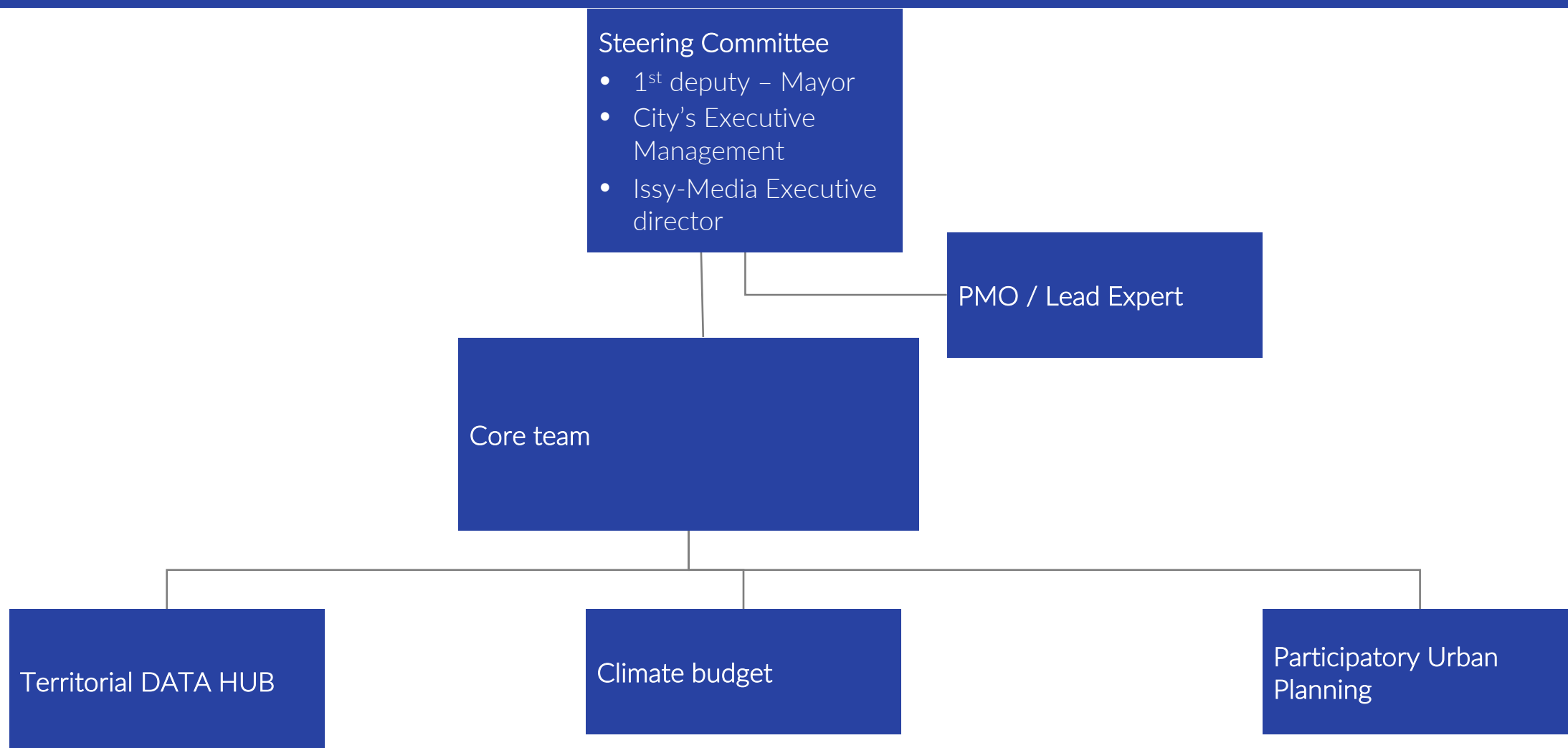
### Initiative 3 – Participatory Urban Planning

- Consistency of representation across the territory and sociology.
- 4 communications on an interactive city profile

- Yearly survey and input process
- 5-6 City Ambassadors named for representing the city and ideas
- 2 big (GPSO, Issy and/or Paris) initiatives

- 40% citizen's participation into the urban planning survey
- 0.5-1% citizen participation in the new city initiatives
- -33% of legal recourse formed against urban planning documents.

# Governance structure for roadmap implementation



Section

3+4

February 2021 to May 2021

# Issy-le-Moulineaux : Impact

ICC Transformation



# Impact executive summary

The major successes of the city were achieving the project goals and publishing the different actions and data to the citizens. The main obstacle will still be the communication between the different services. This point still needs a lot of enhancement.

The progress with the KPIs was not always aligned with the KPIs, as you can see in the following slides, some KPIs were modified and completely changed along the way. It is however very enriching to build with the KPIs and see how the vision changes.

In the next 3 years, with some of the budget problems we are facing, we will need to focus on value and quality. We will prioritize the projects as well as define their end objectives in order to develop well built solutions. Communication is a big question for us, Reducing energy consumptions is a challenge we will all need to face. The third point will be equipping the teams with better agility and efficacy.

# Assessment of city performance - progress against KPIs

	Where we started	Midway through the challenge	Final results
City performance			
Budget Climate 1 KPI 1	Significant CO2 data to move forward	Collecting the data is key – solution Budget Climate	Data retrieved – some actions made, several years followup in place
Energy 2 KPI 2	Significant energy data to move forward	Collecting the data is key – solution CITRON	Data retrieved – solutions / projects given by Alterea for renovation and energy consumption reduction
Big Data 3 KPI 3	Significant social data to move forward – objective is quantity dashboard	Quantity is not interesting, low value and too many data assets to update	New quality data strategy to come for the 2023
Citizen Participation 4 KPI 4	More interaction with Citizens	Have a project aim – Olympics 2024	New citizen communication and interaction tool – made as betatests on different events until getting to the 2024 Olympics
Citizen Participation 5 KPI 5	More interaction with Citizens	Let the Citizens express themselves, propose and conduct projects within the city through Cap Collectif	Several projects chosen and established by the citizens – another round will be happening next years

# Assessment of solution maturity - progress against KPIs

	Where we started	Midway through the challenge	Final results
Budget Climate			
1 KPI 1	Have at least 2-3 actions within the city	Come up with 2-3 actions within the city	Communication and small vegetation actions
2 KPI 2	Follow the CO2 city consumption	Data hard to handle and mix together	General CO2 consumption based on simple data
3 KPI 3	Find link between granular actions and overall data	No direct link between granular actions and overall data, not logical	Showcase general CO2 consumption and actions separately without consequence link
Big Data			
1 KPI 1	The more social data, the merrier	Who actually uses this data ? Is it really used ? Not too many data is actually visited	New Quality Data Strategy for better value
2 KPI 2	All teams are involved, big challenge	Too much work every year for data update and followup	Simplify the data process for the chosen teams

# Assessment of city ecosystem and activities - progress against KPIs

Where we started		Midway through the challenge		Final results
Ecosystem				
1	KPI 1	Create a real cohesive ecosystem	Start small – create small interactions between the working teams There is a big part of agents quite far from digital	First start with a cohesive communication system which gives everyone the same information
2	KPI 2	Digital will create cohesion		
Activity				
1	KPI 1	Be innovative and force of propositions	Too stuck in the daily and operational	Learn agility to manage daily load then create a vision

# Key lessons

Lesson	Reflections
1	Digital is not the only solution. There is a need to think outside the box.
2	Daily load is big and there is no project methodology to construct for the future. Trainings are needed.
3	Communication within all services is KEY

# Commitments

## Commitments to on-going resources

Keep the actual and enhance it, there's a lot of talent, it just needs to be focused and trained.

## Commitments to on-going collaboration

Collaboration is important but in order to have that we need a cohesive communication process between the different teams of the city.

## Commitments to on-going KPIs

Innovation is important but this time we need to concentrate on real value for the agents and for the citizens.

The era of quantity and superficial technology is resolved. Today everything needs to be built with a 'value' and 'usefulness' factor.

## 3 Year plan - ambitions

Building on the ICC, what would the city aim to achieve in 3 years time?

- Reduce energy consumption – big financial obstacle following the context
- Be efficient with less people and less money
- Find the right middle between simple and efficient

What steps will you take over the next 3 years to achieve these goals?

- Follow public building consumption to find and resolve weird energy behavior through heating follow up and human behaviour programs (Ecogestes)
- Create a cohesive communication city plan
- Find subventions to bring money and investment into the city

## 3 Year plan - targets

KPI	Category	What commitments will the city make to this end?
1	Energy consumption	Follow-up on public buildings energy consumption and come up with reduction actions
2	Label Numérique Responsable	Aim for the Responsible Digital Label maintaining good maintenance behavior
3	Low Tech	Find new Low Tech solutions for the city, find new energy solutions
4	Communication	Come up with a communication process targeting all the city services and the citizens
5	Agility	Infuse agility throughout the teams to ensure efficiency and proactivity during this difficult and challenging context