NET ZERO CITIES

EU MISSION PLATFORM | CLIMATE NEUTRAL AND SMART CITIES

Climate City Contract

2030 Climate Neutrality Action Plan

2030 Climate Neutrality Action Plan of Dijon Metropolis

DIJON métropole

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Summary

An abstract **summarizes the content** of the 2030 Climate Neutrality Action Plan (CCC Action Plan) that is developed jointly by local authorities, local businesses, and other stakeholders.

Textual element
Dijon has set itself the goal of being carbon neutral. The city has been implementing an ambitious policy to fight climate change since 2008. In these past years Dijon has involved local actors to co-construct this strategy and has mobilized national and European funds and initiatives to help the city achieve carbon neutrality. The selection of Dijon in several H2020 initiatives like REPONSE is a clear sign of the city's determination to reach the targets. The climate objective is central in Dijon's municipal policy. Dijon Metropole has exceeded the -20% in 2020, a target set in 2009 as part of the Covenant of Mayors and reduced its greenhouse gas emissions by 23% between 2010 and 2022. Building on this momentum, Dijon Metropole now has the political will to accelerate its energy transition, which is well underway, and is putting in place the necessary policies and tools to achieve its objectives by relying on its ongoing solutions while continuing to innovate. An ambitious policy for the development of renewable energies is beginning to bear fruit with the largest urban solar farm in France and a methanization site. Building on this experience, a strategy for the deployment of new production sites is being realized. The development of the hydrogen vector is a major turning point. A study is also underway on urban logistics, which should lead to the definition of concrete solutions. In the building sector, renovations are accelerating. By 2030, 100% of energy-intensive social housing, which represent nearly 22% of the housing stock, will have undergone energy-efficient refurbishment. Technical and financial support is also being offered for co-ownerships, which represent 75% of the housing stock. The experimentation of the two Positive energy blocks (PEBs), which should lead to a 75% reduction in GHG emissions, will be inaugurate in 2025. The PEBs are located in a working-class neighbourhood where all the buildings built in the 1960s will be refurbished by 2025. Finally, the site, which is connected to the heating network, has great potential for solar development on roofs or car parks. Dijon Metropole also relies on a sustainable food project for 2030 to act on food-related emissions which represent 25% of the French emissions. The project relies on partnerships with the private sector, in the framework of the VITAGORA network, as well as scientific partnerships with the research centre INRAE. Dijon is renowned for gastronomy and has a double UNESCO classification and since 2024, Dijon has been home to the headquarters of the International Organisation of Vine and Wine, making this project particularly important. This new dynamic will be based on the new digital tools which are being developed to monitor the carbon footprint of the city month by month and to achieve the objectives while maintaining an ambitious trajectory. Because the objectives cannot be reached without a strong mobilization of the territory's inhabitants and partnerships, Dijon Metropole is committed to co-construct and monitor the implementation of its climate and biodiversity plan. Relying on a dynamic and diverse network of actors in the territory, from industry, the service sector, associations, institutions, education and research, many of them active in RESPONSE and other projects, Dijon has created strong local dynamic at the service of the fight against climate change.

Dijon Metropole has been fully committed to the 100 Climate Neutral and Smart cities Mission since 2021.

The work on the CCC was carried out in conjunction with Dijon Metropole's Climate and Biodiversity Plan, in line with French regulatory frameworks and the development of our Territorial Climate Air Energy Plan (PCAET).

This commitment has acted as a catalyst for accelerating the planning of our climate neutrality policies to meet the project's standards, namely an 80% reduction in GHG emissions by 2030.

In addition, the NetZeroCities expert network allows us to address new challenges or go further in some areas, such as indicators, GHG monitoring, financing options, stakeholder engagement and multi-stakeholder commitment. The international network exchange also provides valuable insights through best practices implemented by other mission cities, offering concrete ideas for advancing toward climate neutrality.

In drafting the Climate City Contract, Dijon Metropole is committed to assuming its share of responsibility to attempt the neutrality in 2030. However, Dijon Métropole can act directly on less than 10% of the emissions emitted in the area, and achieving this highly ambitious goal requires the active involvement of various stakeholders both within and beyond the Metropolis:

- Citizens and businesses to renovate buildings and adopt changes in mobility and consumption habits. More broadly, related sectors (e.g., construction) must keep pace with the necessary transitions in renovation and mobility.

- The French government to enhance support for residential and tertiary building renovation, foster more sustainable mobility, and, more broadly, initiate major changes in laws and regulations across all levels to prioritize climate issues fully.

- The European Union to further its efforts, not only by increasing financial support but also by implementing stricter climate regulations across all sectors and drastically limiting the use of fossil fuels.

There are several major barriers to be removed. These include:

- The financial resources needed for the transition and the development of business models that make projects profitable,
- The availability of human resources and the skills needed to carry out the projects,
- The time needed to complete projects,
- Social acceptability
- More favourable regulations.

Our Metropole is committed to working closely with the stakeholders and institutional partners listed above to achieve the 100 Climate Neutral and Smart cities Mission objectives. However, given the current lack of guarantees from these stakeholders and institutional partners, Dijon Metropole has decided to exclude the industry, the agriculture and waste from its CCC to ensure a transparent and sincere commitment to achieving neutrality by 2030. Dijon Metropole will focus on the mobility, building and energy industry sectors, which account for more than 80% of Scope 1 and 2 greenhouse gas emissions. However, a strategy and an action plan have been defined for the other sectors up to 2030 in order to make progress in these sectors too.

In addition, Dijon Metropole has chosen to:

- place the collapse of biodiversity on the same level as climate change.

- address both mitigation and adaptation to climate change.

- include sustainable food, the emissions from which come under scope 3.

- include air quality issues.

If we want to achieve the climate and biodiversity transitions in a socially just and economically sustainable way, we need to be able to take account of the complexity of the issues to be addressed.

The complexity of the issues to be addressed and the need to take account of the interdependencies between multiple stakeholders require a systemic approach.

This systemic logic associates, groups and considers elements, focusing on interactions, unlike Cartesian analytical logic, which breaks down and compartmentalises by focusing on the detail and isolation of variables.

The systems approach is not based solely on the past but looks to the desired future to influence the present. It is based on key principles:

-Interdependence, where each element is understood in its overall context.

-Feedback or circular causality, where elements act on each other in a positive or negative way.

-Resilience, which enables the system to return to its state of equilibrium after a disturbance.

-Equifinality, which means that the same result can be achieved by different routes, even from different initial conditions.

New forms of cooperative working enable us to provide effective responses to systemic issues of general interest.

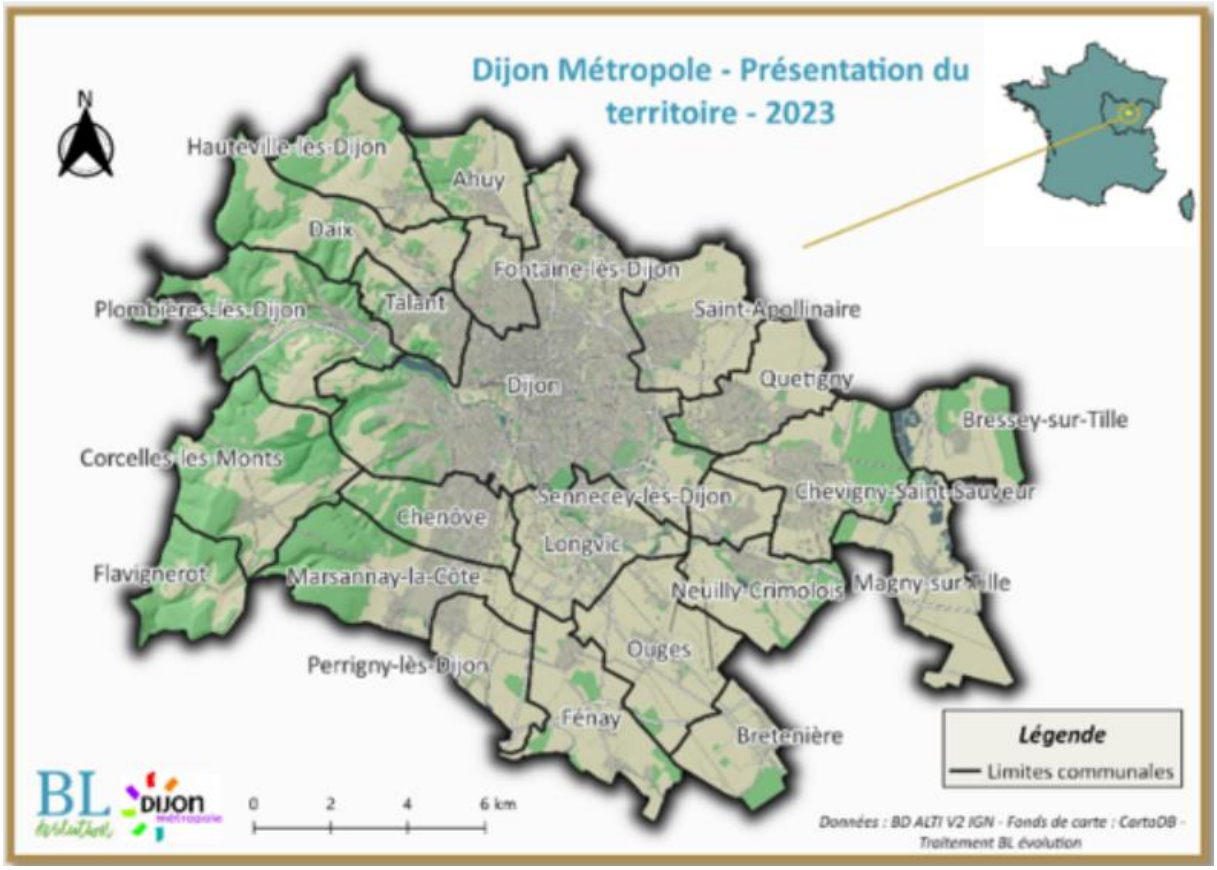
The effectiveness of new forms of cooperation will be demonstrated by observing the collective, environmental, social and economic benefits.

1 Introduction

Introduction

With almost 260,000 inhabitants, Dijon metropole is seeing its population grow slowly. Comprising 23 communes, Dijon metropolitan area is located between Paris and Lyon on the Rhine-Rhone axis, close to Germany and Switzerland. It is a densely populated, urban area with 1,078 inhabitants per km2 and a central city with 1,468 inhabitants per km2.

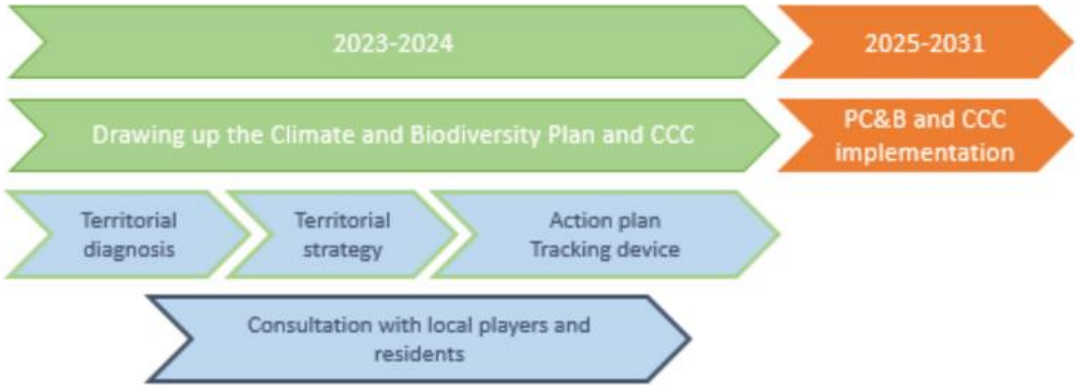
Dijon Metropole has a wide range of skills that enable it to act directly or indirectly on its territory by mobilising local actors and inhabitants to massively reduce greenhouse gas emissions. The main areas of responsibility are development and management of industrial and commercial zones, metropolitan spatial planning (territorial coherence plan (SCOT), local urban planning (PLU)), development operations of metropolitan interest, land reserves, organisation of mobility, development and maintenance of roads, car parks), housing policy (housing policy, financial aid and actions in favour of social housing and disadvantaged people), management of public services (water and sewerage, household waste collection and treatment, air pollution control, noise abatement, support for energy demand management, development and management of heating and cooling networks, electricity and gas distribution concessions, creation and maintenance of electric vehicle charging infrastructure, development council (a forum for consultation with local residents and socio-economic players)…



Key figures for Dijon Métropole (INSEE, 2019)	
Population	255 127 inhabitants
Population density	1063 inhabitants/km²
Area	240 km²
Number of cities	23
Number of housings	142 678
Number of employments	118 285

The Climate and Biodiversity Plan and the CCC are a single public policy implemented by Dijon Metropole. The form of the former has been adapted to comply with French regulations, while the latter has been adapted to meet the expectations of the European Commission as part of its mission to achieve 100 climate-neutral and intelligent cities by 2030.

The work carried out by Dijon Metropole to draw up its CCC and its Climate and Biodiversity Plan has benefited greatly from the 'double dynamic' to which the local authority is committed: that of the 100 climate-neutral and intelligent cities mission and that of FAASST, a project selected as part of the Pilot Cities Program.



Territorial diagnosis is the first stage of a Climate and Biodiversity Plan (PC&B) and a CCC. The aim is to identify the territory's situation with regard to energy, climate and air quality issues. Dijon Metropole has chosen a methodology that enables the PC&B to be drawn up on the basis of a diagnosis shared with and enriched by local players and residents.

The issues identified in this diagnosis have been enriched to define a local strategy based both on quantitative findings (analysis of air-energy-climate data) and local feedback from stakeholders.

The research dimension has therefore been fully embraced by a deliberately heterogeneous group of local players, from both the public and private sectors, who are highly motivated by the significance of the approach. The fact that the Dijon commitment was totally co-constructed and signed off by the partners is undoubtedly a unique feature.

This local combination of exploratory thinking and practical applications has enabled the group to seize on the framework proposed by Europe and adapt it finely to local realities to produce a new framework for cooperation, driven by a shared ambition to decarbonise our economy and combat the collapse of biodiversity.

On more regulatory aspects, with a constant concern for consistency between its policy documents, Dijon metropole has also endeavoured to assimilate its obligation to produce a PCAET (Plan Climat Air

Energie Territorial - Territorial Climate and Energy Plan) into the dynamic pursued through the 100 cities programme.

For over a year and a half, Dijon has been working to ensure that all its actions are consistent with each other, and to structure the following three key documents:

- The Climate and Biodiversity Plan, and its appendices meeting French regulatory requirements (technical and vulnerability assessments, trajectory, etc.), and those specifically structured to steer the transition operationally; The action plan, restructured to meet the European format, is a faithful reproduction of the Climate and Biodiversity Plan voted on.

- Metropolitan Climate and Biodiversity Contract, our commitment, which will bring together the first twenty or so socio-economic players in the region to aggregate the actions planned by each and to measure their overall financial impact and the expected results in terms of the objectives of the Climate and Biodiversity Plan.

- Territorial investment plan, prospective modelling of the financial trajectory of decarbonisation of the metropolitan area, etc.

Each document was the subject of a specific deliberation report, debated and voted on at the Metropolitan Council meeting in September 2024. This choice is strictly educational. The density of the subjects is such that it was deemed necessary to offer the assembly some breathing space to enable it to better grasp the approach and objectives. There were therefore 3 separate votes, but the overall coherence was ensured to steer the transition in a systemic way and to be able to be supported politically over time. The debates were of a very high quality.

Dijon Metropole's CCC is structurally based on the concatenation of these three deliberations.

The methodology deployed aims to synchronise expectations at national and European level, while preparing an operational framework for steering and monitoring the Climate and Biodiversity Plan. This innovative approach needs to be strengthened. It defines the methodological organisation of the work, from the design of the Climate and Biodiversity Plan to the steering of actions and monitoring. We see this document as a tool to facilitate the sharing of our experience at both national and European level.

Dijon Metropole's CCC aims to radically transform the projects carried out in the area in order to enhance their impact on the various objectives set out in the climate and biodiversity plan. The aim is to develop a methodology for the systemic challenge of projects based on:

- the 14 expected systemic effects defined in the Climate and Biodiversity Plan, which are the operational expression of the objectives set,

- the 5 systemic levers defined by NetZeroCities

- the stakeholders to be mobilised and the possible forms of cooperation

- the expected benefits defined by NetZeroCities: GHG & energy, health & environment, social, economic, resources and biodiversity the development of new economic models.

The aim of this approach is to develop portfolios of local projects.

1 - Considering French regulatory requirements, the ambition of the 100 towns mission and structuring the political proposal

Like all inter-municipal public bodies with more than 20,000 inhabitants, Dijon metropolitan area is required by law to draw up a 'Territorial Climate Air Energy Plan (PCAET)'. PCAETs must address both mitigation and adaptation issues, in the areas of climate, air and energy.

On 23 March 2023, the Metropolitan Council set the framework for the development of the 2024-2030 Climate and Biodiversity Plan: 'Dijon has been selected to take part in the Mission 100 climate-neutral and intelligent cities initiative, which aims to achieve carbon neutrality by 2030. This is both European recognition of all the work undertaken by Dijon Metropole, and a clear political will to accelerate the energy transition in the region to combat climate change. The creation of the Territorial Climate Air Energy Plan (PCAET) is therefore an opportunity for our region to pursue this ambition and collectively build, with the residents and stakeholders, a desirable low-carbon city, while considering the economic and social challenges and relying on innovation'.

The objective of accelerating decarbonisation by 2030 also responds to the challenge of emitting as few greenhouse gases as possible and as soon as possible to reduce the cumulative effect of these gases in the atmosphere and thus increase the chances of keeping the rise in global temperatures below 2 degrees.

The major work carried out following the decision of March 2023 quickly confirmed the local authority's determination to consider the issues of global warming and the collapse of biodiversity on the same level and in the same way.

Dijon Metropole, with its pioneering commitment to climate change and biodiversity, has chosen to go far beyond French regulatory requirements to develop a global strategy that meets the challenges of climate change and biodiversity.

This strategic document integrates energy issues in an operational way, via the Energy Master Plan, to prefigure the management of transition projects.

It is also characterised by the importance of food. The food transition, through ProDij, is now one of the major policies supported by the city.

The Climate and Biodiversity Plan is built around three strategic axes - mitigation, adaptation and cooperation - and defines thirty strategic objectives that have been agreed and developed with a group of elected representatives responsible for the Climate and Biodiversity transition.

Following the deliberation in March 2023, a phase of consultation with the public will begin, with the gathering of opinions from the prefecture, the environmental authority, the Bourgogne Franche Comté region, NetZeroCities and the European Commission before a final vote scheduled for June 2025.

The local authority's priority was not to dissociate the different approaches and to present an overall strategic construction embodied by the Climate and Biodiversity Plan. The description of this political commitment ('Mandate to Act') has therefore been substantiated and constructed in a manner consistent with previous deliberations, and in line with the applicable regulatory constraints and the commitments made to the European Commission. This is why it was decided to draw up a single document with a structure adapted to all the issues at stake.

It is also why it was decided, in the context of the commitments made by Dijon Metropole to the European Commission, to structure an ambitious policy of accelerating and massifying actions built in cooperation with the players in the area, with an operational vision.

2 - Considering the results of the Pilot Cities project 'FAASST' (Facilitate, Accelerate, Support and Monitor the Transition) and the working dynamic with local stakeholders

The Climate and Biodiversity Plan's action plan will be continually enriched as part of the management of the Climate and Biodiversity Plan. The structure of the plan will also allow for the overall monitoring and evaluation of the large number of actions to be carried out under the plan, and particularly those resulting from the cooperative initiatives that will be launched and that will be a key factor in achieving the objectives. In this respect, the actions carried out by the socio-economic players involved in the Metropolitan Contract for Climate and Biodiversity will typically enrich the overall action plan.

This is entirely consistent with the iterative working framework implemented with the region's partners as part of the '100 Cities' and 'Pilot Cities' action research programmes. Ultimately, being able to objectify the financial amounts committed to the ecological transition on the scale of a significant number of players and relate them to an overall measurement of the carbon impact, or even the biodiversity impact, will make it possible to enhance the territorial dynamic and make it even more attractive to skills and investors.

As part of the governance aspect of the transition and the mobilisation of all the stakeholders expected in the Climate City Contract, Dijon metropole therefore wanted to explore new forms of cooperation with socio-economic players.

On this basis, an initial twenty or so socio-economic players from a wide range of backgrounds, influential in their sector and with strong local roots, were asked to commit themselves to a very pragmatic project with Dijon metropole: aggregating the actions envisaged by each of them in order to measure their overall financial impact and the expected results in terms of the objectives of the Climate and Biodiversity Plan. On this basis, the Metropolitan Climate and Biodiversity Contract is intended to be extended to new players who were mobilised as part of the call for low-carbon initiatives launched in February 2024.

The Metropolitan Climate and Biodiversity Contract has been structured and guided by the development of this kind of leadership approach. The description of this operational dynamic, 'Commitment', was therefore supported and built in line with the results of the discussions held with the area's socio-economic players, who ultimately formalised their interest by declaring actions and agreeing to have their actions compared with the expectations of the Climate Plan.

The development of new forms of cooperation aims to go beyond the sum of individual interests to collectively achieve the general interest objectives set out in the Climate and Biodiversity Plan.

3 - Considering programmatic expectations concerning public finances (constitution of a green budget) and regulatory expectations concerning extra-financial reporting for companies (compliance with the CSRD - Corporate Sustainability Reporting Directive)

It is relatively complex to list, measure and quantify precisely the actions that contribute to the mitigation of greenhouse gas emissions, and/or to adaptation to changes in the climate and biodiversity, and to the fight against the collapse of biodiversity carried out by the players in the metropolitan area, including the actions carried out by Dijon Metropole.

To get around this difficulty, Dijon metropole has initiated an exploratory evaluation and costing method based on simplifying working hypotheses, founded on a scoring system for direct actions (works, investments, etc.) and indirect actions (communication, awareness-raising, etc.) weighted according to the systemic effects sought in the action sheets of the Climate and Biodiversity Plan.

This method differs from other costing methods available on several points

It is a global approach: both climate and biodiversity are considered. Most of the figures available relate only to actions that contribute to reducing greenhouse gas emissions. This financial costing work is carried out in conjunction with the Climate and Biodiversity Plan's action plan.

It is an integrated approach: all costs are considered, including related costs that often add significantly to the cost of operations (landscaping of the project, treatment of rainwater, maintenance of ecological continuity, measures to support changes in use, etc.).

It's a bottom-up, iterative approach: the rating system is based on the operating costs observed by local players. It is not based solely on macro data broken down by region.

This method differs from other costing studies available, even though all the headings of the Investment Plan framework proposed by NetZeroCities have been studied. Nevertheless, it is a forward-looking exercise that fits in perfectly with the research-action dynamic supported by the European Commission.

It should be noted that this approach was the subject of a presentation and discussions with I4CE - Institute for Climate Economics and with its president Jean Pisani-Ferry, French economist and author of the report on the economic impact of climate action submitted to the Prime Minister in 2023, and aroused interest.

As part of the iterative approach proposed for both the Climate and Biodiversity Plan and the Metropolitan Contract for Climate and Biodiversity, the parameters and calculation method will be discussed on an ongoing basis, to regularly consolidate the assessment of the financial trajectory.

The aim of the method is to create a systemic tool that can be used to put an approximate but coherent figure on the actions to be carried out in the metropolitan area by all the stakeholders, and to give an idea of the financial efforts made and to be made, their scope and their effectiveness in achieving the objectives set out in the Climate and Biodiversity plan.

For example, it will make it possible to estimate the costs that could be borne over time by residents, socio-economic players and local authorities, and to identify the associated funding requirements. It will also provide a means of comparing actions against the objectives of the Climate and Biodiversity Plan.

This tool is in no way to be compared with budgetary programming but rather is intended to be a decision-making tool for steering and coordinating the metropolitan area's Climate and Biodiversity Plan. This is how it differs from the Investment Plan proposed by Net Zero Cities. It attempts to take a global approach to the issue, making the financial trajectory a lever for action rather than a brake.

The investment plan is based on private investment initiatives, the pace of which depends on the standard of living, purchasing power, financial capacity and national policies. The results have a de facto impact on the targets set for 2030.

4 - Summary of the strengths of Dijon Metropole's approach

=> Strong political support, based on the interactions between changes in lifestyles and the implementation of public policies. A clear desire to implement a policy that sets the region in motion through a discourse that is accessible and mobilising, and that speaks to as many people as possible.

=> Go beyond the regulatory framework of the PCAET and/or the framework of the CCC.

=> A single public policy addressing two major environmental crises: climate and biodiversity Integration of an adaptation component

=> The interweaving of the energy strategy and the definition of an operational vision for projects

=> Integration of the local sustainable food strategy

=> Integration of Scope 3

=> The integration of the co-benefits proposed by NetZeroCities and those not always quantifiable defined as objectives of the climate and biodiversity plan are at the heart of a systemic approach.

=> Creation of a group of elected representatives responsible for climate and biodiversity issues

=> Implementation of a global and systemic territorial management approach and management of project portfolios

=> Modification of the local authority's internal organisation to manage and monitor Climate and Biodiversity actions.

=> Structuring an ambitious coordination process, with the involvement of local players with a strong impact on climate and biodiversity issues, and with the pursuit of precise operational objectives, such as: A project to create an energy SEM to accelerate the region's energy transition,

=> Dijon metropole is going beyond ‘business as usual’ thanks to the approach taken as part of the 100 towns mission, by structuring exchanges with the region's partners to bring to light ambitious cooperation projects conducive to the transition to sustainable development.

=> Project to create a Popular University on Climate and Biodiversity.

=> Dijon's appropriation of the 100 towns and cities pilot scheme, which has led us to invest fully in the research dimension of the approach, but with a clear desire to make it operational. It's part of being a local authority to take concrete action to transform the daily lives of residents.

=> A strong desire to define very ambitious and measurable objectives, with neutrality from 2030 onwards, as part of a common movement and thanks to a territorial organisation that corresponds to this idea of a facilitating authority.

On this basis, Dijon Metropole intends to embody and structure its role as a ‘Local Authority facilitating transitions’.

5 - 2030 climate neutrality target

To meet the commitments made as part of the 100 climate-neutral and intelligent cities by 2030 mission, Dijon Metropole will focus on the mobility, building and energy industry sectors, which account for more than 80% of Scope 1 and 2 greenhouse gas emissions.

Table I-1.1: Climate Neutrality Target by 2030			
Sectors	**Scope 1**	**Scope 2**	**Scope 3**

Stationary energy (named Buildings)	Included	Included Scope 2 covers electricity only	/
Transport	Included	Included	/
Energy industry	Included	/	/
Waste/wastewater	Excluded	Not applicable	Not applicable
IPPU	Excluded	Not applicable	/
AFOLU	Excluded	Not applicable	/
Geographical boundary	**Same as city administrative boundary**	**Smaller than city administrative boundary**	**Larger than city administrative boundary**
(Tick correct option)	**X**		
Specify excluded/additional areas		Required information	Required information

Neutrality objectives concern all territory of the metropolis.

Scope 1 et 2	2010	2022	2030 Scénario Ambitious	2030 Scenario Neutrality
Buildings (tCO2eq)	458 241	298 072	164 751	4 582
Transports (tCO2eq)	310139	308189	205888	3 101
Energy industry (tCO2eq)	114425	54039	29721	1 144
TOTAL of 3 main sectors of GHG emissions (tCO2eq)	882805	660300	400360	8 827
% of total territory emissions (scope 1 & 2)	82	**80,49**	81,48	13%
Number of inhabitants	244652	257193	268000	268000
emissions per inhabitant	3,61	2,57	**1,49**	**0,03**
% reduction in emissions compared to 2010		**25**	55	99
Cost			**18 595 520 €**	**45 871 340 €**

Dijon Métropole is a predominantly urban area whose economic activity is mainly in the tertiary sector. This is why the three main sectors together emit more than 80% of the area's greenhouse gas emissions.

The targets take account of the low population growth, which has an impact on the residential, tertiary and transport sectors.

Two scenarios have been developed:

- an ambitious scenario: the entire CCC has been built on the basis of this scenario, which is the result of a co-construction process involving local players and residents.

- a neutrality scenario: In drawing up the Climate City Contract, Dijon Métropole undertook to assume its share of responsibility in an attempt to achieve neutrality by 2030. However, Dijon Métropole can act directly on less than 10% of the emissions emitted in the area, and achieving this very ambitious objective requires the active involvement of various players inside and outside the Metropole. Although it has not yet been possible to draw up an action plan to meet this objective, the neutrality scenario has been quantified and Dijon Métropole undertakes to work on consolidating it and implementing it as soon as possible.

The reasons for excluding 3 sectors are:

- Agriculture: This sector accounts for very little greenhouse gas emissions in the metropolitan area, due to the small proportion of the territory devoted to agriculture. Dijon metropole is committed to an ambitious policy on sustainable food for 2030, which covers all sectors of food, from producer to consumer, and aims to increase the consumption of local regional products. It turns out that the metropolitan area's scope is too narrow given the consumption issues involved, which is why the objectives are set at regional level.

- Industry: This sector accounts for 13% of employment, with almost 12,000 salaried jobs, and has a moderate impact on the region's greenhouse gas emissions. Jobs are mainly distributed around 40 main production sites (Safran, Schneiders, Urgo, Chocolotaterie de Bourgogne, Tetrapack, etc.). The rest of the jobs are very fragmented. Three sectors predominate: health, agri-food, electrical engineering and electronics. Industrial companies are grouped together in 6 business parks in the area. In this sector, Dijon Metropole has very few levers for action on industrial processes, the products of which benefit a much wider area than the metropolitan area. However, priorities have been identified in this sector around the issues of mobility and the production of renewable and recycled energy, sectors covered by the CCC. In addition, the energy efficiency policy for industrial buildings, which account for little of the emissions from this sector, has been included in the action plan due to the creation of a joint action sheet for the tertiary and industrial sectors in this area. Finally, the two sectors of health and agri-food are the subject of ambitious policies: agri-food, already mentioned in the context of the agriculture sector, and health, with a strong focus on the development of biotechnologies.

- Waste: France has developed a policy of closing household waste dumps in favour of incinerators. Dijon Metropole, which has a high environmental performance incinerator, has developed several partnerships with neighbouring areas to enable them to have their waste incinerated while limiting the construction of new incinerators. In addition, the Dijon metropolitan area incinerator treats all the region's medical waste. As a result, greenhouse gas emissions from the waste sector far exceed the emissions linked to the region's activities. And while greenhouse gas emissions from the waste sector are increasing in the Dijon metropolitan area due to the treatment of waste from neighbouring areas resulting from new partnerships, on a regional scale it is reducing the impact in terms of greenhouse gas emissions and promoting numerous co-benefits in terms of biodiversity, soil, waste management, etc.

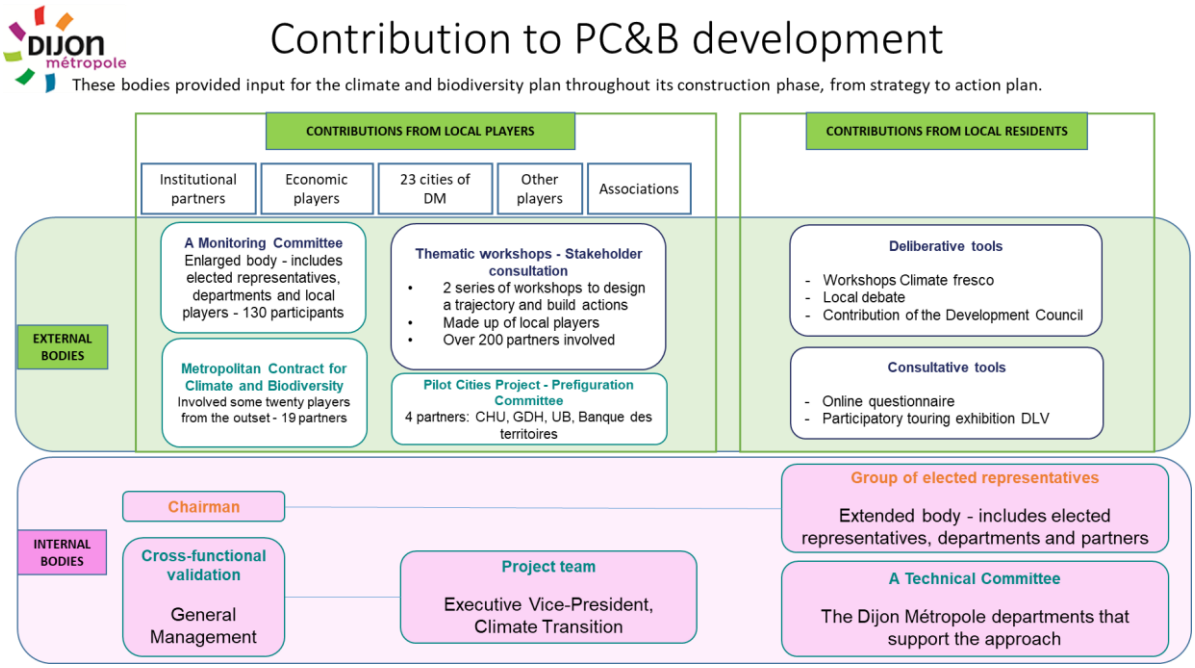
Although the neutrality objectives relate to the three sectors identified, as part of Dijon metropole's climate and biodiversity plan strategy, whose scope is broader than that of the Climate City Contract, a strategy and quantified objectives have been set, and action sheets have been produced.

6 - key stakeholders to be mobilised to achieve climate neutrality by 2030

To achieve the objectives of carbon neutrality, Dijon metropole wishes to involve the main players concerned by the territory's carbon neutrality objectives, grouped into 5 categories:
- Communes and institutional players: this includes the 23 communes that make up the metropolis, public-sector players, the Département, the Region, government departments, etc.
- Private socio-economic players: including businesses, trade unions and professional organisations, associations, etc.
- Residents and users
- Communes and extra-territorial institutional players: this includes the communes and intercommunal bodies of the urban area, which represents Dijon metropole's catchment area, European Union, and so on.

- Extra-territorial private socio-economic players: this includes companies, associations and private structures from outside the metropolis, but which may have an impact on the decarbonisation of the Territory.

<u>Overall consultation process for the Climate and Biodiversity Plan</u>



6 thematic workshops were organised with stakeholders:

- Mobility
- Buildings
- New energies
- Air quality, quality of life, health
- Circular economy, waste
- Adaptation to climate change, biodiversity, food

The carbon neutrality trajectory and action plan were mainly developed jointly during the first 3 workshops on mobility, buildings and new energies.

The Metropolitan Contract for Climate and Biodiversity has been the subject of a joint project involving somme twenty local players involved.

The actions carried out by the partners are grouped around 5 objectives:

- -production of renewable energy
- -construction
- -mobility
- -water and biodiversity
- -energy supply

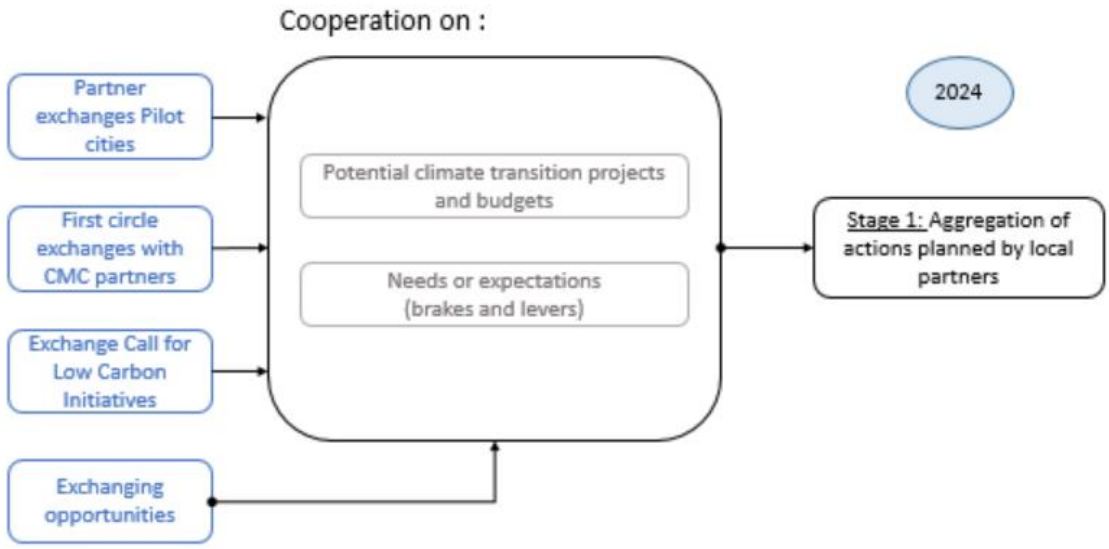
-A collective commitment to:

-A carbon trajectory

-A financial trajectory

-Contributions to the action levers of the CCC

The first step of the metropolitan contract for climate and biodiversity:



The aim of the pilot cities project is to build local engineering capacity.

4 public players are engaged in the project. They are committed to the prefiguration of local engineering to amplify the impact of local initiatives.

The University Hospital Dijon Burgundy

Burgundy University Europe

Grand Dijon Habitat
A social landlord

Banque des Territoires
A bank

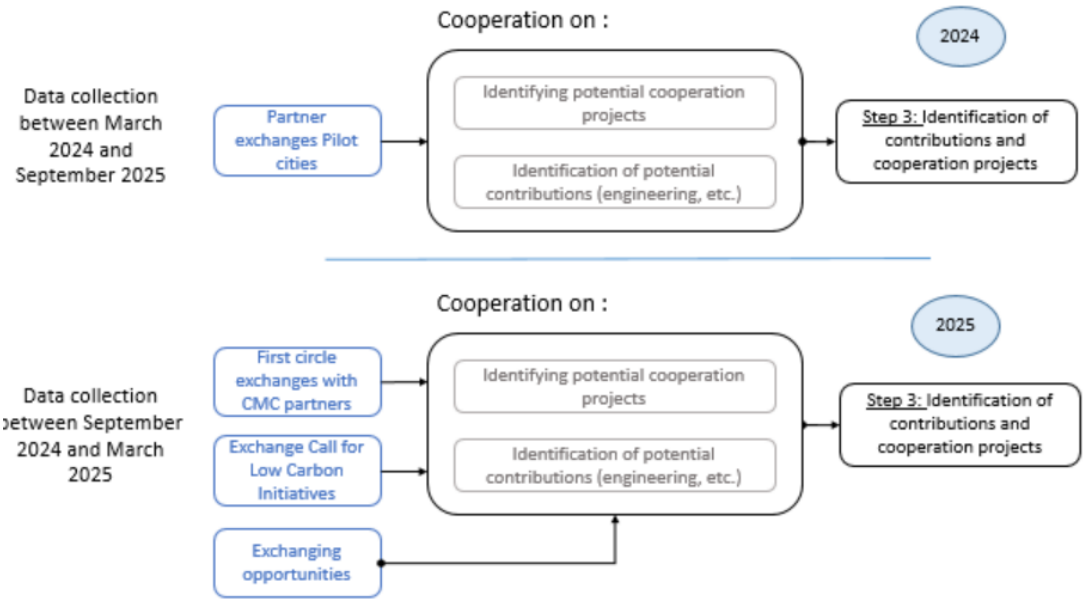
The objectives of the engineering project are:

-to develop the use of innovative methods of financing the energy transition;

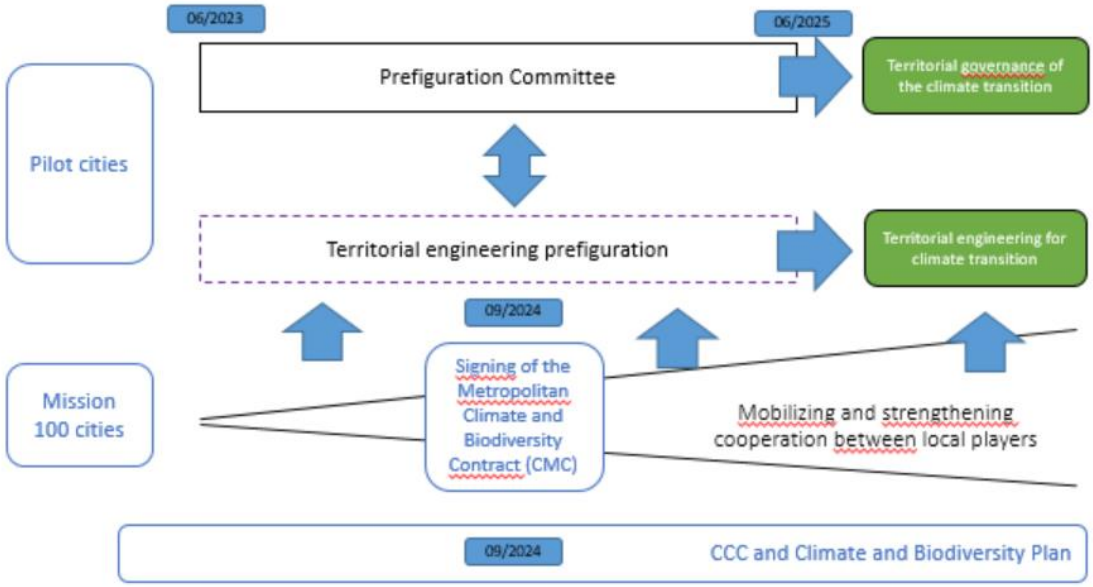
-Encourage the emergence of cooperative initiatives to increase ambition;

-Observe the region using shared tools.

The main steps :



Presentation of the links between the various approaches to mobilising local players.



From September to December 2023, various citizen participation 5 tools were deployed throughout the metropolitan area to gather the observations and proposals of local residents on climate transition: Times for sharing information, listening and debating, based on the following system deployed throughout the metropolitan area…

In order to be as close as possible to local residents, these tools have been deployed at events and in neighborhood centers.

3868 contributions to the climate plan were collected.

A cooperation strategy has been drawn up to accelerate the region's climate transition

Cooperation is one of the 3 pillars of the climate and biodiversity plan.

Dijon Metropole, a local authority facilitating the transition

The global dimension of the climate and biodiversity crises, and their profoundly systemic causes, justify an appropriate positioning of the metropolis.

As an organization, it must naturally commit to reducing the impact of its own activity on global warming and biodiversity loss. Its status encourages it to set an example, but also to research and innovate in ways of limiting this impact.

As a public institution with numerous powers and prerogatives, it has the capacity to act, whether directly in organizing its service offering, or more indirectly by adopting rules and regulations that constrain or accompany change, or by developing information and awareness-raising efforts aimed at the general public.

But however important our commitment may be in these two areas, they will only be part of the region's response to the many challenges it faces, which require everyone, from residents to socio-economic players, to get involved to the best of their abilities.

The metropolis must also act on these capacities. First and foremost, it must help to make everyone aware of these capabilities, and then it must strive to make the most of them, by creating links between players, supporting initiatives and promoting them.

It is the combination of these roles that makes Dijon Metropole a facilitator of the transition.

It is this approach that has attracted the attention of Europe as part of the "100 towns" and "Pilot towns" programs, of which Dijon Metropole is a stakeholder.

The idea is to consider that local authorities will only have control over part of the transition levers, and that it is only through a strong and coordinated mobilization of all players, public and private, that the human, technological and financial challenges will be met in an efficient and sustainable way.

Data, research and innovation at the heart of cooperation

Embarking on a path to transform our lifestyles and economic models cannot be done without knowledge, benchmarks and guidelines.

Knowledge, research and innovation are essential to guide our decisions and pursue our progress.

The phenomena involved are highly complex. Nevertheless, everyone - elected representatives, socio-economic players and the general public - needs to be able to understand them.

Data is essential to objectify trajectories, measure the effects of policies and better understand phenomena. Sharing it is essential.

Innovation is not just technological, it's also social. We need to develop new technical solutions to problems as much as we need to create new forms of social cooperation. 77

Shared governance

Objective 1: Develop and strengthen forums for cooperation and the construction of responses

With the development of this climate and biodiversity plan and the European 100 Towns and Pilot Town programs, the metropolis has set in motion an unprecedented movement of local socio-economic players and residents.

This dynamic needs to be nurtured and structured so that it produces responses.

Beyond the desirable, consultation must bring out the possible. Concertation must have an operational focus, concentrating as often as possible on impact-related issues with tenable objectives.

However, we also need to explore new forms of cooperation and links between players, in order to tap new potential and boost efficiency. This is particularly true of partnerships between the public and private sectors.

This is the ground on which we need to build a genuine shared engineering approach to transition in our region.

Objective 2: Support public policy through science, research and innovation

Today, our region benefits from a long tradition of cooperation between the community and places of knowledge and research.

It's an asset we need to cultivate if we are to preserve our ability to base public policy choices on a solid knowledge base.

Science and innovation are essential to human progress. The challenges of the ecological transition also bring us back to these fundamentals.

It is with this in mind that Dijon Metropole is involved in European research and innovation programs and national university research programs.

These programs nurture knowledge and support a spirit of openness and innovation that must be widely shared.

Extra-territorial coopération

Dijon Metropole, the regional capital, occupies a unique position within the department and the region.

Its dynamic population, economy, university and top-ranking schools are major assets for the region.

Urban, peri-urban and rural areas interact very strongly on a daily basis. Far from the oppositions that are artificially maintained, the reciprocities are real. We need to bring them out into the open and reinforce them.

Food, energy, waste treatment, ecological continuity and mobility (particularly commuting and logistics) are major priorities for our regions, and we need to know how to tackle them within a broad, structured partnership framework.

For these issues, which in reality know no administrative boundaries in the day-to-day lives of local residents, the State, Region, Département, SCOT, EPCI and Metropolis must be able to engage in closer cooperation.

Similarly, when it comes to economic and industrial development, alliances need to be forged with a broader territorial vision, as in the case of the "Bourgogne Industrie" project, to pool engineering resources and carry out projects on a larger scale - this is the whole point of the metropolitan engine.

<u>Objective 1: Build strategic alliances for the gradual relocation of certain sectors of economic activity</u>

The global economy's long-standing trend towards relocation is being called into question by the challenges posed by the ecological transition. However, ecological transition can also be an opportunity to strengthen the resilience of territories and relocate part of their economic flows.

This general trend towards relocation of all or part of the production process has led to a major disconnect between our metropolis and local production capacity. This is particularly true in the food sector, but other sectors could benefit from a reorientation of demand coupled with a reorganization of supply. The development of renewable energies is one example, the data economy another.

<u>Objective 2: Strengthen reciprocity between territories</u>

Sharing value around the challenges of food, ecological continuity, energy, construction and mobility must drive and guide the strengthening of cooperative approaches already underway.

The development of short food circuits, renewable energies, short bio-sourced materials chains and new mobility solutions, are subjects of common interest shared by urban, peri-urban and rural areas

which are intrinsically a source of reciprocity. Stimulating and enhancing this dynamic will also contribute to social cohesion. 79

In this respect, Dijon Metropole would like to work on a more regular basis with the territories of the urban area that are affected by its policies, in order to reinforce mutual benefits. This is particularly true in the areas of food and mobility.

Mobilization

Residents are naturally at the heart of our concerns, and therefore of our approach.

They need to be informed, made aware, trained, mobilized, involved... and listened to. Visions are necessarily diverse, if not divergent, but they need to be understood and taken into account, in order to set the best trajectory, one that offers everyone the possibility of committing themselves in their own way and building their own path.

This free will must be respected, this power to act must be stimulated, but it must also be nourished with the knowledge necessary for everyone to fully grasp the issues at stake, based in particular on the principles of popular education.

Finally, the commitment and involvement of local residents must be expressed in a wide variety of settings, from the most formal to the most informal, in order to maintain an ongoing dialogue that drives change.

Objective: To inform, report on and actively mobilize all residents and socio-economic players in order to consolidate actions on the territory and increase their impact.

Faced with the reality of eco-anxiety or feelings of powerlessness, it's essential to make visible the reality of the progress that is being made every day, by everyone, and which places our territory among the leading territories in the transition at European level.

Regularly reporting on the concrete results of our policies, which can lead to new constraints in the daily lives of residents and stakeholders, is also essential if changes are to make sense.

We therefore need to make a special effort to produce and share reliable, easy-to-read data that shows the concrete results of our actions and the overall trend in which the metropolitan area is moving.

Sharing knowledge and skills

Objective 1: Build and share a common culture of climate and biodiversity in the Territory

Working to ensure that the technicality and complexity of the issues at stake do not make them a subject for specialists only is a major democratic challenge.

Clearly, the issues of global warming and the collapse of biodiversity are particularly demanding in terms of scientific knowledge. What's more, this knowledge is constantly evolving and progressing.

This knowledge must be made accessible to the general public. The metropolitan area has all the assets needed to achieve this ambition: a history that sets the standard for the popularization of science through the invention of the "experimentarium", a rich and active network of researchers involved in the fields of ecological transition, and an extensive network of popular education players.

A constant effort must be made to ensure that a common culture of transition is established and disseminated. The creation of a popular university on climate and biodiversity will meet this objective.

In this respect, the world of culture undoubtedly also has a major role to play. Through storytelling, aesthetics, the diversity of media and the sensitive approach it offers, culture has always had a place in human societies, helping them to get through crises. The commitment of local cultural players, for the benefit of as many people as possible, will be an essential resource in accelerating the transition.

Objective 2: Share and promote experience to accelerate the transition

There are many positive and virtuous initiatives in the region. The need for acceleration encourages greater pooling and sharing of experience.

In fact, showing what's being done is a powerful mobilizing force, and better knowledge of what's being done can help improve the ability to measure overall results.

The sheer number and diversity of projects means that new cooperative tools need to be deployed to link players and aggregate technical and financial data relating to project implementation.

Such tools have two main benefits: they help to bring people together and pool resources (particularly technical and financial), and they generate a knock-on effect by showing what's possible.

Steering the climate and biodiversity plan

The principle of federative governance is enshrined in the metropolitan project. The Climate and Biodiversity Plan will be implemented within this framework and mindset.

The Metropolis is rich in the diversity of the players who make it up, who live it and make it live. The spirit of cooperation, collective intelligence and the ambition to live well together will be the main drivers of the ecological transition.

Finally, governance means dialogue, with everyone and between everyone. It was at the heart of the Climate and Biodiversity Plan, and will be at the heart of its implementation.

Internal management

Internal governance, both political and administrative, and the link with all local elected representatives, takes climate and biodiversity issues into account in a structured way.

The community's administrative organization has been adjusted, as has its political governance, to give greater strength and scope to this plan.

In 2023, a general direction delegated to the climate transition has been created. Its mission is to create the conditions for the coherent implementation of all the city's sectoral policies. To this end, it is piloting the biodiversity strategy, the food strategy and the European 100 Cities and Pilot Cities projects, in view of their systemic dimension.

Implementation of the Climate and Biodiversity Plan will be monitored by this department through three bodies set up and mobilized during the plan's development phase: the Group of elected representatives, the Climate and Biodiversity Technical Committee and the internal Steering Committee.

The Group of elected representatives meets before each meeting of the Metropolitan Council. It is chaired by the vice-president in charge of ecological transition and brings together elected representatives whose delegations are directly linked to ecological issues (biodiversity, water, food, etc.). Its scope may, however, vary according to the issues addressed. During these meetings, a link is established between elected representatives and the executive management team in charge of climate transition. In particular, strategic orientations are discussed before being proposed to the executive. A progress report on work and actions in progress is also provided. The Climate and Biodiversity Technical Committee, which also meets three times a year, is a cross-functional technical body chaired by the Executive Vice President for Climate Transition, and comprising directors and department heads representing all the local authority's delegated departments. It is at the technical heart of the emergence and consolidation of a systemic vision of the local authority's actions.

The Climate and Biodiversity Plan Internal Steering Committee meets once a year, two months before the Monitoring Committee. This internal Steering Committee ensures that technical information is effectively fed into the local authority's management, enabling informed strategic decision-making.

In addition to these bodies, the position of the executive vice-president in the organization chart provides a continuous link with general management as a whole, the executive and the various political bodies.

The mutualization scheme also needs to be strengthened in terms of climate and biodiversity, so that all the communes making up the metropolis can benefit from common engineering, shared experience and skills, and can cooperate to bring projects to fruition. The management of the region's vulnerabilities must also be structured within this framework.

Attention paid to the involvement of local players

The involvement of every player, every inhabitant, in his or her own way and with his or her own capacities, is essential to make the transition a success and preserve the quality of life and economic dynamism of our metropolis and neighboring areas.

The metropolis intends to make this commitment possible for everyone, and to make the most of it by creating links, making some a resource or a source of inspiration for others, and supporting pooling, partnerships and cooperative ventures...

But this involvement must be structured and controlled.

Dijon Metropole's determination to mobilize a wide range of people around the development and implementation of the ecological transition is bearing fruit. The circle of players involved is now significantly enlarged around a number of flagship projects, in particular:

• The Metropolitan Contract for Climate and Biodiversity (European 100 cities program)

• The European Pilot City program

• The food transition strategy, ProDij

These three policies, which are structuring for the region, have in common that they pay particular attention to mobilizing local residents, involving research players and bringing together the public and private sectors.

Many other projects mobilize a broad partnership around the metropolis, and such mobilization calls for a high level of vigilance when it comes to managing all these bodies and the "dialogue of productions".

The purpose of the Climate and Biodiversity Plan Monitoring Committee, a very broad and open body, is to synthesize all this work and action, and to contribute to its sharing. The Monitoring Committee meets annually and brings together local experts, qualified individuals, companies, socio-economic players, civil servants, elected representatives and local authority managers. Its aim is to inform and share information on the progress of cooperative ventures, while addressing both Territorial Engineering and concrete projects. The meeting offers a global and inclusive vision of climate and biodiversity actions, combining the local authority's in-house expertise with that of external local players.

A detailed list of the various bodies and their participants can be found in the appendix. In addition to these meetings, ongoing communication must also be organized.

Stimulating these cooperative ventures, crossing certain boundaries (public/private in particular), is an essential resource for the transition.

Financing the transition

In its report of April 17, 2024, the Inspectorate General of Finance estimates the cost of the investments needed to make the ecological transition a success at 21 billion euros a year between now and 2030 for local authorities; 6 billion euros a year for adapting and preserving ecosystems, 15 billion euros a year for reducing emissions.

In this scenario, the cost of the transition would represent 40% of the community's capital expenditure, according to the same report.

While work is progressing on quantifying the expenditure involved, the methods of financing such amounts remain unclear, at a time when local authorities' room for manoeuvre has been steadily

shrinking in recent years, and access to State and Regional funding has become more complex overall.

While this situation reinforces the local authority's determination to strengthen the region's ability to attract private funding, it also calls for great caution in the choice of priorities and, to this end, for the ongoing strengthening of its financial management and assessment tools.

With this in mind, Dijon Metropole has set up a consultancy and evaluation department which integrates both environmental management control (2024 Innovation Prize on environmental management dialogue) and public policy evaluation functions.

What's more, the Finance Department has already been able to experiment with budget rating tools, which puts the metropolis in a very favourable position for the forthcoming implementation of green budgets. In view of its level of maturity in this field, it is also regularly involved in work carried out by various private and public bodies on the subject.

The Climate City Contract

The Climate City Contract, which will be proposed to the European Commission as part of the "100 climate-neutral and intelligent cities" program, is a document that combines:

• The climate and biodiversity plan, which presents the metropolitan strategy and specifies the conditions for mobilizing residents

• The metropolitan contract for climate and biodiversity, which represents a first level of shared commitment between the metropolis and socio-economic players. It is an experimental approach that is intended to be operational and to be extended to other willing socio-economic players.

• Assessment of a territorial financial trajectory for the transition. Based on all our work, this is an attempt to territorialize a possible financial trajectory for a successful transition, at the level of all players.

Based on the 100 Climate City Contracts it receives, Europe will have an improved vision of the role of cities in the transition, enabling it to better guide its support measures.

2 Part A – Current State of Climate Action

2.1 Module A-1 Greenhouse Gas Emissions Baseline Inventory

GhG Emissions Baseline inventory

The scope 1 and 2 emissions inventory of the climate and biodiversity plan covers the entire metropolitan area and all sectors: buildings, mobility, energy industry, industry, waste and agriculture.

The methodology used is issued by the national taskforce for the standardization of territorial emission inventories ("Pôle de Coordination national sur les Inventaires d'émission Territoriaux - PCIT). This taskforce is managed by the department of Energy and Climate from the ministry of environment (Direction Générale de l'Energie et du Climat (DGEC) and is composed mainly of the ATMO federation (national federation of air quality monitoring networks), the CITEPA and the INERIS. The guides produced by this taskforce ensures the proper application of the reference methods form the IPCC in the production of local / territorial data and the consistency of the GHG emissions between regional districts and the national scale.

The inventory of greenhouse gas emissions covers all areas of the metropolitan's activities, including scope 1 and 2: buildings (tertiary & residential), mobility, energy industry, manufacturing industry, waste and agriculture. This inventory is completed by the production of a carbon footprint, known as the Territory's carbon balance, incorporating scope 3.

The methodological details on GHG balances

	Territorial inventory	Territorial Carbon Footprint
Perimeter	Scopes 1 and 2 (approach limited to territorial boundaries)	Scopes 1, 2 and 3 (no geographical limits)
Structuring	Sectors of activity	Sectors of activity and consumption items (food, consumption)
Data source	Inventory 2022 ATMO Bourgogne Franche Comté	**Direct emissions :** • Inventory 2022 ATMO Bourgogne Franche Comté **Direct emissions :** • ATMO (transport excluding DM) • BD TOPO (roads) • Observatoire & Perspectives DM 2021 (construction) • MyCO2 (supply, consumption)
Gas included	CO2, CH4 and N2O	CO2, CH4 and N2O

2010 is the reference year for Dijon Metropole's Climate and Biodiversity Plan, as it was in 2010 that the city developed its strategy for reducing greenhouse gas emissions.
However, Dijon Metropole has defined its objectives for 2030 and the action plan to be implemented, with 2022 as the base year.

We therefore fully agree to consider 2022 as the reference year for the FAASST project in the evaluation section.

A-1.1: Final energy use by source sectors			
Base year	2010		
Unit	MWh		
	Scope 1	Scope 2	Scope 3
Buildings	2 244 513	1 244 677	-
(Fuel type/ energy used)	Oil products: 187 834 Natural Gas: 1 767 826 Renewable Energies: 102 147 Heating networks: 186 705	Electricity (network): 1 244 677	/
Transport	1 276 911	31 272	/
(Fuel type/ energy used)	Oil products: 1 084 203 Natural gas: 3 453 Renewable energies: 67 493	Electricity: 31 272	/
Waste	279 139	/	/
(Fuel type/ energy used)	Renewable energies: 139 570 Other energies: 139 570	/	/
Industrial Process and ProductUse (IPPU)	376 099	299 726	/
(Fuel type/ energy used)	Oil products: 134 738 Natural gas: 241 361	Electricity: 299 726	/
Agricultural, Forestry and Land Use (AFOLU)	17 591	2 372	
(Fuel type/ energy used)	Oil products: 11 154 Natural gas: 3 798 Other energies: 2 640	Electricity: 2 372	/

A-1.1: Final energy use by source sectors			
Base year	2022		
Unit	Mwh		
	Scope 1	Scope 2	Scope 3
Buildings	1 544 938	1 059 977	/
(Fuel type/ energy used)	Oil products: 92 306	Electricity: 1 059 977	/

	Natural Gas: 929 103 Renewable Energies:92 813 Heating networks: 430 715		
Transport	1 248 014	21 712	/
(Fuel type/ energy used)	Oil products: 1 124 103 Natural gas: 16 016 Renewable Energies: 107 896	Electricity: 21 712	/
Waste	360 377	/	/
(Fuel type/ energy used)	Renewable energies: 180 189 Other renewable energies: 180 189	/	/
Industrial Process and Product Use (IPPU)	263 817	285 464	
(Fuel type/ energy used)	Oil products: 109 345 Natural gas: 152 974 Renewable Energies: 1 498	/	/
Agricultural, Forestry and Land Use (AFOLU)	16 278	1 814	/
(Fuel type/ energy used)	Oil products: 11 145 Natural gas: 2 549 Other Renewable Energies: 2 584	Electricity: 1 814	/

The transport and buildings sectors will account for 80% of the region's energy consumption in 2022.
55% of energy consumption comes from fossil fuels. Three main energy carriers dominate: electricity, petroleum products and gas. Electricity, mainly produced by nuclear power stations, accounts for 29% of the region's consumption. Petroleum products, used mainly in the transport sector, account for 28% of energy consumption. Gas accounts for 23% of energy consumption.

A-1.3: GHG emissions by source sectors				
Base year	2010			
Unit	tCO2eq			
	Scope 1	Scope 2	Scope 3	Total
Buildings	359 912	98 329	/	458 241
Transport	307 669	2 470	/	310 139
Energy Industry	114 425	/	/	114 425
Waste	82 675	/	/	82 675
Industrial Process and Product Use (IPPU)	68 466	23 678	/	92 144

Agricultural, Forestry and Land Use (AFOLU)	13 049	187	/	13 236
Total	946 195	124 664	/	1 070 859

A-1.3: GHG emissions by source sectors				
Base year	2022			
Unit	tCO2eq			
	Scope 1	Scope 2	Scope 3	Total
Buildings	253 371	44 701	/	298 072
(Fuel type/ energy used)	Oil products: 26 567 Natural Gas: 195 219 Heating networks: 31 585	Electricity: 44 701		
Transport	307 270	919	/	308 189
(Fuel type/ energy used)	Oil products: 303 849 Natural Gas: 3 421	Electricity: 919		
Energy Industry	54 039	/	/	54 039
(Fuel type/ energy used)	Natural Gas: 11 211 Thermal renewable Energies:42 828	/	/	
Waste	73 267	/	/	73 267
(Fuel type/ energy used)	Thermal renewable Energies:73 267		/	
Industrial Process and Product Use (IPPU)	65 395	11 902	/	77 297
(Fuel type/ energy used)	Oil products: 32 132 Natural Gas: 33 263	Electricity: 11 902	/	
Agricultural, Forestry and Land Use (AFOLU)	9 377	92	/	9 469
(Fuel type/ energy used)	Oil products: 3 282 Natural Gas: 518 Other fuel: 1 272 Non-energy: 4 304	Electricity : 92	/	
Total	762 719	57 614	/	820 333

The transport, buildings and energy industry sectors will account for 80% of the region's greenhouse gas emissions in 2022.

Between 2010 and 2022, greenhouse gas emissions will have been reduced by 23%. However, there are major disparities between sectors. The residential sector has seen its greenhouse gas emissions fall by 41%, while the transport sector has seen its greenhouse gas emissions stagnate.

A-1.2: Emission factors applied

Base year : 2022

Unit : tCO2eq

the reference methods form the IPCC

Emission Sectors	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	F-gases (hydrofluorocarbons and perfluorocarbons)	Sulphur hexafluoride (SF_6)	Nitrogen trifluoride (NF_3)
Buildings	291 628	2146	805	/	/	/
Transport	278277	381	2898	/	/	/
Energy Industry	90181	6880	1317	/	/	/
Waste	63311	11529	2535	/	/	/
Industrial Process and Product Use (IPPU)	74611	71	3292	/	/	/
Agricultural, Forestry and Land Use (AFOLU)	3546	1316	4829	/	/	/

The methodology currently used accounts for greenhouse gas emissions of the 3 main gases: carbon dioxide, methane and nitrous oxide. The methodology should gradually be extended to other greenhouse gases.

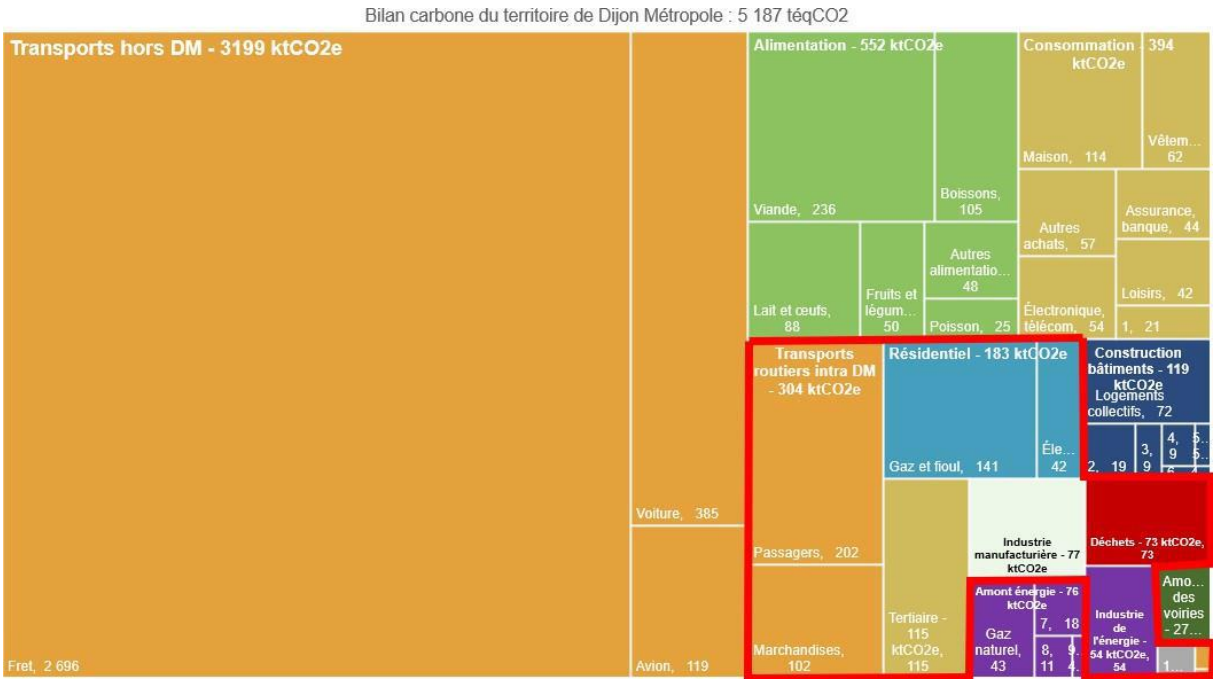
A-1.4: Activity by source sectors.

Base year: 2022

	GWh	TCO2eq
Buildings	2 605	298 072
Residential	1 445	183 327
Tertiary	1 160	114 745
Transport	1 270	308 189
Light duty vehicles	617	
Heavy goods vehicules	624	
Road transport	1 241	304 297
No-road transport	29	3 892
Renewable Energies Production		

recovery of waste heat from the household waste incinerator	136	
Biomass	275	
Electricity	20	
hydrogen	0	
Biomethan	10	

The Dijon Metropole's carbon footprint, including direct and indirect emissions linked to the region's activities (scopes 1, 2 and 3).



Direct emissions

The Territory carbon footprint has been assessed for the year 2022. Its aim is to go beyond the cadastral vision of the territorial inventory of direct emissions and identify the territory's dependence on "imported emissions". The aim is to identify additional levers for action by integrating the complete life cycle of products, so as to be able to act on all our activities.
The carbon footprint therefore includes not only the greenhouse gas emissions emitted directly on the site, but also all the greenhouse gas emissions directly linked to the company's activity and for which it has a significant share of responsibility. In this way, indirect greenhouse gas emissions, known as Scope 3 emissions, are included:

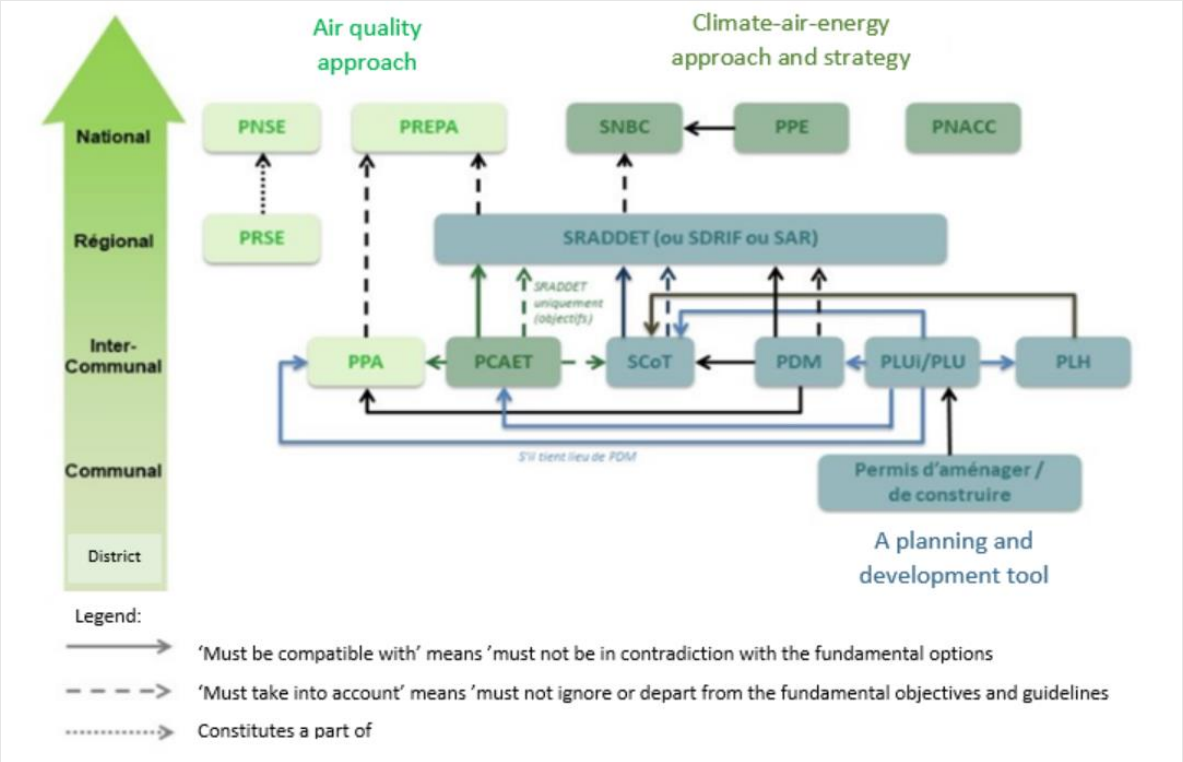
- Travel outside our territory (e.g. our air travel for vacations or the transport of goods we buy).
- The manufacture of our goods outside our territory (e.g. the manufacture of our washing machine and our car in Asia),
- The production of our food (for example: the production of the Spanish vegetables we eat, the industrial manufacture of our yoghurts...).

The scope is detailed as follows:
• Direct emissions, divided into 8 sub-items. These include all the emission categories of a regulatory PCAET: road transport, non-road transport, residential, tertiary, industry, energy industry, waste treatment and agriculture;
• Indirect emissions, divided into 6 sub-items: "upstream energy" GHG emissions, due to the extraction of materials (oil, gas), their transport and processing; transport outside Dijon Metropole with a link to the territory (cars and trucks to and from the metropolis); building construction (in 2022); amortization of road construction; emissions outside the metropolis due to food; emissions linked to the various consumption habits of residents.

84% of our greenhouse gas emissions are emitted outside the region. Emissions linked to the transport of goods to Dijon Metropole represent almost half of the territory's overall carbon footprint, and 62% if we add the transport of people by car or plane.
We can immediately see that freight represents a major challenge for decarbonization.
With a share of 10% and 8% respectively in the overall balance sheet, food and consumer goods are the two largest emission sectors after transport.
These three sectors are as much a part of our everyday purchasing habits as they are of supply, but they are as dependent on demand as they are on supply.
It should be noted that construction accounts for only 2% of total emissions in mainland France.

2.2 Module A-2 Current Policies and Strategies Assessment

A-2.1: Description & assessment of policies



PLU: Local urban developement plan
PLU: Local housing plan
PDU: Urban mobility plan
SCOT: Territorial coherence plan
PCAET: territorial climate-air-energy plan
PPA: atmospheric protection plan
SRADDET: regional plan for development, sustainable development and territorial equality
SNBC: national low-carbon strategy
PPE: multi-annual energy planning
PNACC: national climate change adaptation plan
PRSE: regional environmental health plan
PNSE: national environmental health plan
PREPA: national plan to reduce emissions of atmospheric pollutants

European Scale :

Legislation	Description
European Green Deal	The first objective is to reduce net GHG emissions by at least 55% by 2030.
SECAP of Covenant of Mayors for Climate & Energy	An initiative that brings together local authorities committed to reducing emissions by 55% by 2030, building resilience and reporting on progress.

National Scale :

Loi de Transition Energétique pour la Croissance Verte (2015)	The law aims to enable France to contribute more effectively to the fight against global warming and the preservation of the environment, as well as to strengthen its energy independence while offering its businesses and citizens access to energy at a competitive cost.
Programmation Pluriannuelle de l'Energie (PPE)	An energy policy management tool that sets the priorities for government action in the field of energy.
PNPD (Plan national de prévention des déchets)	Led by the French Ministry of Ecological Transition, it aims to provide an overall vision of the strategic orientations of public policy on waste prevention and the actions to be implemented.
Stratégie nationale d'économie circulaire	Aims to accelerate waste recycling and the transition to a circular economy. The Recyclability, Recycling and Reincorporation of Materials strategy aims to meet these challenges for 5 materials.
Stratégie nationale biodiversité (SNB)	Reflects France's commitment under the International Convention on Biological Diversity (reduce pressures, protect and restore ecosystems, bring about change).
PREPA (Plan national de réduction des émissions de polluants atmosphériques) 2022-2025	It sets out the government's strategy for reducing atmospheric pollutant emissions at national level to meet European requirements.

Regional Scale :

SDAGE Rhône-Méditerranée 2022-2027	This master plan sets out the strategy for achieving good status for aquatic environments in the Rhône-Méditerranée basin by 2027.
SNBC (Stratégie Nationale Bas Carbone)	The National Low-Carbon Strategy (SNBC) is France's roadmap for combating climate change. It sets out guidelines for implementing the transition to a low-carbon, circular and sustainable economy in all sectors of activity. It defines a trajectory for reducing greenhouse gas emissions up to 2050, and sets short- and medium-term objectives: carbon budgets.
SRADDET _ Schéma Régional d'Aménagement, de Développement Durable et d'Égalité des Territoires	SRADDET (= Regional plan for land use, sustainable development and territorial equality) is a strategic planning document drawn up by the Bourgogne-Franche-Comté region. It aims to coordinate and harmonize public policies in a number of key areas, with a view to the balanced and sustainable development of regional territories
SRCAE (Schéma Régional du Climat, de l'Air et de l'Energie de Bourgogne)	Its guidelines are designed to facilitate and reinforce the regional coherence of public policies by integrating the issues of air pollution, air quality, reducing GHG emissions, developing renewable energies and adapting territories to the impacts of climate change.
SRCE (Schéma régional de cohérence écologique de Bourgogne)	Approved in March 2015, it defines the regional green and blue grid and the main guidelines associated with the spaces that make it up through a strategic action plan.
Stratégie Régionale pour la biodiversité de BFC 2020-2030	The aim is to develop a common framework for intervention and initiate a dynamic at all decision-making levels. Since 2020, with the help of the Agence Régionale de la Biodiversité (Regional Biodiversity Agency), the Region has been working to implement this strategy in all its areas of intervention.

Departmental Scale :

SAGE de l'Ouche	This tool makes it possible to plan a comprehensive water management policy on a watershed scale. The aim is to define acceptable conditions for a sustainable balance between protecting aquatic environments and satisfying water uses.
SAGE de la Vouge	Based on the same principle as the Ouche SAGE, it was adopted in 2014, with the aim of "preserving and restoring the quality of watercourses and their ancillary environments by improving their morphological and ecological functioning".
SAGE de la Tille	Adopted in 2022, the document aims to preserve and improve the functionality of watercourses and wetlands.

Local Scale :

SCoT	A reference framework for development, urban planning, housing, mobility, commercial development and environmental policies... Approved on October 9, 2019, it places particular emphasis on protecting biodiversity reservoirs, preserving ecological corridors over time and maintaining the blue framework in good ecological condition.
PLUiHD (Plan Local d'Urbanisme Intercommunal equivalent to Programme Local de l'Habitat et Déplacements)	The PLUIHD is an urban planning document drawn up at inter-municipal level in France. It combines several essential aspects of regional planning and local development, notably urban planning, housing and transport. It must be compatible with the PCAET. It also defines the territory's green and blue networks.
Schéma directeur cyclable 2023-2030	The aim is to enable as many people as possible to get around the metropolitan area by bike, whatever the journey. In order to achieve a 12% modal share of cycling by 2030, we need to reassure and secure the many users who are ready to use bicycles.
Dijon, Alimentation durable 2030 : ProDij	Dijon Metropole aims to demonstrate that the move towards a sustainable food system is an opportunity to transform a territory, from an environmental, economic and social point of view, and wishes to federate as many public, private, academic and industrial players as possible, as well as residents, and to involve several local authorities.
PPA (Plan de Protection de l'Atmosphère)	Approved in 2014, it is an action plan that aims to reduce emissions of atmospheric pollutants and maintain or reduce pollutant concentrations in the area concerned to levels below the standards set by regulations.
SDE (Schéma directeur des énergies)	The SDE (Energy Master Plan) is a strategic document drawn up by a local authority, a region or an inter-municipality, aimed at defining the orientations and priority actions in terms of energy policy for a given territory. It is essential for planning the energy transition, improving energy efficiency and promoting renewable energies.

The portfolio of actions takes account of all the policies pursued. Ambitions set at a higher level may hamper the implementation, at local level, of ambitions to be neutral by 2030.

Climate Policy	Key policy actions	Policy Status	Description of the policy (sector, targeted audience, etc.)
Mobility	Cycling master plan 2023-2030	In process	The city's objective: to increase the proportion of of journeys made by bicycle to 12% within seven compared with 3% today. In all, more than 1,000 kilometres of roadway are being 'corrected'. Dijon Métropole intends to develop cycling to the detriment of 'auto-solism', with the aim of maintain a good walking rate (30%) and erode the car's share (53%).
	Urban logistics policy	Developement	The metropolis has carried out a process of all the economic and institutional economic and institutional players to co-define the ambitions of this new urban logistics policy urban logistics policy, the aim of which is to goods in order to : - Make urban logistics a lever the energy transition by reducing the environmental impact of goods flows; - Calming Dijon's city centre, the heart city centre with its preserved heritage, and improve the quality of life for of the city; - Improve the efficiency of freight goods transport and reduce negative externalities; - Strengthen the attractiveness and competitiveness of its territory
	Divia as a global mobilty operator	In process	Management of all of the city's mobility services, under the DiviaMobilités brand: bus & tram, multi-storey car parks, on-street parking, car impound, car-sharing, bike hire and self-service.

Housing and Buildings	Eco-districts and urban design practices	In process	Development projects implemented in the Dijon metropolitan area with the aim of improving the quality of life in housing by taking into account the future climate challenges
	Renoveco Urban renovation program	In process	Rénovéco Dijon métropole is a free, objective and personalised public service aimed at all owners or co-owners - occupiers or landlords - of a dwelling located in one of the 23 communes of Dijon métropole.
	Plui-HD and SCOT revision	In process	The Local Intercommunal Urban Plan for Housing and Transport, which plans the development of the conurbation in terms of both housing and business premises.
Energy production	Solarisation program for metropolitan buildings	In process	The production of solar-generated electricity will support the self-consumption of the city's buildings and the electrification of mobility infrastructure, in particular powering the tramway, thereby helping to reduce CO_2 emissions.

	Metropolitan heating network	In process	The metropolitan district heating network distributes around 450 GWh/year of heat to connected customers. Thanks to the installation of a heat exchanger heat exchanger in the energy recovery energy recovery unit (UVE), Dijon métropole recovers the thermal heat produced by from the incineration of household waste 150 GWh/year, i.e. a third of the heat consumed.
	SEM Energies as a global energy territorial operator	Developement	Study into the creation and implementation of a SEM Energies to facilitate the deployment of energy production projects in the metropolitan area (photovoltaic electricity production and biomass heat production).
Production and consommation of good and services	Circular economy	In process	Dijon metropole, as part of this approach, is committed to giving priority to its development and/or construction operations to encourage the re-use of materials in order to reduce the volume of waste
	Industrial Territory to support industrry decarbonizatio n	Developement	Economic cooperation to: decarbonise industry, produce renewable energy and build sustainable buildings, encourage innovation and research to serve industry, develop the attractiveness of industrial professions and skills, and mobilise land to re-industrialise the area
Water	Revegetation and soil drainage	In process	Provisions limiting waterproofing and promoting biodiversity, such as the planting of one tree for every 100 m² of open space, the identification of 163 remarkable trees, 54 wooded areas (EBC), 169 areas of landscape and ecological interest (EIPE), 700 natural continuities to be preserved and 8 to be created. to be preserved and 8 to be created
	Anticipating the effects of climate change	In process	Prospective study to anticipate the effects of climate change and define an adaptation strategy, with the aim of : define the changes in use in our territory that will be impacted by the expected changes in climate by 2050, identify an adaptation strategy, plan the actions and investments needed to anticipate the effects of climate change on water resources. water resources.

	on water resources		
Sustainable agriculture	Prodij 'Eat Better, Produce Better' programme	In process	Joint contract for the preparation and supply of meals for school restaurants, out-of-school facilities and early childhood facilities for 23 cities of the metropolis
	Dijon sustainable food 2030	In process	Food transition towards local, quality production, including processing and distribution. Food is sourced from six producers on the Manger bio Bourgogne-Franche-Comté platform, five in the Côte-d'Or, one in the Jura and one in the Bourgogne-Franche-Comté region.
	"Chouette cantine" programm	In process	Since 2022, the 'Chouette cantine' programme has been studying children's food satisfaction using a system of satisfaction terminals. It also the importance of awareness-raising awareness-raising workshops among schoolchildren.
Health and living environment	Local health contract 2024-2028	In process	Improving access to rights and healthcare, in particular by developing coordinated practice and experimenting with health mediation in areas with the most vulnerable populations : Promoting mental health by deploying awareness-raising and training initiatives and training, and by strengthening the mobile home care team (EMAS); Promoting the health of children and young people in the following areas: parenting, psychosocial skills, nutrition and addictive behaviour; Invest in environmental health, particularly in the fields of run-down housing, indoor air quality and vector-borne infectious diseases; Set up a dedicated engineering department, with the appointment of a coordinator, shared between the City of Dijon and Dijon Métropole.

	Low emission zone - mobility	Developement	The French Climate and Resilience Act requires urban areas with more than 150,000 inhabitants to create m-FTAs by 1 January 2025, in order to reduce nitrogen dioxide (NO2) emissions by banning polluting vehicles. Since 2019, Dijon has already been below the new European thresholds to be applied by 2030. Despite this, the city still needs to set up a ZFE-m. The perimeter of the ZFE-m will cover the whole of the metropolitan area within the limits defined by the major roads.
	Development of cool islands	In process	On the basis of the mapping of urban heat islands in the Dijon Metropolitan area, trees are to be planted in the various development projects to help develop cool islands and provide a quality landscape and environment.
Services provided by nature	Encouraging biodiversity corridors, 'Ecojardin' label	In process	Coordinating the introduction of ecological management to promote biodiversity corridors in the area with 7 organisations (uB, Inrae, Institut Agro Sup, CRDP, Crous, Dijon city council and Dijon metropole) covering an area of almost 130 ha
	"Expert Soils" and "Soil change" projects	Developement	The brown grid encompasses all types of soil, whether natural, agricultural, forestry or even urban, such as the soils of green spaces, whether degraded or not. It represents all the soil reservoirs and corridors that play an essential role in maintaining the ecological functions and continuities necessary for underground life, and constitutes a complex network of abiotic and biotic elements present in the soil; these biotic components refer to the various living elements in the soil, including the many micro-organisms, plants, insects and earthworms. These organisms are essential for various ecological processes such as the decomposition of organic matter, nitrogen fixation and soil fertility. Aware of this major challenge, Dijon métropole has launched these 2 studies.

Scenario Ambitious

	(1) Baseline emissions 2010	(1b) Emissions 2022	(2) Emissions Reduction Target 2030		(4) Emissions Gap		(5) Emissions reduction through the CCC Action Plan to address the Gap		(6) Residual emissions	
	Baseline emissions (ideally not older than 2018) - referring to the inventory used for target setting	Baseline emissions (ideally not older than 2018) - referring to the inventory used for target setting	The emissions reduction target for 2030 ideally achieves a minimum 80% reduction from the baseline, as reported in Section 2 of the Commitments document of the CCC. The overall target should be absolute or net-zero (i.e. including the compensation of any residual emissions).		(4) = (2) – (3)		This column is used to present the already quantified emission reduction associated with the action portfolios outlined in module B-2. Ideally, this equals the gap. If the there is a difference between the reduction potential of the actions specified in module B-2 (for instance because their reduction potential has not been fully estimated or because additional measures will be identified in future iterations), the CCC AP should be explicit about this difference and explain how the difference will be closed. In principle, as long as the difference has not been addressed, it would be considered as part of the residual emissions.		(6) = (1) – (2)	
	tCO2eq	tCO2eq	tCO2eq	(%)	tCO2eq	(%)	tCO2eq	(%)	tCO2eq	(%)
Buildings	458 241	298 072	293 490	64	293 490	64	133 321	45	164 751	36
Transport	310 139	308 189	104 251	44	104 251	44	102 301	98	205888	66
Energy industry	114 425	54 039	84 704	74	84 704	74	24 318	29	29721	26
Total	882 805	660300	482445	45	482445	45	259940	54	400360	55

(5) The targets for 2030 are fixed in relation to 2010. Actions have already been taken between 2010 and 2022, the year in which the emissions inventory will be updated. The action plan covers future actions. It begins on the date on which the Climate and Biodiversity Plan is approved, i.e. 2024. This is why the action plan covers emissions from 2022 onwards.

To built the ambitious scenario, 3 trajectories have been drawn up:

-The co-constructed trajectory resulting from the workshops and co-constructed and technically consolidated by the various internal bodies of the metropolis

-The trajectory of regional objectives

-The trajectory of national objectives, in line with the European objectives of -55% greenhouse gas emissions by 2030

The trajectory has been constructed on the basis of actions to be implemented, in order to make it as realistic as possible, even if it is already extremely ambitious.

For each sector, levers have been identified and their impact quantified in terms of both energy consumption and greenhouse gases.

To achieve our mobility objectives, we will need to:

- Reduce mobility flows by 10%, while maintaining heavy goods vehicle flows, which are currently forecast to increase by 10% if we follow the trend.
- Reduce commuter traffic by 10,000 vehicles per day (construction of transport hubs, etc.).
- 15% modal shift to cycling, walking and public transport
- 10% conversion to electro-mobility
- Smaller, more fuel-efficient vehicles are favoured over SUVs
- Improving heat engines

To achieve our buildings objectives, we will need to:

- 15% renewable energy in the gas network
- 25% reduction in gas consumption (thermal renovation, condensing boilers, etc.).
- 5% reduction in electricity consumption (uses other than heating) including electrification of uses

- 20% reduction in energy consumption for heating purposes
- Elimination of petroleum products for heating purposes

To achieve our energy industry objectives, we will need to:

- 16% increase in energy consumption by the district heating network and 10% increase in the proportion of renewable energies.
- Massive development of renewable energies (all the region's major projects have been identified, listed and assessed in terms of their impact on the climate)

The costed levers were then reallocated to each action sheet.

On this basis, the action portfolios are then drawn up with the local players. The main actions identified were included in each action sheet, along with an assessment of their quantified impact. (see table of expected impacts by action sheet page 233)

The work of quantifying the actions must continue in order to complete the portfolios of actions drawn up.

Scenario Neutrality

	(1) Baseline emissions 2010	(1b) Emissions 2022	(2) Emissions Reduction Target 2030		(4) Emissions Gap		(5) Emissions reduction through the CCC Action Plan to address the Gap		(6) Residual emissions	
	Baseline emissions (ideally not older than 2018) - referring to the inventory used for target setting	Baseline emissions (ideally not older than 2018) - referring to the inventory used for target setting	The emissions reduction target for 2030 ideally achieves a minimum 80% reduction from the baseline, as reported in Section 2 of the Commitments document of the CCC. The overall target should be absolute or net-zero (i.e. including the compensation of any residual emissions).		(4) = Neutrality Target– Ambitious Target		This column is used to present the already quantified emission reduction associated with the action portfolios outlined in module B-2. Ideally, this equals the gap. If the there is a difference between the reduction potential of the actions specified in module B-2 (for instance because their reduction potential has not been fully estimated or because additional measures will be identified in future iterations), the CCC AP should be explicit about this difference and explain how the difference will be closed. In principle, as long as the difference has not been addressed, it would be considered as part of the residual emissions.		(6) = (1) – (2)	
	tCO2eq	tCO2eq	tCO2eq	(%)	tCO2eq	(%)	tCO2eq	(%)	tCO2eq	(%)
Buildings	458 241	298 072	453 659	99	160 169	35	133 321	45	4582	1
Transport	310 139	308 189	307 038	99	202787	66	102 301	98	3101	1
Energy industry	114 425	54 039	113 281	99	28577	25	24 318	29	1144	1
Total	882 805	660300	873 978	99	391533	45	259940	54	8827	1

(5) The targets for 2030 are set relative to 2010. Measures have already been taken between 2010 and 2022, when the emissions inventory will be updated. The action plan covers future actions. It begins when the Climate and Biodiversity Plan is approved, i.e. in 2024. This is why the action plan covers emissions from 2022 onwards. The action plan has not been drawn up on the basis of the Neutrality scenario but on the basis of the Ambitious scenario, which is why the same data as in the previous table can be found in this column.

2.3 Module A-3 Systemic Barriers and Opportunities to 2030 Climate Neutrality

Dijon Métropole places cooperation at the heart of its action to promote climate change.

This is why Dijon Métropole has decided to apply consecutively to two programmes:

- The European '100 climate-neutral and intelligent cities' programme, to benefit from the framework and expertise needed to structure our actions.

- The Pilot Cities programme, to work on cooperation mechanisms to create new territorial engineering and new territorial governance.

Cooperation is built within a structured framework that is conducive to innovation and 'action research', making Dijon Métropole a centre for experimentation and innovation.

Systemic obstacles and opportunities to achieve carbon neutrality by 2030 and reduce pressure on ecosystems

Climate issues, like biodiversity issues, are systemic in nature. In other words, they involve a considerable number of factors and an equally considerable number of interactions between these factors.

Territorial scales are extremely intertwined (from local to global), institutional competencies overlap, multiple players are involved and social and economic sensitivities are very high, not to mention the intergenerational nature of an issue for which today's actions will most of the time only have a real effect on the next generation.

Faced with such complexity, there are many obstacles to overcome. The following table highlights some of the obstacles identified, and suggests levers for action.

Barriers	Levers
Financing actions: Implementation by the city, local players or residents	Development of innovative financing solutions, particularly in partnership with private investors
Silo structure prevents the emergence of partnership projects between players and a systemic approach to the area.	Strengthening cooperation
Project completion times difficult to reconcile with the short times required by climate and biodiversity issues	Anticipate the launch of major projects Phasing major projects and highlighting perceptible milestones
The limit of human capacity to absorb major changes	Diversify transition solutions and evolve practices over time
Partial understanding and complexity of local issues and actions	Sharing knowledge Strengthen communication and awareness-raising and help practices evolve over time
Complexity of implementation due to different political decision-making levels (Communal, Intercommunal, Departmental, Regional, National and European)	Strengthening links and cooperation between different decision-making levels
Density of projects to be completed in a short space of time	Implement realistic project planning

Difficulty of access and lack of skills linked to data, methodological differences between players, construction of different indicators which makes it difficult for players to work together.	Development of shared solutions
Importance of the number of players and residents involved in the climate transition to achieve objectives	Rely on volunteers and implement a long-term commitment strategy, diversifying mobilization partners and approaches. Developing shared solutions
The climate transition requires a great deal of research and innovation.	Strengthen capacity to work on innovative projects
A number of issues go beyond the geographical boundaries of the region	Developing extra-territorial cooperation
A system of standards that has not been updated, slowing down the deployment of high-impact actions (e.g., the sizing of installations must now take into account the climatic rigor defined several years earlier).	Lobbying for changes to current standards
Instability and volatility of energy prices	Mutualized approach, setting up collective self-consumption systems, with long-term purchase contracts, storage systems and energy management systems.
Recruitment difficulties in the transition professions	Attractiveness and training of new professions or evolution of existing professions
National regulations	Lobbying to change laws
Public procurement contracts do not allow us to promote the purchase of local products and to work on local and sustainable supply chains (e.g. food products).	Allow local authorities to make food purchases by mutual agreement, using short, sustainable channels.

Systemic transition management:

On regulatory aspects, Dijon métropole has endeavored to assimilate its obligation to draw up a PCAET into the dynamic pursued through the 100 towns program.

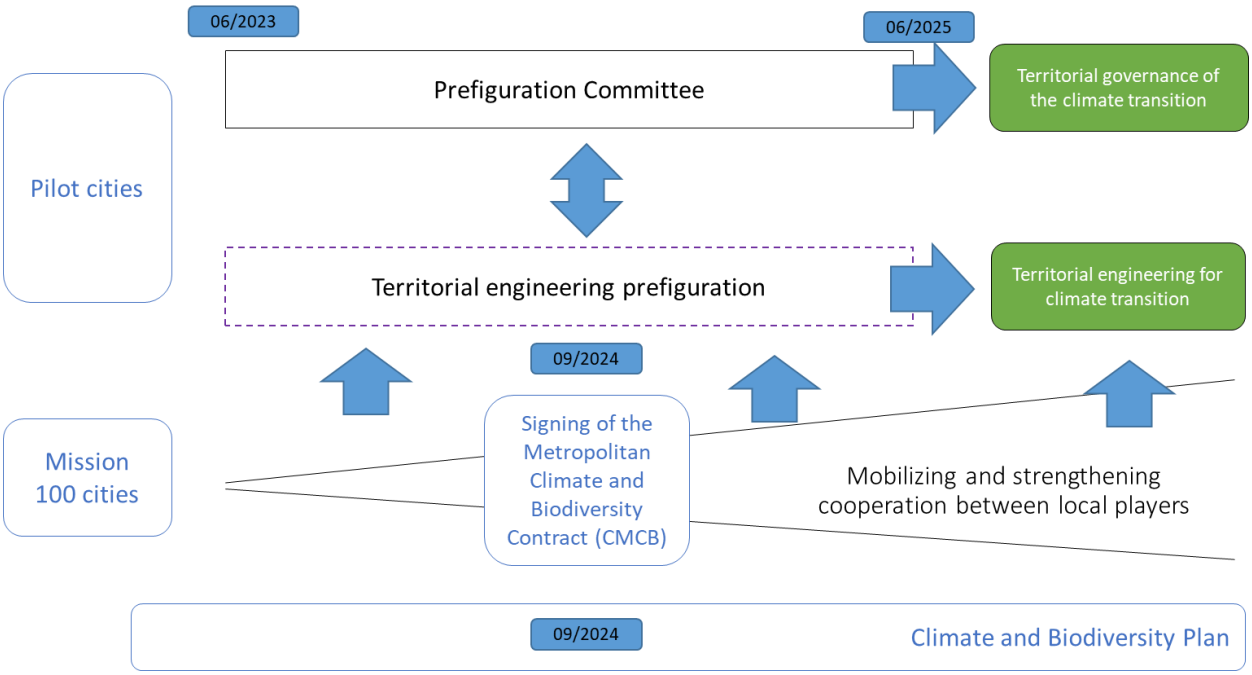
The work of aligning all actions has resulted in the structuring of the following three key documents:

-**Climate and Biodiversity Plan**, and its appendices meeting French regulatory expectations (technical and vulnerability diagnosis, trajectory, etc.), and those specifically structured to steer the transition operationally (energy master plan, etc.),

-**Metropolitan Climate and Biodiversity Contract**, which federates the first twenty or so socio-economic players in the region to aggregate the actions envisaged by each and to measure their overall financial impact and expected results in relation to the objectives of the Pan Climat et Biodiversité,

Plan d'Investissement Territoriale (Territorial Investment Plan), a forward-looking model of the financial trajectory of decarbonization in the metropolitan area.

The link between the approaches are organized as follows:



Dijon métropole's CCC is structurally based on the concatenation of these three documents.

Dijon Métropole's CCC aims to transform the projects carried out in the area in order to enhance their impact on the various objectives set out in the Climate and Biodiversity Plan. The aim is to build a **systemic project challenge** methodology based on :

- **the 14 expected effects defined in the Climate and Biodiversity plan :**

The expected effects represent **all the concrete transformations that the region aims to achieve** through its climate and environmental strategy. They are expressed through fourteen areas of intervention in the ecological transition.

Identifying and analyzing expected effects plays a crucial role in understanding and optimizing the territorial approach. By systematically examining the potential impacts of each action, this approach **highlights the co-benefits** that may emerge from different interventions.

This systemic vision of effects enables us **to identify and maximize synergies** between different actions, optimizing the overall effectiveness of the regional strategy. It also helps to justify investments by demonstrating the multiplicity of benefits generated, over and above direct climatic impacts alone.

Expected effects (x 14)

- Energy-efficient building renovation
- Space planning and efficient building construction
- Flexibility and usage control
- Development of renewable energies (electricity, gas, heat)
- Optimizing and decarbonizing mobility flows within the region
- Reducing, optimizing and decarbonizing incoming and outgoing mobility flows (commuting by car and freight)
- Promoting alternative modes of consumption and waste management
- Promoting alternative waste production and management methods
- Evolution of new management methods for nature areas
- Water conservation on our territory
- Supporting those most vulnerable to change
- Supporting economic players in meeting the challenges of decarbonization
- Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion
- Development favorable to the development of natural ecosystem functions

- **The 5 systemic levers defined by NetZeroCities**

The 5 systemic levers represent the driving forces capable of initiating and sustaining territorial transformation.

Systemic levers are the fundamental transformation mechanisms that make the ecological and climate transition a reality. They manifest themselves through five complementary dimensions: technological solutions, which provide concrete technical answers; governance, which establishes the regulatory and political framework; social innovation, which encourages the adoption of new behaviors; economic and legal models, which ensure the viability of projects; and the development of sectors and capacities, which guarantees the sustainability of transformations. These levers do not operate in isolation, but work together to create a multiplier effect on local transformation.

The purpose of these systemic levers lies in their ability to **structure territorial action in line with strategic reference documents**. They serve as a reading and analysis grid for assessing the robustness of projects with regard to the objectives of the climate plan and other structuring policy frameworks. By examining each project through the prism of these five levers, territorial players can ensure that their initiatives mobilize the dimensions required for sustainable transformation.

This approach also makes it possible to **consolidate an overall vision of territorial projects**, by identifying how each initiative contributes to the various dimensions of transition, and by pinpointing any gaps that need to be filled. Systemic levers thus act as an interface between the strategic vision conveyed by framework documents and the operational implementation of projects on the ground.

This mulit-levers approach recognizes that the ecological transition cannot succeed through tehnical innovation or regulation alone, but requires the coordinated activation of different modes of transformation. Levers act as catalysts which, together, remove barriers to implementation and create the conditions for systemic change.

Systemic action levers (x 5)	
Technological solutions, implementation techniques	*Ex: heat pump* *Ex: tree planting*
Governance (policy and regulation)	*Ex: Partnerships, contractualization (Climate and Biodiversity Contract, for example)* *Ex : Data sharing* *Ex: ZFE or ZAN or PLUI-HD*
Social innovation, new uses	*e.g. car-sharing applications* *E.g.: complementary services at mobility hubs* *E.g.: raising awareness and encouraging action on mitigation and adaptation issues (climate fresco)*
Financing and business models, legal structures, purchasing clauses	*e.g. transport on demand, mobility as a service*
Sectors and capacities	*E.g.: experiments in real-life conditions, innovations (Response project)* *E.g.: training in transition professions, recruitment, network of expertise*

- **The expected benefits defined by NetZeroCities: GHG & energy, health & environment, social, economic, resources and biodiversity**

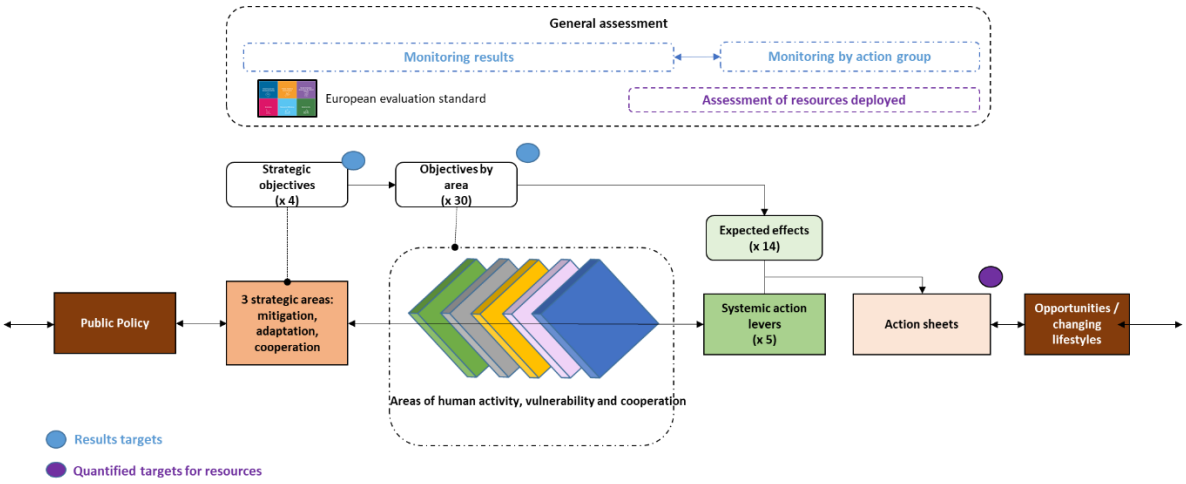
The quest for carbon neutrality is not just an environmental constraint, but generates multiple, mutually reinforcing benefits. Identifying and highlighting the benefits transforms the perception of the ecological transition, from a binding obligation to a genuine opportunity for more balanced and resilient territorial development.

The expected effects, systemic action levers and expected benefits of NZC are integrated into a **systemic transition management system.**

- The systemic transition management system

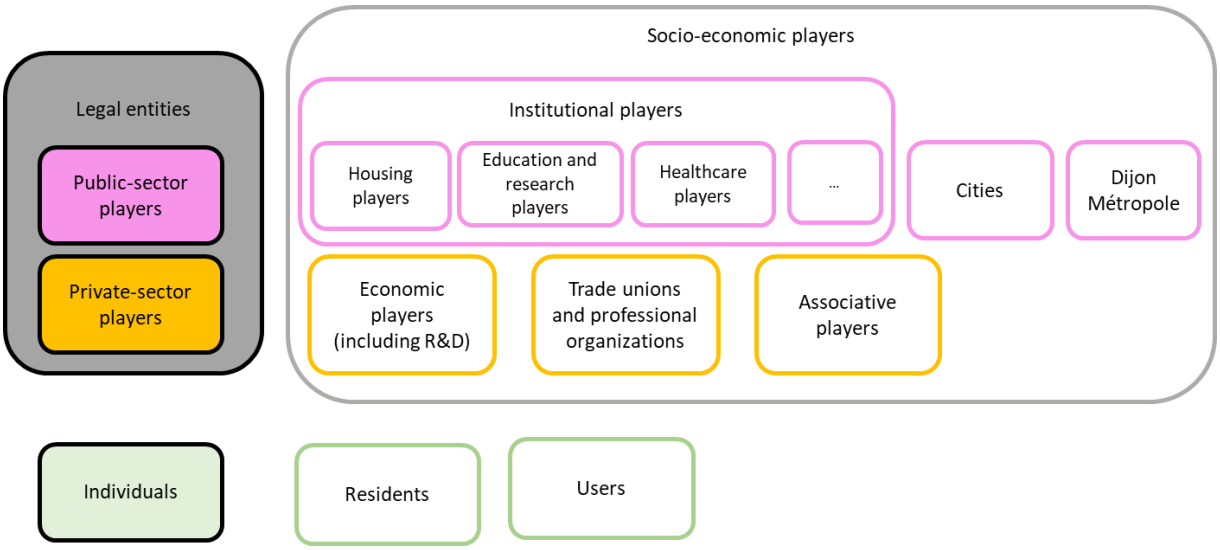
The strength of the Climate and Biodiversity Plan, and thus of the CCC, lies in its systemic approach, which articulates these different components in a coherent overall logic. By linking strategic and domain objectives to concrete actions through expected effects and systemic levers, it creates a solid and comprehensive approach to action. The results of the latter are monitored and evaluated, enabling the approach to be adjusted on an ongoing basis.

In this way, we can move beyond traditional sectoral approaches to adopt a systemic vision of the climate transition. On this basis, the actions needed to achieve the CCC's objectives are designed and implemented.



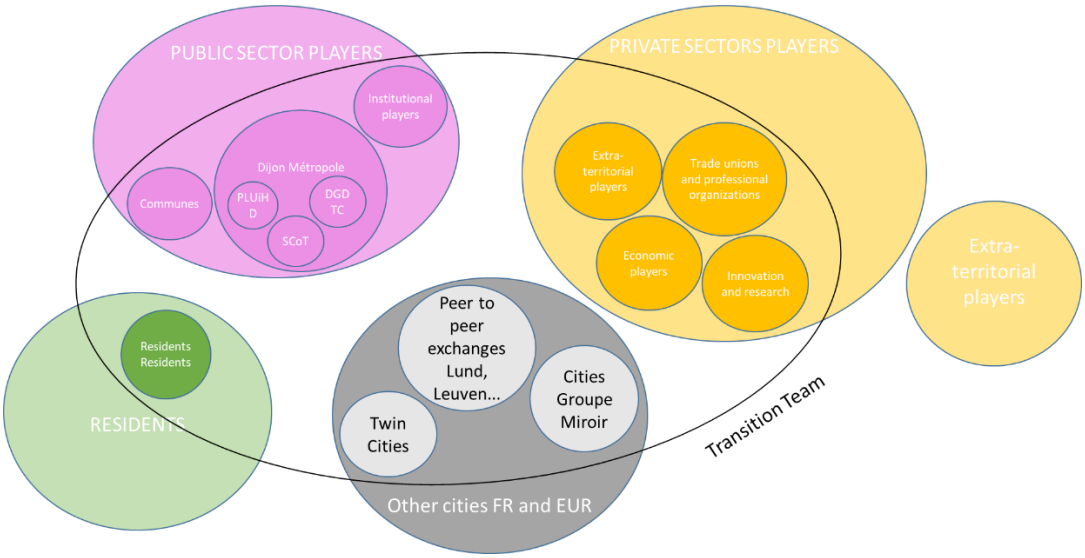
-the stakeholders to be mobilized and the possible cooperative ventures

We identified categories of players involved in the conception and realization of the CCC's actions. Identifying these categories makes it possible to understand the stakeholders involved in each project, action or dedicated governance bodies.



D1: Categories of players involved

These different stakeholders all play a part in achieving the objectives of the Climate and Biodiversity Plan. All the stakeholders in each of these categories can be considered partners in the climate transition, the Transition Team. The following diagram (D2) highlights the mapping of key players in the climate transition in the categories identified in Diagram 1 (D1: Categories of players involved).

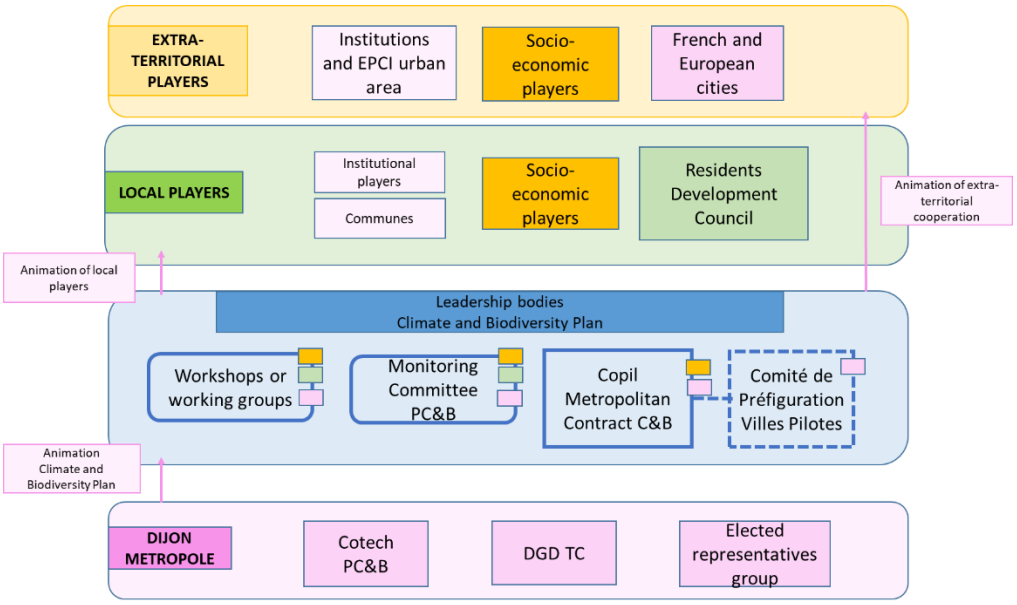


D2: Mapping of key players

The different categories and mapping of the Climate and Biodiversity Plan's partners in the two preceding diagrams (D1, D2) provide a clear representation of the governance framework set up to design and implement the Plan.

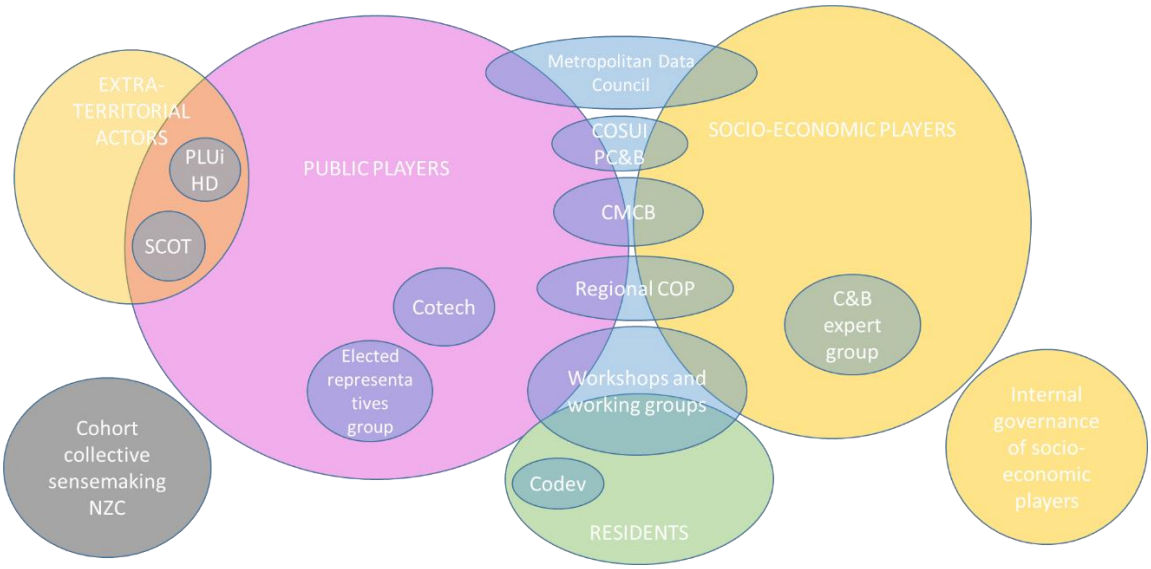
Several levels of governance are involved, from local to regional and European. Through various bodies - Cosui, Copil CMCB, POC and workshops - all territorial and extra-territorial players participate in the governance of the Climate and Biodiversity Plan (represented in blue). Dijon métropole has its own internal governance and steering bodies (shown in pink). All the key bodies are presented in part C-1.

The PC&B governance framework is complex. It brings together different levels of players and decision-making structures, with a view to multi-level coordination and cooperation. Dijon métropole is determined to involve all stakeholders in the development and implementation of the Climate and Biodiversity Plan, to ensure its appropriation and effectiveness across the metropolitan territory, and to continually challenge and enrich this approach.



D3: PC&B governance framework

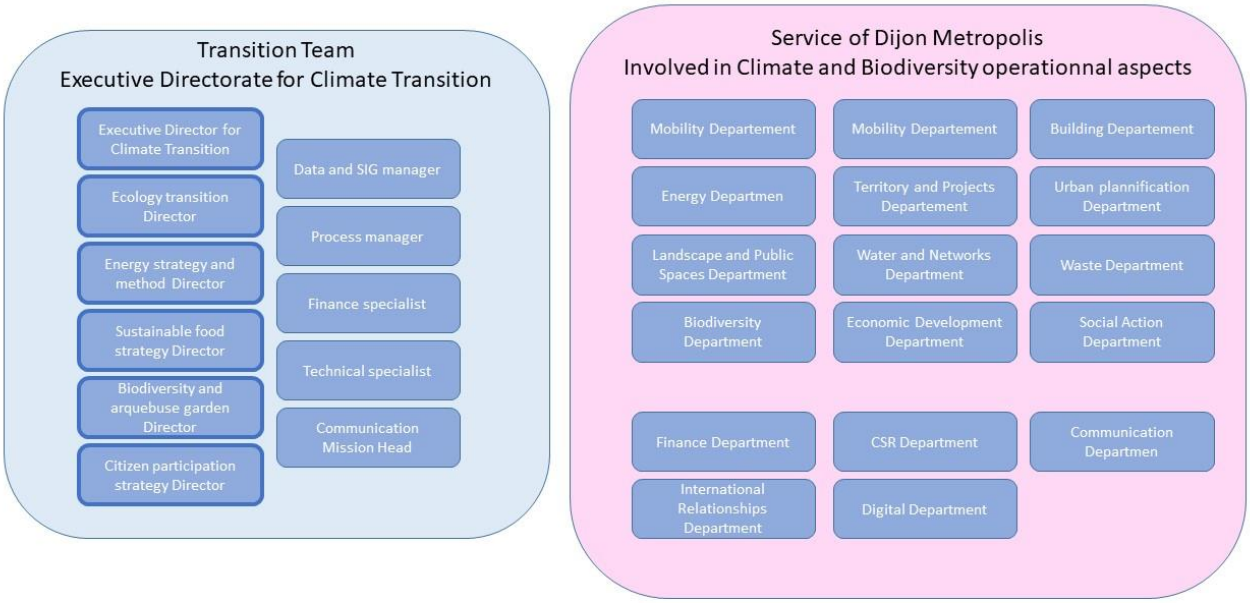
All stakeholders are therefore involved in at least one of the governance bodies of the Climate and Biodiversity Plan. The following diagram (D4) completes the stakeholder mapping (D2) with the governance and steering bodies (D3).



D4: Stakeholders and governance bodies mapping

In terms of internal governance, within Dijon metropole, the Executive Directorate for Climate Transition (DGD) plays a central role in the governance and management of the PC&B. This DGD brings together several key departments that play an essential role in the effective implementation of the Plan.

The project team brings together a wide range of complementary expertise to coordinate and lead strategic actions, while ensuring a cross-functional approach. The DGD also works closely with other metropolitan departments to ensure that climate and biodiversity objectives are integrated into all public policies and metropolitan projects.



In conclusion, the implementation of Dijon Métropole's Climate and Biodiversity Plan (PC&B) is based on organized, systemic management, involving a variety of players and skills to meet the complex challenges of ecological transition. The approach implemented highlights strategic goals, expected results, systemic levers and expected benefits, while encouraging cooperation between various decision-making scales and partners on the territory. This dynamic ensures coherent, global action in line with the objectives of carbon neutrality and safeguarding biodiversity.

Given the complexity of the challenges and the interdependence between the various players and scales involved, the option of cooperaiton has emerged as a strategic requirement. The next section will explain in detail why this cooperative approach was chosen.

A systemic and cooperative climate and biodiversity plan

To achieve **socially just** and **economically sustainable** transitions in climate and biodiversity, we need to take into account the complexity of the issues involved.

The **complexity** of the issues to be addressed, and the need to take into account the interdependencies between multiple stakeholders, require a systemic working approach.

This **systemic logic** associates, groups and considers elements as a whole, focusing on interactions, unlike Cartesian analytical logic, which breaks down and compartmentalizes, focusing on the detail and isolation of variables.

The systemic approach doesn't just draw on the past, but looks to the desired future to influence the present. It is based on key principles:

- Interdependence, where each element is understood in its overall context;
- Feedback or circular causality, where elements act on each other in positive or negative ways;
- Resilience, which enables the system to return to its state of equilibrium after a disturbance;
- Equifinality, which enables the same result to be achieved via different paths, even from different initial conditions.

New forms of cooperative work enable us to provide effective responses to systemic issues of general interest.

The effectiveness of new forms of cooperation will be demonstrated by observing the collective, environmental, social and economic benefits.

Thus, for a socially just and economically sustainable transition, cooperative working is a strategic choice. This choice has nevertheless been studied in order to identify the barriers it helps to overcome and the benefits it brings.

Obstacles overcome by cooperative work

Cooperation overcomes a number of structural barriers that currently restrict the effectiveness and scope of measures and actions taken.

First, cooperation overcomes the **lack of coordination between the various players involved** in the PC&B, which is often limited by a silo-based organization. By encouraging the creation of networks and dialogue between stakeholders, it optimizes communication, reduces misunderstanding and accelerates the transmission of information. It also help to prevent duplication of effort, harmonize priorities and ensure that decisions are relevant and consistent.

Cooperation also helps to **overcome competition between projects** and **encourages synergies** between existing initiatives. The coordination of actions and the pooling of resources, particularly financial resources, enable a more efficient use of resources. This global approach amplifies the effect of measures, while extending their scope and relevance.

Finally, cooperation **simplifies the monitoring and evaluation of measures and actions**. Exchanging data, tools and skills facilitates the collection of essential information for monitoring indicators and assessing results. This makes it easier to demonstrate the impact of the measures taken, and to make any adjustments required to ensure that established objectives are met.

Benefits of cooperation

By removing systemic obstacles, cooperation is already showing its first benefits. In addition, other complementary benefits have been identified:

- **Bringing a global vision :**

This working approach promotes a global perception of the region's climate and biodiversity challenges. The synergy created by sharing expertise, skills and resources enriches the capacity for collective action. The result is a clearer picture of the interdependencies between processes, players, etc., making it easier to coordinate activities and anticipate risks. The result is a more efficient and sustainable organizational approach.

- **Enhanced resilience**

The distribution of financial, technological and operational risks among the various partners reduces individual exposure to these risks.

Strategic anticipation enables us to prepare for environmental regulatory requirements, respond to future vulnerability, anticipate risks and so on. Failure to take these issues into account is a major obstacle to building an effective long-term strategy.

- **Turning constraints into opportunities**

Meeting legal and regulatory obligations, such as the CSRD, makes it easier to identify risks and opportunities in the face of climate and biodiversity challenges. These requirements help reinforce the relevance, compatibility and adaptability of a company's or organization's strategy to a low-carbon world.

- **Increased innovation:**

Cooperative work is based on collective moments that stimulate collective intelligence beyond the simple addition of individual contributions. These privileged moments of sharing enable players and partners to exchange experiences, express their needs and identify obstacles and opportunities together. This cooperative dynamic encourages the emergence of innovative solutions tailored to the challenges of climate change and biodiversity.

SWOT management and steering processus

On the overall, strenghts, weaknesses, opportunities and threats are identified on the systemic and cooperative management approach:

Strengths	Weaknesses
- Innovative and ambitious Climate and Biodiversity Plan, in terms of objectives, systemic approach and cooperative management of the territory. - Strong and growing stakeholder involvement - Overall coherence from conception, public policy to operational project (link between levers + Action Sheets + Investment Plan + expected effects) - Strong mandate - Ability to be challenged throughout the project by the EU, local stakeholders and local residents...	- Difficult access to the Action Plan due to its systemic approach and complexity (it is not a catalog of actions). - Shared management of Action Plan actions difficult to structure and coordinate. - Insufficient cross-functional coordination between metropolitan departments, hampered by organizational silos - Lack of project vision within the local authority to lead the transition (climate transition is a project)
Opportunities	**Threats**
- Continuous improvement of the methodological base (CMCB, IP, etc.) - Ongoing development of cooperation, with recurrent analysis of changes in the scope of players involved - The MCCB is a powerful lever for the development of future cooperation projects, providing strategic and integrated management of project portfolios. - Pursue the dynamic of responding to European calls for tenders in order to continuously strengthen and refine our strategic and methodological approach -The framework, as structured, makes it possible to improve assessment and monitoring of the progress of transitions by measuring	- Political changes in 2026 -Difficulty in maintaining a systemic dynamic over time for the animation of the action plan - Lack of a clear definition of how actions are to be carried out and how the associated players are to be coordinated. - Structuring of meetings to be tested and consolidated

3 Part B – Pathways towards Climate Neutrality by 2030

3.1 Module B-1 Climate Neutrality Scenarios and Impact Pathways

B-1.2: Description of impact pathways

Presentation of diagnostic elements

The diagnosis carried out during the first phase of the Climate and Biodiversity Plan (January - September 2023) comprises 2 parts :

- **1er Mitigation section**: this section comprises 2 parts. A first **technical part** covers the fields defined by Decree no. 2016-849 of June 28, 2016 on the PCAET, namely an inventory of territorial greenhouse gas emissions (cadastral inventory), territorial emissions of atmospheric pollutants, the territory's carbon dioxide sequestration capacities, the territory's final energy consumption, electricity, gas and heat distribution and transport networks, and the territory's renewable energy production. Unless otherwise stated in the diagnosis, the **reference year is 2022**.
  This section also includes diagnostic elements that go beyond regulations, in line with the systemic approach of the Climate and Biodiversity Plan. In this technical section, fuel poverty is analyzed. This section also includes a Bilan Carbone Territoire. This is a global approach to accounting for all GHGs emitted by and for the territory ("dependency" or "flow" approach and accounting for direct and indirect emissions, which account for the vast majority [84%]). This approach complements the regulatory territorial or cadastral inventory, which records only the GHGs emitted directly on the territory.

- **2ème Adaptation section:** this section meets the regulatory requirement for an analysis of the area's vulnerability to the effects of climate change. It is detailed, and comprises 5 parts: a description of the observed climate, a prospective vision of future trends, an analysis of risks, impacts and, finally, existing measures to deal with climate hazards.

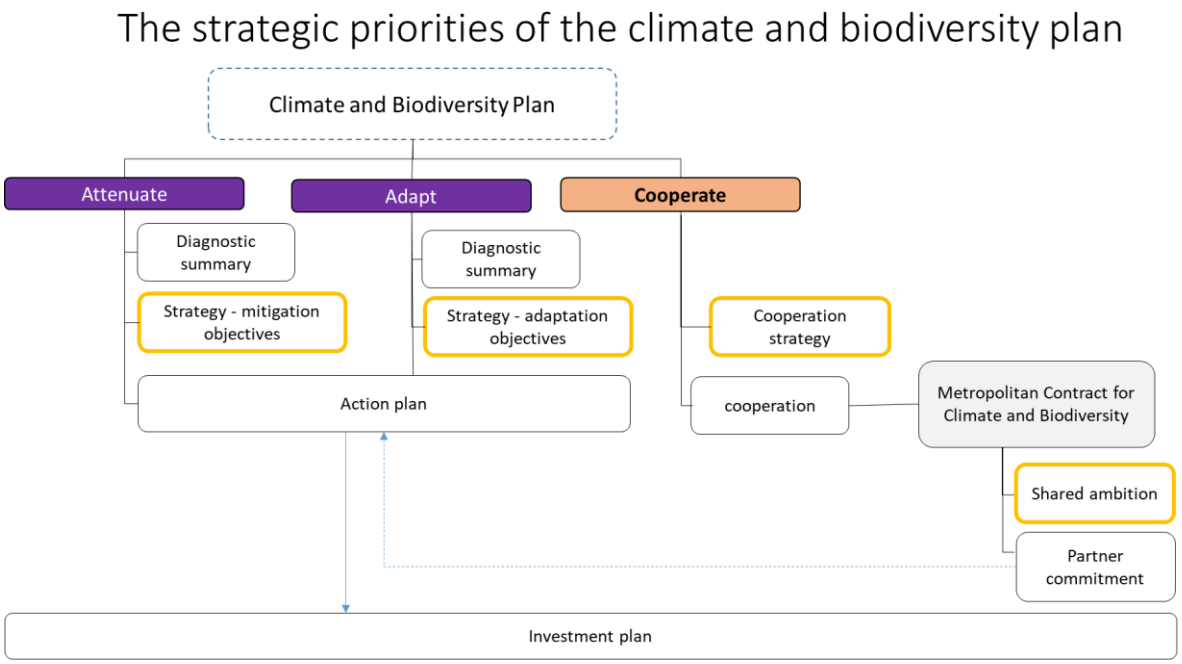
The full diagnosis is available in appendices 6 (mitigation) and 8 (adaptation) of the Climate and Biodiversity Plan.

The approach implemented as part of the Climate and Biodiversity Plan is based on three complementary axes.

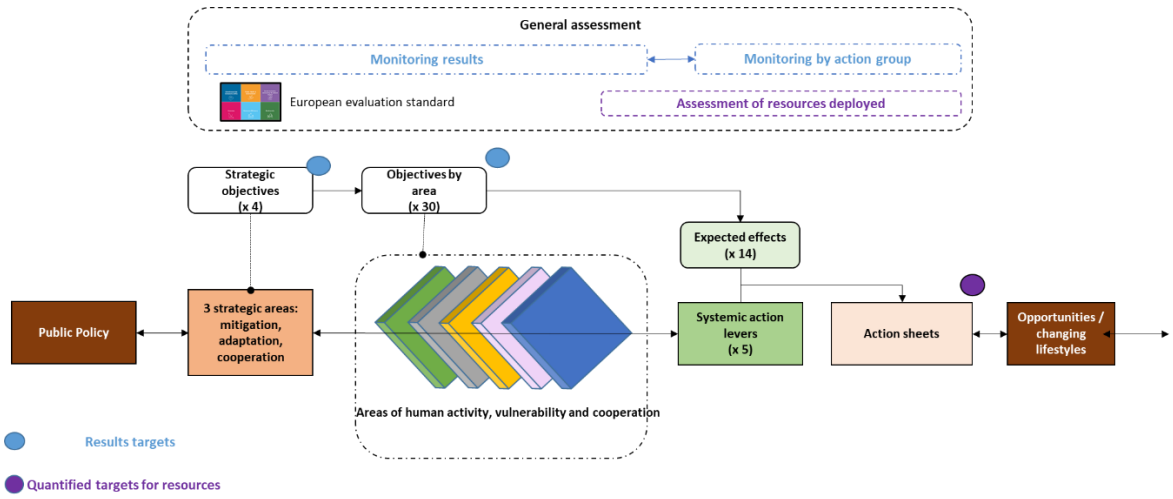
On the one hand, **mitigation** of climate impacts (Attenuate), structured around a technical diagnosis and mitigation objectives, integrates regulatory data (GHG emissions, energy consumption, carbon sequestration) as well as in-depth analyses such as the Bilan Carbone Territoire.

On the other hand, **adaptation** (Adapt), guided by a detailed analysis of climatic vulnerabilities, includes an assessment of risks, impacts and existing measures in the face of climatic hazards.

Finally, **cooperative action** (Cooperate) mobilizes players around a collective strategy, consolidated by a Metropolitan Contract for Climate and Biodiversity, to guarantee a shared ambition and concrete commitments. These approaches converge towards an operational action plan and a structuring investment plan.

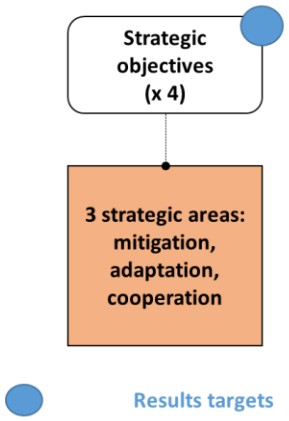


As explained in section 2-3, the strength of the Climate and Biodiversity Plan, and thus of the CCC, lies in its systemic approach, which articulates these different components in a coherent overall logic. By linking strategic and domain objectives to concrete actions through expected effects and systemic levers, it creates a solid and comprehensive approach to action. The results of the latter are monitored and evaluated, enabling the approach to be adjusted on an ongoing basis.



The three strategic axes presented, mitigation, adaptation and cooperation, include strategic objectives. A total of 4 are defined: reducing pressure on the environment, preparing for a territory at +4 degrees by 2100, Dijon métropole as a local authority facilitating transition, and data, research and innovation at the heart of cooperation.

Systemic management of transitions - Strategic objectives



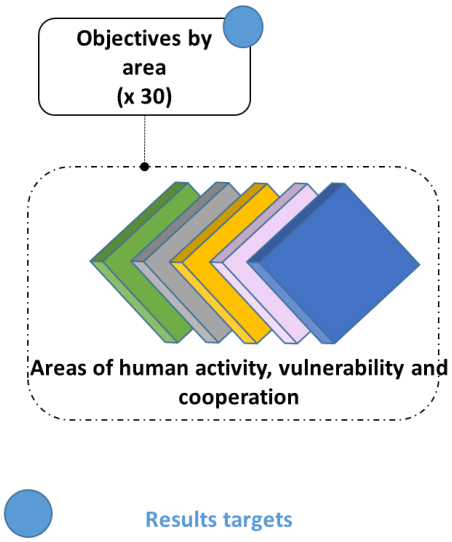
Attenuation
- Reducing pressure on the environment

Adaptation
- Preparing for a territory at +4 degrees by 2100

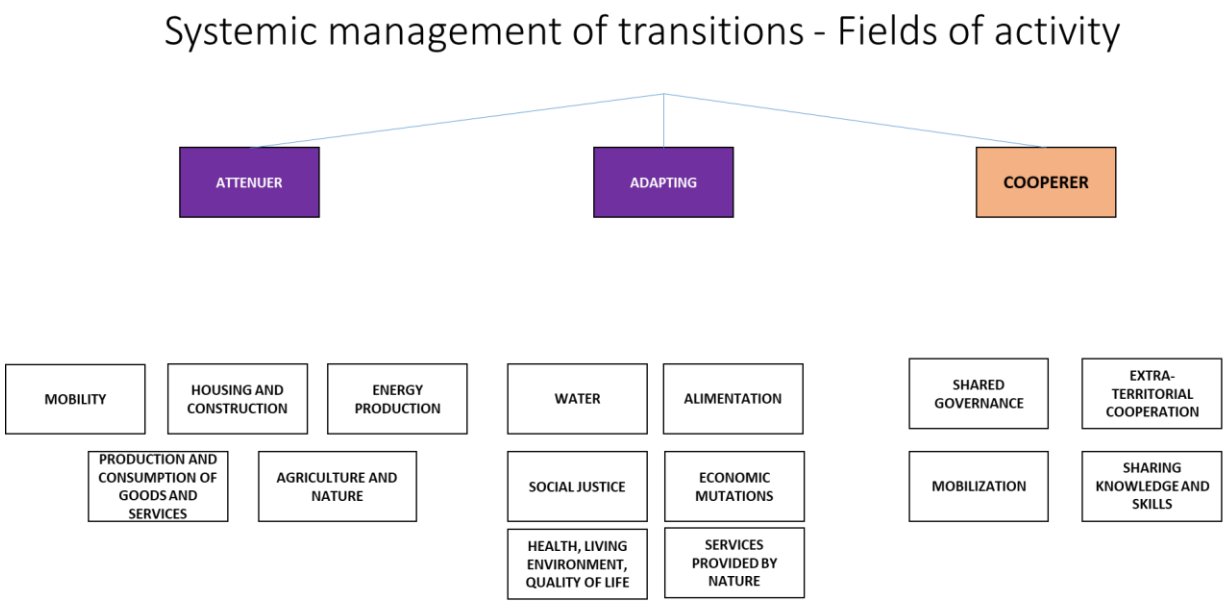
Cooperation
- Dijon métropole Local authority facilitating transition
- Data, research and innovation at the heart of cooperation

There are 30 objectives per area. These represent the various fields of action on which the metropolis intends to focus its efforts in order to achieve its strategic objectives. These objectives cover areas of human activity, the territory's vulnerabilities to climate change, and the dimensions of cooperation required to implement these transformations.

Systemic management of transitions - Objectives by domain



Still within the framework of the systemic management system for transitions, the various fields of activity are identified below. These are grouped according to the three strategic axes detailed above: mitigation, adaptation and cooperation.
With regard to mitigation, the areas of intervention concern mobility, the production and consumption of goods and services, as well as agriculture and nature, energy production and housing and construction.
With regard to adaptation, the fields of activity identified concern water management, food, as well as health, the environment and quality of life, social justice, economic mutations and services provided by nature.
Finally, the cooperation axis is broken down into actions linked to shared governance, mobilization, extra-territorial cooperation and sharing knowledge and skills.



For each strategic domain, specific objectives have been defined. This detailed breakdown showcases the comprehensive nature of the framework implemented. By aligning specific, actionable goals with the overarching strategic vision, the city can ensure a coherent and effective deployment of resources and initiatives.

Systemic management of transitions - Objectives by domain

Attenuation

Mobility
- Contribute to a gradual reduction in the role of the car in the daily lives of residents
- Promote the development of solutions to reduce and optimize commuter and freight flows by car

Housing and buildings
- Reduce energy consumption and greenhouse gas emissions in buildings
- Develop, renovate and build to enhance ecological functions and biodiversity

Energy production
- Developing local production of renewable and recovered energies
- Controlling the impact of renewable energy development on resources

Production and consumption of goods and services
- Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.
- Helping local businesses reduce the environmental impact of their activities

Agriculture and nature
- Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity
- Promote ecological management of public and private natural areas and maintain carbon sinks

Systemic management of transitions - Objectives by domain

Adaptation

Water
- Restore the natural cycle of stormwater on our territory and use it sustainably
- Adapting our water consumption to availability, reducing it and optimizing its use

Power supply
- Promoting healthy, sustainable food accessible to all
- Increase local sourcing and guarantee fair remuneration for producers

Social **justice**
- Adapting metropolitan public policies to vulnerabilities linked to environmental crises
- Supporting residents most at risk

Economic **change**
- Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment
- Promote a sustainable economic development model that creates wealth throughout the urban area
- Supporting professional transitions and enhancing the attractiveness of professions

Health, living environment, quality of life
- Promoting a culture of risk and hazard management in our territory
- Offering everyone a resilient, healthy region with a high quality of life

Services provided by nature
- Strengthening and improving the quality of our ecological continuity and ecosystem services
- Making biodiversity an ally in our region's transition

Systemic management of transitions - Objectives by domain

Cooperation

Shared **governance**
- Developing and strengthening areas of cooperation and response construction
- Putting science, research and innovation at the service of public policy

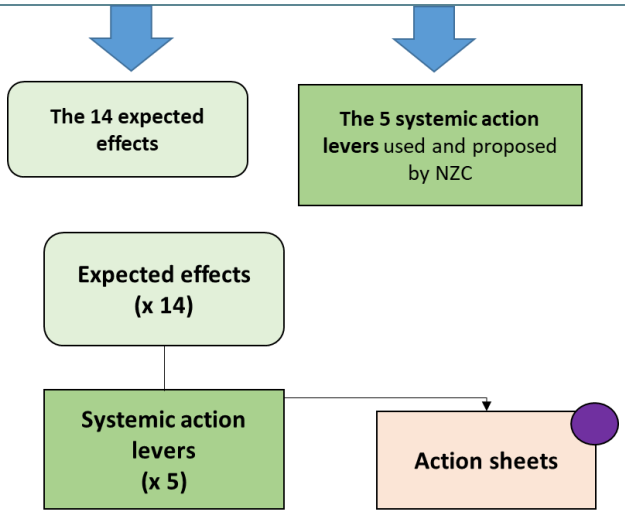
Mobilization
- Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

Extra-territorial **cooperation**
- Building strategic alliances for the gradual relocation of certain sectors of economic activity
- Strengthening reciprocity between territories

Sharing knowledge and skills
- Building and sharing a common culture of climate and biodiversity in the region
- Sharing and leveraging experience to accelerate the transition

Building action sheets

The chosen methodology aims to strengthen the links and coherence between the action plan and the quantified or non-quantified objectives defined at strategic axis or domain level. On the other hand, a systemic approach was deployed to take account of all the types of action required to achieve the quantified objectives. The expected effects and systemic levers were used to structure 23 priority action sheets.



Systemic management of transitions – Expected effects

The expected effects represent **all the concrete transformations that the region aims to achieve** through its climate and environmental strategy. They are expressed through fourteen areas of intervention in the ecological transition. They allow to **highlights the co-benefits** and **to identify and maximize synergies** between actions.

- Energy-efficient building renovation
- Space planning and efficient building construction
- Flexibility and usage control
- Development of renewable energies (electricity, gas, heat)
- Optimizing and decarbonizing mobility flows within the region
- Reducing, optimizing and decarbonizing incoming and outgoing mobility flows (commuting by car and freight)
- Promoting alternative modes of consumption and waste management
- Promoting alternative waste production and management methods
- Evolution of new management methods for nature areas
- Water conservation on our territory
- Supporting those most vulnerable to change
- Helping economic players meet the challenges of decarbonization
- Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion
- Development favorable to the development of natural ecosystem functions

Systemic management of transitions – Systemic action levers

As explained in section 2-3, the purpose of the systemic levers lies in their ability to **structure territorial action in line with strategic reference documents** and to **consolidate an overall vision of territorial projects**, by identifying how each initiative contributes to the various dimensions of transition.
Levers act as catalysts which, together, remove barriers to implementation and create the conditions for systemic change

Technological solutions, implementation techniques	*Ex: heat pump* *Ex: tree planting*
Governance (policy and regulation)	*Ex: Partnerships, contractualization (Climate and Biodiversity Contract, for example)* *Ex : Data sharing* *Ex: ZFE or ZAN or PLUI-HD*
Social innovation, new uses	*e.g. car-sharing applications* *E.g.: complementary services at mobility hubs* *E.g.: raising awareness and encouraging action on mitigation and adaptation issues (climate fresco)*
Financing and business models, legal structures, purchasing clauses	*e.g. transport on demand, mobility as a service*
Sectors and capacities	*E.g.: experiments in real-life conditions, innovations (Response project)* *e.g.: training in transition professions, recruitment, network of expertise*

The general framework of the Agenda Climat implemented by Dijon métropole comprises four key components: Diagnosis, Strategy and objectives, Levers and Action plan.
The overall approach begins with a comprehensive diagnostic phase, which helps to clarify and support decision-making in defining the Plan's ambitions, strategy and objectives.
The strategy is then translated into Levers. These are then used to structure the action plan and the actions it contains, which will be implemented to achieve the defined objectives.
It is important to note that the framework includes continuous evaluation and learning cycles, both in terms of the triennial mid-term review and the annual monitoring and adjustment of the action plan. This iterative approach ensures that the climate agenda remains responsive to changing circumstances and opportunities.
Finally, at the end of the six-year period, the whole process must be reviewed, with a new diagnostic phase to ensure that the strategy remains adapted to changing conditions and challenges.

Table summarising the pathways/action sheets and their main links with the objectives.

AXES	AREAS		OBJECTIVES OF THE CLIMATE AND BIODIVERSITY PLAN	N°	ACTION SHEETS	Organisation responsible for the action sheet
Mitigation	Neutrality 2030	MOBILITY	Contribute to a gradual reduction in the role of the car in the daily lives of residents	1	Developing active mobility and encouraging calmer public spaces	Dijon Métropole - Mobility Department
				2	Developing public transport services	Dijon Métropole - Mobility Department
				3	Development of low-carbon and carbon-free vehicles	Dijon Métropole - Energy strategy department
			Encourage the development of solutions to reduce and optimise commuter and freight flows by car	4	Developing sustainable urban logistics	Dijon Métropole - Territory and projects department
				5	Developing a coordinated transport offer for the urban area	Dijon Métropole - Territory and projects department
		HOUSING AND BUILDINGS	Reducing energy consumption and greenhouse gas emissions from buildings	6	Decarbonising and reducing energy consumption in existing homes	Dijon Métropole - Housing department
				7	Decarbonising and reducing energy consumption in the tertiary and industrial sectors (excluding processes)	Dijon Métropole - Energy strategy department
			Develop, renovate and build to enhance ecological functions and biodiversity	8	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)	Dijon Métropole - PLUI Department
		PROD ENERGIE	Developing local production of renewable and recovered energy sources	9	Developing renewable electricity generation	Dijon Métropole - Energy strategy department
				10	Developing renewable gas production	Dijon Métropole - Energy strategy department
				11	Developing the production of renewable thermal energy	Dijon Métropole - Buildings and Energy Department
				12	Development of energy management	Dijon Métropole - Urban Ecology Department
			Controlling the impact of the development of renewable energies on resources		Included in the action sheets responding to the first objective in the energy production field	Dijon Métropole - Energy strategy department
		PROD CONSO GOODS & SERVICES	Adopting consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production	13	Encouraging the consumption of local products and supporting changes in behaviour	Dijon Métropole - Public procurement department
			Supporting the reduction of the environmental impact of the activities of local businesses	14	Promoting the circular economy, reducing the impact of industrial processes on the climate, biodiversity, resources and health	Dijon Métropole - Waste recycling department
		AGRI AND NATURE AREAS	Promoting low-carbon farming practices throughout the urban area that preserve and enhance biodiversity		Included in the action sheet for the food sector	Dijon Métropole - Sustainable Food Department

AXES	AREAS		OBJECTIVES OF THE CLIMATE AND BIODIVERSITY PLAN	N°	ACTION SHEETS	Organisation responsible for the action sheet
	Co-benefits	AGRI AND NATURE AREAS	Promoting ecological management of public and private natural spaces and maintaining carbon sinks		Included in the action sheet for services to nature	Dijon Métropole - Biodiversity Department, Jardin de l'arquebuse
Adaptation		**WATER**	Restore the natural cycle of rainwater in our region and use it sustainably	15	Planning the management of water resources and adapting infrastructures	Dijon Métropole - Water and networks department
			Adapting our water consumption to availability, reducing it and optimising its use			Dijon Métropole - Water and networks department
		SUSTAINABLE FOOD	Promoting healthy, sustainable food accessible to all	16	Supporting local, environmentally-friendly food production	Dijon Métropole - Sustainable food department
			Increase the proportion of local food and guarantee fair remuneration for producers			Dijon Métropole - Sustainable food department
		SOCIAL JUSTICE	Adapting metropolitan public policies to vulnerabilities linked to environmental crises		Cross-cutting action sheets - expected systemic effect: Supporting the most vulnerable to change	Dijon Métropole - Urban ecology department
			Supporting residents most at risk		Cross-cutting action sheets - expected systemic effect: Supporting the most vulnerable to change	Dijon Métropole - Social Action Department
		ECONOMIC TRANSFORMATION	Stimulating and supporting the decarbonisation of economic activities and reducing their impact on the environment		Transversal to the action sheets - expected systemic effect: Supporting economic players in tackling the challenges of decarbonisation	Dijon Métropole - Energy strategy department
			Promoting a sustainable economic development model that creates wealth throughout the urban area		Transversal to the action sheets - expected systemic effect: Supporting economic players in tackling the challenges of decarbonisation	Dijon Métropole - Energy strategy department
			Supporting professional transitions and the attractiveness of professions		Cross-cutting action sheets - expected systemic leverage: Industries and capabilities	Dijon Métropole - Urban ecology department
		HEALTH AND WELL-BEING	Promoting a culture of risk and hazard management in our region	17	Reducing vulnerability to natural and health risks exacerbated by climate change	Dijon Métropole - Urban ecology department
			Offering everyone a resilient, healthy region with a high quality of life		Cross-cutting action sheets - expected systemic effect: support for those most vulnerable to change	Dijon Métropole - Urban ecology department
		NAUTRE-BASED SOLUTIONS	Strengthening and improving the quality of our ecological continuity and ecosystem services	18	Strengthening biodiversity and natural ecosystems in Dijon Metropole	Dijon Métropole - Biodiversity Department, Jardin de l'arquebuse
			Making biodiversity an ally in the transition of our region			Dijon Métropole - Biodiversity Department, Jardin de l'arquebuse

Table of expected effects by objective

	Objectives	Expected systemic effects													
		Energy-efficient renovation of buildings	-Space planning and construction of efficient buildings	-Flexibility and control of usage	-Development of renewable energies (electricity, gas, heat)	-Optimising and decarbonising mobility flows within the region	-Reducing, optimising and decarbonising incoming and outgoing mobility flows (commuting by car and freight)	-Promoting alternative modes of consumption and waste management	-Promoting alternative ways of producing and managing waste	-Development of new ways of managing nature areas	-Developments to protect water resources in our region	-Supporting those most vulnerable to change	-Supporting economic players in tackling the challenges of decarbonisation	-Strengthening our resilience to better manage the hazards associated with climate change and the increasing scarcity and erosion of resources	-Development favourable to the development of natural ecosystem functions
neutrality 2030	Contribute to a gradual reduction in the role of the car in the daily lives of residents					■						▒	▒		▒
	Encourage the development of solutions to reduce and optimise commuter and freight flows by car						■					▒	▒		
	Reducing energy consumption and greenhouse gas emissions from buildings	■		▒	▒							▒	▒		▒
	Develop, renovate and build to enhance ecological functions and biodiversity	■		▒	▒							▒	▒		▒
	Developing local production of renewable and recovered energy sources			▒	■							▒	▒		
	Controlling the impact of the development of renewable energies on resources	▒	▒											■	▒
	Adopting consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production			▒				■				▒		▒	▒
	Helping to reduce the environmental impact of the region's industries								■		▒		▒	▒	▒
	Encouraging low-carbon farming practices throughout the urban area that preserve and enhance biodiversity									▒		▒	▒		■
	Promoting ecological management of public and private natural spaces and maintaining carbon sinks									▒		▒	▒		■
	Restore the natural cycle of rainwater in our region and use it sustainably		▒								■		▒	▒	▒
	Adapting our water consumption to availability, reducing it and optimising its use			▒				■				▒	▒	▒	
	Promoting healthy, sustainable food accessible to all			▒				■	▒			▒	▒	▒	

	Objectives	Expected systemic effects													
		Energy-efficient renovation of buildings	-Space planning and construction of efficient buildings	-Flexibility and control of usage	-Development of renewable energies (electricity, gas, heat)	-Optimising and decarbonising mobility flows within the region	-Reducing, optimising and decarbonising incoming and outgoing mobility flows (commuting by car and freight)	-Promoting alternative modes of consumption and waste management	-Promoting alternative ways of producing and managing waste	-Development of new ways of managing nature areas	-Developments to protect water resources in our region	-Supporting those most vulnerable to change	-Supporting economic players in tackling the challenges of decarbonisation	-Strengthening our resilience to better manage the hazards associated with climate change and the increasing scarcity and erosion of resources	-Development favourable to the development of natural ecosystem functions
Co-benefits	Increase the proportion of local supplies and ensure that producers are fairly remunerated														
	Adapting metropolitan public policies to vulnerabilities linked to environmental crises														
	Supporting residents most at risk														
	Stimulating and supporting the decarbonisation of economic activities and reducing their impact on the environment														
	Promoting a sustainable economic development model that creates wealth throughout the urban area														
	Supporting professional transitions and the attractiveness of professions														
	Promoting a culture of risk and hazard management in our region														
	Offering everyone a resilient, healthy region with a high quality of life														
	Strengthening and improving the quality of our ecological continuity and ecosystem services														
	Making biodiversity an ally in the transition of our region														

Table of expected effects by pathway/action sheets

N°	ACTION SHEETS	Energy-efficient renovation of buildings	-Space planning and construction of efficient buildings	-Flexibility and control of usage	- Development of renewable energies (electricity, gas, heat)	-Optimising and decarbonising mobility flows within the region	-Reducing, optimising and decarbonising incoming and outgoing mobility flows (commuting by car and freight)	-Promoting alternative modes of consumption and waste management	-Promoting alternative ways of producing and managing waste	- Development of new ways of managing nature areas	- Developments to protect water resources in our region	-Supporting those most vulnerable to change	-Supporting economic players in tackling the challenges of decarbonisation	- Strengthening our resilience to better manage the hazards associated with climate change and the increasing scarcity and erosion of resources	- Development favourable to the development of natural ecosystem functions
		Assessment of the expected systemic effects of the actions													
1	Developing active mobility and encouraging calmer public spaces		yes		yes	yes	yes	yes	yes		yes	yes	yes	yes	yes
2	Developing public transport services			yes	yes	yes	yes	yes				yes		yes	
3	Development of low-carbon and carbon-free vehicles					yes	yes	yes				yes	yes	yes	
4	Developing sustainable urban logistics		yes		yes	yes	yes	yes					yes		
5	Developing a coordinated transport offer for the urban area		yes	yes	yes	yes	yes	yes	yes		yes	yes	yes		
6	Decarbonising and reducing energy consumption in existing homes	yes		yes	yes	yes		yes	yes		yes	yes	yes	yes	
7	Decarbonising and reducing energy consumption in the tertiary and industrial sectors (excluding processes)	yes		yes	yes	yes		yes	yes		yes	yes	yes	yes	
8	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)		yes		yes	yes		yes	yes	yes	yes	yes	yes	yes	yes
9	Developing renewable electricity generation	yes	yes	yes	yes	yes			yes			yes	yes	yes	
10	Developing renewable gas production	yes		yes	yes	yes		yes	yes				yes	yes	yes

N°	ACTION SHEETS	Energy-efficient renovation of buildings	-Space planning and construction of efficient buildings	-Flexibility and control of usage	- Development of renewable energies (electricity, gas, heat)	-Optimising and decarbonising mobility flows within the region	-Reducing, optimising and decarbonising incoming and outgoing mobility flows (commuting by car and freight)	-Promoting alternative modes of consumption and waste management	-Promoting alternative ways of producing and managing waste	- Development of new ways of managing nature areas	- Developments to protect water resources in our region	-Supporting those most vulnerable to change	-Supporting economic players in tackling the challenges of decarbonisation	- Strengthening our resilience to better manage the hazards associated with climate change and the increasing scarcity and erosion of resources	- Development favourable to the development of natural ecosystem functions
		Assessment of the expected systemic effects of the actions													
11	Developing the production of renewable thermal energy	yes	yes	yes	yes			yes	yes			yes	yes	yes	yes
12	Development of energy management	yes	yes	yes		yes		yes	yes			yes	yes	yes	
	Included in the action sheets responding to the first objective in the energy production field														
13	Encouraging the consumption of local products and supporting changes in behaviour	yes	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
14	Promoting the circular economy, reducing the impact of industrial processes on the climate, biodiversity, resources and health	yes	yes	yes				yes	yes			yes	yes	yes	
	Included in the action sheet for the food sector														
	Included in the action sheet for services to nature														
15	Planning the management of water resources and adapting infrastructures	yes	yes					yes		yes	yes	yes		yes	yes

N°	ACTION SHEETS	Energy-efficient renovation of buildings	-Space planning and construction of efficient buildings	-Flexibility and control of usage	- Development of renewable energies (electricity, gas, heat)	-Optimising and decarbonising mobility flows within the region	-Reducing, optimising and decarbonising incoming and outgoing mobility flows (commuting by car and freight)	-Promoting alternative modes of consumption and waste management	-Promoting alternative ways of producing and managing waste	- Development of new ways of managing nature areas	- Developments to protect water resources in our region	-Supporting those most vulnerable to change	-Supporting economic players in tackling the challenges of decarbonisation	- Strengthening our resilience to better manage the hazards associated with climate change and the increasing scarcity and erosion of resources	- Development favourable to the development of natural ecosystem functions
		Assessment of the expected systemic effects of the actions													
16	Supporting local, environmentally-friendly food production				yes		yes	yes	yes		yes	yes	yes		yes
	Cross-cutting action sheets - expected systemic effect: Supporting the most vulnerable to change														
	Cross-cutting action sheets - expected systemic effect: Supporting the most vulnerable to change														
	Transversal to the action sheets - expected systemic effect: Supporting economic players in tackling the challenges of decarbonisation														
	Transversal to the action sheets - expected systemic effect: Supporting economic players in tackling the challenges of decarbonisation														
	Cross-cutting action sheets - expected systemic leverage: Industries and capabilities														
17	Reducing vulnerability to natural and health risks exacerbated by climate change		yes						yes	yes	yes	yes	yes	yes	yes

N°	ACTION SHEETS	Assessment of the expected systemic effects of the actions													
		Energy-efficient renovation of buildings	-Space planning and construction of efficient buildings	-Flexibility and control of usage	- Development of renewable energies (electricity, gas, heat)	-Optimising and decarbonising mobility flows within the region	-Reducing, optimising and decarbonising incoming and outgoing mobility flows (commuting by car and freight)	-Promoting alternative modes of consumption and waste management	-Promoting alternative ways of producing and managing waste	- Development of new ways of managing nature areas	- Developments to protect water resources in our region	-Supporting those most vulnerable to change	-Supporting economic players in tackling the challenges of decarbonisation	- Strengthening our resilience to better manage the hazards associated with climate change and the increasing scarcity and erosion of resources	- Development favourable to the development of natural ecosystem functions
	Cross-cutting action sheets - expected systemic effect: support for those most vulnerable to change														
18	Strengthening biodiversity and natural ecosystems in the region	yes	yes	yes						yes	yes		yes	yes	yes

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number	_name
Action sheet number	1	
Action sheet name		Developing active mobility and encourage the calming of public spaces

	_manager	_domain	_period	progress
Person responsible for the action sheet	Dijon métropole - Mobility Department			
Main area		Mobility		
Action period			2024-2030	
Advancement				Implementation

Trajectory

	description
Action description	The development of active mobility and the calming of public spaces aim to promote sustainable modes of transport, such as walking and cycling, while reducing motorized traffic. This involves creating appropriate infrastructure (cycle paths, pedestrian zones), implementing safety measures (speed reduction, pedestrian facilities) and improving accessibility. The aim is to create a healthier, more pleasant and convivial urban environment, while reducing pollution and strengthening social ties.

	_stakeholder1		_stakeholder3		_stakeholder5	
Stakeholders involved	O	Dijon metropole	O	Actors socio-economic players	O	Municipalities and extra-territorial institutional players
	O	Municipalities and institutional players		Residents & users		Actors socio-economic actors

	_milestone 1		_milestone 2		_milestone 3	
Main milestones	2026	Progress report and new program	2028	Progress report	2030	Completion

	_cost1		_cost2		_CO2_cost	
Financial estimate	Estimated cost 2030 Ambitious scenario	454 000 000 €	Estimated cost 2030 Neutrality scenario	790 000 000 €	Cost in € / tCO2 (Ambitious)	22 200 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	1	Action sheet name	Developing active mobility and encourage the calming of public spaces

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Mobility Department	Main area	Mobility	Action period	2024-2030	Advancement	Implementation

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Improving public health, Reducing pollution, Reducing noise, Strengthening social cohesion, Boosting local economy, Improving road safety, Enhancing public space, Changing behavior		Energy-efficient building renovation	O	Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control	O	Development of renewable energies (electricity, gas, heat)	O	Optimizing and decarbonizing mobility flows within the region	O	Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
O	Promoting alternative modes of consumption and waste management	O	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas	O	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
O	Supporting those most vulnerable to change	O	Supporting economic players in meeting the challenges of decarbonization	O	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	O	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**1**	**Action sheet name**	**Developing active mobility and encourage the calming of public spaces**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Mobility Department**	**Main area**	**Mobility**	**Action period**	**2024-2030**	**Advancement**	**Implementation**

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole	**Projects of public spaces modernization (October 30, rue Monge)**	**Dijon Métropole**	**Programm of public spaces modernization**	**PLUi-HD**	**Plan local d'urbanisme (regulatory)**	**Divia**	**Divia as a global mobilty operator on the territory**
	_project3		_project4		_document3		_document4
Dijon Métropole / VNF	**Development of the Burgundy canal in the Dijon metropolitan area - Mobility section**			**SD Mobilités**	**Active mobility master plan (strategy and programming)**		
	_project5		_project6		_document5		_document6
	_project7		_project8		_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 1	Action sheet name	_name: Developing active mobility and encourage the calming of public spaces

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Implementation

Systemic action levers to mobilize

Technology	_techno1: Deploy secure parking facilities equipped with electrical outlets for bicycles	_techno2: Develop and maintain visible, safe bicycle paths between the various communes of the metropolitan area and within Dijon.	_techno3: Experiment with draining, decarbonized, light-colored asphalt for bike paths and sidewalks
	_techno4: Strengthen relations with other local authorities (particularly the Département) to promote cycling continuity	_techno5	_techno6
Governance, policy & regulation	governance1: Develop inter-company mobility plans, particularly in large employment areas	governance2	_governance3
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	1		Developing active mobility and encourage the calming of public spaces

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Mobility Department		Mobility		2024-2030		Implementation

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Develop services to facilitate bicycle use: secure bicycle racks and parking, repair and inflation stations/workshops, with priority given to locations close to people's homes.	Deploy repair and inflation stations/workshops	Study the reduction of flows and speeds by neighborhood
	_social4	_social5	_social6
	Raising residents' awareness of active mobility		
	capacities1	capacities2	capacities3
Capacity & capabilities	Working on data / active mobility		
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 1

Action sheet name	_name: Developing active mobility and encourage the calming of public spaces

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department

Main area	_domain: Mobility

Action period	_period: 2024-2030

Advancement	progress: Implementation

Systemic action levers

Finance & business models	finance1: Develop bike rentals, cargo bikes, electric bikes, to facilitate behavioral change in the region.	finance2: Implement actions to combat and reduce economic vulnerability (mobility)	_finance3
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	20 460	tCO2eq		
Greenhouse gases	Development of electric-assist bicycles	0,5	GWh / year		
Social inclusion	Bicycle modal share	12	%	2	2016
Social inclusion	Pedestrian modal share	30	%	30	2016

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 1	Action sheet name	_name: Developing active mobility and encourage the calming of public spaces

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Implementation

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents	O	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4: O	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 1	Action sheet name	_name: Developing active mobility and encourage the calming of public spaces

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Implementation

Adaptation

WATER	_contribution11: O	Restore the natural cycle of stormwater on our territory and use it sustainably		_contribution12:	Adapting our water consumption to availability, reducing it and optimizing its use		
SUSTAINABLE FOOD	_contribution13:	Promoting healthy, sustainable food accessible to all		_contribution14:	Increase local sourcing and guarantee fair remuneration for producers		
SOCIAL JUSTICE	contribution15: O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises		_contribution16: O	Supporting residents most at risk		
ECONOMIC MUTATIONS	_contribution17: O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment		_contribution18: O	Promote a sustainable economic development model that creates wealth throughout the urban area	_contribution19:	Supporting professional transitions and enhancing the attractiveness of professions
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20: O	Promoting a culture of risk and hazard management in our territory		_contribution21: O	Offering everyone a resilient, healthy region with a high quality of life		
SERVICES PROVIDED BY NATURE	_contribution22: O	Strengthening and improving the quality of our ecological continuity and ecosystem services		_contribution23:	Making biodiversity an ally in our region's transition		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 1	Action sheet name	_name: Developing active mobility and encourage the calming of public spaces

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Implementation

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27 o	Strengthening reciprocity between territories
MOBILIZATION	_contribution28 o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29 o	Building and sharing a common culture of climate and biodiversity in the region	_contribution30 o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number	_name
Action sheet number	2	
Action sheet name		Development of public transit services

	_manager	_domain	_period	progress
Person responsible for the action sheet	Dijon métropole - Mobility Department			
Main area		Mobility		
Action period			2024-2030	
Advancement				Under study

Trajectory

	description
Action description	Developing the public transport offer involves improving and extending public transport services, such as buses and streetcars. This includes increasing the frequency of service, extending lines to cover new areas, and improving accessibility for all users. The aim is to make public transport more attractive, efficient and reliable, in order to reduce the use of private cars, ease traffic congestion and promote sustainable mobility within the urban area.

	_stakeholder1		_stakeholder3		_stakeholder5	
Stakeholders involved	O	Dijon metropole	O	Actors socio-economic players		Municipalities and extra-territorial institutional players
	_stakeholder2		_stakeholder4		_stakeholder6	
	O	Municipalities and institutional players		Residents & users		Actors socio-economic actors

	_milestone 1		_milestone 2		_milestone 3	
Main milestones	2026	Completion of BHNS / streetcar line development studies	2027	Start of project deployment	2031	Completion

	_cost1		_cost2		_CO2_cost	
Financial estimate	Estimated cost 2030 Ambitious scenario	363 000 000 €	Estimated cost 2030 Neutrality scenario	3 787 000 000 €	Cost in € / tCO2 (Ambitious)	35 500 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**2**	**Action sheet name**	**Development of public transit services**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Mobility Department**	**Main area**	**Mobility**	**Action period**	**2024-2030**	**Advancement**	**Under study**

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	**Reducing traffic congestion, Improving air quality, Accessibility and mobility, Economic stimulus, Strengthening social cohesion, Spatial planning, Changing behavior, Impact on public health**			**Energy-efficient building renovation**	**Space planning and efficient building construction**

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	**Flexibility and usage control**	**o**	**Development of renewable energies (electricity, gas, heat)**	**o**	**Optimizing and decarbonizing mobility flows within the region**	**o**	**Reducing, optimizing and decarbonizing incoming and outgoing mobility flows**

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	**Promoting alternative modes of consumption and waste management**		**Promoting alternative waste production and management methods**		**Evolution of new management methods for nature areas**		**Water conservation on our territory**

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	**Supporting those most vulnerable to change**		**Supporting economic players in meeting the challenges of decarbonization**	**o**	**Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion**		**Development favorable to the development of natural ecosystem functions**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	2	Action sheet name	Development of public transit services

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Mobility Department	Main area	Mobility	Action period	2024-2030	Advancement	Under study

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole	Tramway extension	Dijon Métropole	Transport on Demand	PLUi-HD	Plan local d'urbanisme (regulatory)	Divia	Divia as a global mobilty operator on the territory
	_project3		_project4		_document3		_document4
	_project5		_project6		_document5		_document6
	_project7		_project8		_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 2	Action sheet name	_name: Development of public transit services

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Improve existing services (times, distances) for each means of public transport (bus, streetcar)	Improving modal shift services between public transport	Experiment with draining, low-carbon, light-colored asphalt for public transit stops
	_techno4	_techno5	_techno6
	Improving PRM access to public transport	Developing PV production to power transport infrastructure	
	governance1	governance2	_governance3
Governance, policy & regulation	Develop the mobility payment: increase the mobility payment rate above 2.2% (lobbying the French government + consultation with local companies).	Develop inter-company mobility plans, particularly in large employment areas	Maintain an attractive rail transport offer for long-distance travel (TGV, TER)
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 2	Action sheet name	_name: Development of public transit services

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Development of on-demand transport	Raising residents' awareness of car vs. public transport modal shift	
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Structuring data on public transport mobility		
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 2	Action sheet name	_name: Development of public transit services

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Systemic action levers

Finance & business models	finance1: Implement actions to combat and reduce economic vulnerability (mobility)	finance2	_finance3
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	10 230	tCO2eq		
Greenhouse gases	Light rail development (power consumption)	1,5	GWh / year		
Social inclusion	Modal share of public transport	20	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 2	Action sheet name	_name: Development of public transit services

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents	O	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4: O	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 2	Action sheet name	_name: Development of public transit services

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Adaptation

	_contribution11		_contribution12	
WATER	O	Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD		Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	O	Supporting residents most at risk
ECONOMIC MUTATIONS	O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE		Strengthening and improving the quality of our ecological continuity and ecosystem services		Making biodiversity an ally in our region's transition

	_contribution13		_contribution14	
SUSTAINABLE FOOD		Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers

	contribution15		_contribution16	
SOCIAL JUSTICE	O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	O	Supporting residents most at risk

	_contribution17		_contribution18		_contribution19	
ECONOMIC MUTATIONS	O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area		Supporting professional transitions and enhancing the attractiveness of professions

	_contribution20		_contribution21	
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life

	_contribution22		_contribution23	
SERVICES PROVIDED BY NATURE		Strengthening and improving the quality of our ecological continuity and ecosystem services		Making biodiversity an ally in our region's transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 2	Action sheet name	_name: Development of public transit services

Person responsible for the action sheet	_manager: Dijon métropole - Mobility Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE		Developing and strengthening areas of cooperation and response construction		Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27	Strengthening reciprocity between territories
MOBILIZATION	_contribution28	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29	Building and sharing a common culture of climate and biodiversity in the region	_contribution30	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 3	Action sheet name	_name: Development of low-carbon and carbon-free vehicles

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: In progress

Trajectory

Action description	description: The development of low-carbon and decarbonized vehicles aims to design, produce and promote means of transport that generate less CO2 emissions. This includes increasing the use of electric, hybrid and hydrogen-powered vehicles, as well as optimizing combustion engines to reduce their environmental impact. The aim is to reduce the carbon footprint of transport, promote sustainable mobility solutions, and help combat climate change while improving air quality in urban areas.

Stakeholders involved					
	_stakeholder1: O — Dijon metropole		_stakeholder3: O — Actors socio-economic players		_stakeholder5: Municipalities and extra-territorial institutional players
	_stakeholder2: O — Municipalities and institutional players		_stakeholder4: O — Residents & users		_stakeholder6: Actors socio-economic actors

Main milestones	_milestone 1		_milestone 2		_milestone 3	

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	1 459 000 000 €	Estimated cost 2030 Neutrality scenario	4 581 000 000 €	Cost in € / tCO2 (Ambitious)	31 700 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	3	**Action sheet name**	**Development of low-carbon and carbon-free vehicles**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Energy Strategy Department**	**Main area**	**Mobility**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	**Reducing greenhouse gas emissions, Improving air quality, Technological innovation, Impact on regional planning, Consumer awareness and commitment, Reducing dependence on fossil fuels**			**Energy-efficient building renovation**	**Space planning and efficient building construction**

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control		**Development of renewable energies (electricity, gas, heat)**	**o**	**Optimizing and decarbonizing mobility flows within the region**	**o**	**Reducing, optimizing and decarbonizing incoming and outgoing mobility flows**

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	**Promoting alternative modes of consumption and waste management**		**Promoting alternative waste production and management methods**		**Evolution of new management methods for nature areas**		**Water conservation on our territory**

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	**Supporting those most vulnerable to change**	**o**	**Supporting economic players in meeting the challenges of decarbonization**	**o**	**Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion**		**Development favorable to the development of natural ecosystem functions**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	3	Action sheet name	Development of low-carbon and carbon-free vehicles

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Mobility	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

_project1		_project2	
Dijon Métropole	Devabonization of bus fleet	Dijon Métropole	Decabonization of metropolitan service fleet
_project3		_project4	
Private and public players	Decabonization of the service fleet of partners involved into the Metropolitan Climate & Biodiversity Contract		
_project5		_project6	
_project7		_project8	

Key policies, documents or strategic studies

_document1		_document2	
_document3		_document4	
_document5		_document6	
_document7		_document8	

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	3		Development of low-carbon and carbon-free vehicles

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Mobility		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Decarbonizing public transport	Decarbonizing car-sharing vehicles	Decarbonizing corporate fleet vehicles
	_techno4	_techno5	_techno6
	Decarbonizing private vehicles		
	governance1	governance2	_governance3
Governance, policy & regulation	Encourage the use of small vehicles	Continue lobbying for the financing of electro-mobility vehicles (hydrogen in particular)	
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	3		Development of low-carbon and carbon-free vehicles

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Mobility		2024-2030		In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Strengthen the car-sharing offer and promote car-sharing	Encourage carpooling, in particular by using company networks	Encouraging telecommuting and reducing the number of kilometers traveled
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Structuring energy and mobility sectors (including renewable energies and eco-construction)	Experiment with V2G charging stations (storage) charging company vehicles and a car-sharing vehicle.	
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	3		Development of low-carbon and carbon-free vehicles

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Mobility		2024-2030		In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Study the deployment of IRVEs in the area, in line with travel patterns in the urban area and with the deployment of electric vehicles and uses in the area.		
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	46 035	tCO2eq		
Greenhouse gases	Development of battery-powered light electric vehicles and flow optimization	23	GWh / year		
Greenhouse gases	Reducing the number of vehicles running on hydrocarbons, optimizing flows	-305	GWh / year		
Social inclusion	car modal share	38	%		
Social inclusion	Share of electric cars in the fleet	10	%		
Social inclusion	% reduction in internal flows within the metropolis	5	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	3	Action sheet name	Development of low-carbon and carbon-free vehicles

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Mobility	Action period	2024-2030	Advancement	In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 3	Action sheet name	_name: Development of low-carbon and carbon-free vehicles

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	O Supporting residents most at risk

	_contribution17		_contribution18		_contribution19	
ECONOMIC MUTATIONS	O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area	O	Supporting professional transitions and enhancing the attractiveness of professions
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20 O	Promoting a culture of risk and hazard management in our territory	_contribution21 O	Offering everyone a resilient, healthy region with a high quality of life		
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 3	Action sheet name	_name: Development of low-carbon and carbon-free vehicles

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION		Building strategic alliances for the gradual relocation of certain sectors of economic activity		Strengthening reciprocity between territories

	_contribution28	
MOBILIZATION	o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	o	Building and sharing a common culture of climate and biodiversity in the region	o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	4		Developing sustainable urban logistics

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Territory and Projects Department		Mobility		2024-2030		Under study

Trajectory

Action description	description
	Developing sustainable urban logistics involves optimizing goods transport and distribution systems to minimize their environmental impact. This includes the use of environmentally-friendly vehicles, more efficient supply chains, strategic delivery points and innovative solutions such as drone delivery and resource pooling. The aim is to reduce greenhouse gas emissions, ease urban congestion and guarantee equitable access to goods, while promoting local economic development.

Stakeholders involved		_stakeholder1		_stakeholder3		_stakeholder5	
	o	Dijon metropole	o	Actors socio-economic players		Municipalities and extra-territorial institutional players	
		_stakeholder2		_stakeholder4		_stakeholder6	
	o	Municipalities and institutional players		Residents & users		Actors socio-economic actors	

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2027	Delivery of studies	2029	End of trial phase	2030	Assessment and start of massification

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	495 000 000 €	Estimated cost 2030 Neutrality scenario	1 651 000 000 €	Cost in € / tCO2 (Ambitious)	96 800 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	4	Action sheet name	Developing sustainable urban logistics

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Territory and Projects Department	Main area	Mobility	Action period	2024-2030	Advancement	Under study

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Reduced carbon footprint, Improved air quality, Optimization of urban space, Reduced congestion, Strengthened local economy, Improved safety, Resilience of supply chains		Energy-efficient building renovation	O	Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control	O	Development of renewable energies (electricity, gas, heat)	O	Optimizing and decarbonizing mobility flows within the region	O	Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
O	Promoting alternative modes of consumption and waste management		Promoting alternative waste production and management methods		Evolution of new management methods for nature areas		Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
	Supporting those most vulnerable to change	O	Supporting economic players in meeting the challenges of decarbonization		Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion		Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	4	Action sheet name	Developing sustainable urban logistics

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Territory and Projects Department	Main area	Mobility	Action period	2024-2030	Advancement	Under study

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole and private logistics players	Experimentation of Urban Logistics solutions			LUDIC	Urban Logistics Charter LUDIC		
	_project3		_project4		_document3		_document4
	_project5		_project6		_document5		_document6
	_project7		_project8		_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	4		Developing sustainable urban logistics

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Territory and Projects Department		Mobility		2024-2030		Under study

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Supporting the development of recharging solutions for electromobility-powered trucks (H2, batteries)	Study the opportunities for developing recharging solutions for CNG-powered trucks	
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Organize the development of logistics points in the region with stakeholders	Study the advisability of restricting access for polluting vehicles to sensitive areas, regulating deliveries in the city center, and preventing risks for delivery personnel as part of the interlud / ludic charter.	
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	4		Developing sustainable urban logistics

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Territory and Projects Department		Mobility		2024-2030		Under study

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Study the implementation of a cycling hub as part of the interlud / ludic charter	Raising awareness among residents of the need to reduce the impact of home deliveries (particularly within a very short timeframe).	Encourage cycling for the last few km as part of the interlud / ludic charter
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Encourage the emergence of less impactful delivery channels (scooters, velocargoes, etc.).		
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 4	Action sheet name	_name: Developing sustainable urban logistics

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Develop common criteria among public purchasers to reduce freight and its impact on the region		
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	5 115	tCO2eq		
Greenhouse gases	Fleet of electric trucks as a percentage of total trucks	6	%		
Greenhouse gases	Reducing the number of vehicles running on hydrocarbons, optimizing flows	-25	GWh / year		
Greenhouse gases	Expanding the fleet of fuel cell vehicles (trucks) and optimizing flows	18	GWh / year		
Economy	Reducing the share of freight entering metropolitan France	0	%		
Social inclusion	% reduction in internal flows within the metropolis	5	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 4	Action sheet name	_name: Developing sustainable urban logistics

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents	O	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 4	Action sheet name	_name: Developing sustainable urban logistics

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	Promoting a culture of risk and hazard management in our territory	_contribution21	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

_contribution19	
	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 4	Action sheet name	_name: Developing sustainable urban logistics

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Under study

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	O	Developing and strengthening areas of cooperation and response construction		Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION		Building strategic alliances for the gradual relocation of certain sectors of economic activity		Strengthening reciprocity between territories
MOBILIZATION		Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS		Building and sharing a common culture of climate and biodiversity in the region	O	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 5	Action sheet name	_name: Development of a coordinated transport offer across the urban area

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Not started

Trajectory

Action description	description: The development of a coordinated transport offer across an urban area involves harmonizing and integrating the different modes of transport (TER, bus, streetcar, train, bike) to offer users a fluid, coherent mobility system. This includes synchronizing timetables, creating efficient transfer points, and introducing a single or simplified fare structure. The aim is to improve accessibility and connectivity between neighborhoods, facilitate daily travel, and promote the use of public transport while reducing dependence on the private car.

Stakeholders involved						
	_stakeholder1: O	Dijon metropole	_stakeholder3: O	Actors socio-economic players	_stakeholder5: O	Municipalities and extra-territorial institutional players
	_stakeholder2	Municipalities and institutional players	_stakeholder4	Residents & users	_stakeholder6	Actors socio-economic actors

Main milestones		_milestone 1		_milestone 2		_milestone 3
	2026	Delivery of SERM studies	2029	End of trial phase	2030	Assessment and start of massification

Financial estimate	Estimated cost 2030 Ambitious scenario	_cost1: 1 345 000 000 €	Estimated cost 2030 Neutrality scenario	_cost2: 4 055 000 000 €	Cost in € / tCO2 (Ambitious)	_CO2_cost: 65 700 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	5	Action sheet name	Development of a coordinated transport offer across the urban area

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Territory and Projects Department	Main area	Mobility	Action period	2024-2030	Advancement	Not started

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Improved mobility, Reduced congestion, Positive environmental impact, Accessibility, Economic boost, Spatial planning, Public health, Technology integration		Energy-efficient building renovation	O	Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
O	Flexibility and usage control	O	Development of renewable energies (electricity, gas, heat)	O	Optimizing and decarbonizing mobility flows within the region	O	Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
O	Promoting alternative modes of consumption and waste management	O	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas	O	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
O	Supporting those most vulnerable to change	O	Supporting economic players in meeting the challenges of decarbonization		Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion		Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	5	Action sheet name	Development of a coordinated transport offer across the urban area

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Territory and Projects Department	Main area	Mobility	Action period	2024-2030	Advancement	Not started

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon metropole, Département, Région	Experimentation of Energy Mobilty hubs	Dijon metropole, Département, Région	Schéma Express Regional Métropolitain (SERM)	SCOT	SCOT - Territorial Coherence Scheme		
	_project3		_project4		_document3		_document4
	_project5		_project6		_document5		_document6
	_project7		_project8		_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 5	Action sheet name	_name: Development of a coordinated transport offer across the urban area

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Not started

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Study the deployment of a network of energy-mobility hubs in line with local usage, enabling structured intermodality throughout the urban area.		
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Coordinate the deployment of sustainable mobility services throughout the urban area, in partnership with the region and the dreal, and in consultation with the EPCIs of the urban area and the département.		
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**5**	**Action sheet name**	**Development of a coordinated transport offer across the urban area**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Territory and Projects Department**	**Main area**	**Mobility**	**Action period**	**2024-2030**	**Advancement**	**Not started**

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	**Supporting the development of new services that encourage new mobility uses to replace car-pooling**		
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	**Improving shared knowledge of the mobility needs of urban area residents**		
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	5		Development of a coordinated transport offer across the urban area

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Territory and Projects Department		Mobility		2024-2030		Not started

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Accompany the deployment of new economic services based on the development of new forms of mobility and the expansion of mobility needs.		
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	20 460	tCO2eq		
Greenhouse gases	Reducing the flow of light vehicles commuting on their own	-10	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number (_number)	Action sheet name (_name)
5	Development of a coordinated transport offer across the urban area

Person responsible for the action sheet (_manager)	Main area (_domain)	Action period (_period)	Advancement (progress)
Dijon métropole - Territory and Projects Department	Mobility	2024-2030	Not started

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents	O	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4 O	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5 O	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7 O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8 O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 5	Action sheet name	_name: Development of a coordinated transport offer across the urban area

Person responsible for the action sheet	_manager: Dijon métropole - Territory and Projects Department	Main area	_domain: Mobility	Action period	_period: 2024-2030	Advancement	progress: Not started

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15: O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16: O	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18: O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	Promoting a culture of risk and hazard management in our territory	_contribution21: O	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

_contribution19	
	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**5**	**Action sheet name**	**Development of a coordinated transport offer across the urban area**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Territory and Projects Department**	**Main area**	**Mobility**	**Action period**	**2024-2030**	**Advancement**	**Not started**

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	**o**	Developing and strengthening areas of cooperation and response construction	**o**	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION		**Building strategic alliances for the gradual relocation of certain sectors of economic activity**	**o**	**Strengthening reciprocity between territories**

	_contribution28	
MOBILIZATION	**o**	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	**o**	**Building and sharing a common culture of climate and biodiversity in the region**	**o**	**Sharing and leveraging experience to accelerate the transition**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number
	6

Action sheet name	_name
	Decarbonizing and reducing energy consumption of existing housing

Person responsible for the action sheet	_manager
	Dijon métropole - Housing Department

Main area	_domain
	Building

Action period	_period
	2024-2030

Advancement	progress
	In progress

Trajectory

Action description	description
	Decarbonizing and reducing energy consumption in existing housing aims to improve energy efficiency and reduce greenhouse gas emissions from buildings. This includes actions such as thermal insulation, replacing heating systems with less polluting solutions (such as heat pumps or biomass boilers), and integrating renewable energies (such as solar panels). The aim is to make homes more energy-efficient, reduce energy bills for occupants, and contribute to the fight against climate change while enhancing residents' comfort.

Stakeholders involved		_stakeholder1		_stakeholder3		_stakeholder5
	O	Dijon metropole	O	Actors socio-economic players		Municipalities and extra-territorial institutional players
	O	Municipalities and institutional players	O	Residents & users		Actors socio-economic actors
		_stakeholder2		_stakeholder4		_stakeholder6

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2028	First experiments in renovation of private condominiums	2030	End of F and G ECD housing in the social housing stock		

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	1 969 000 000 €	Estimated cost 2030 Neutrality scenario	3 217 000 000 €	Cost in € / tCO2 (Ambitious)	25 900 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	6	Action sheet name	Decarbonizing and reducing energy consumption of existing housing

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Housing Department	Main area	Building	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Improving air quality, Reducing energy bills, Enhancing property assets, Creating jobs, Energy resilience, Reducing inequalities, Transition to renewable energies	O	Energy-efficient building renovation		Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
O	Flexibility and usage control	O	Development of renewable energies (electricity, gas, heat)	O	Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
O	Promoting alternative modes of consumption and waste management	O	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas	O	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
O	Supporting those most vulnerable to change	O	Supporting economic players in meeting the challenges of decarbonization	O	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion		Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number	_name
Action sheet number	6	
Action sheet name		Decarbonizing and reducing energy consumption of existing housing

	_manager	_domain	_period	progress
Person responsible for the action sheet	Dijon métropole - Housing Department			
Main area		Building		
Action period			2024-2030	
Advancement				In progress

Main reference projects identified in the region

	_project1	_project2	_project3	_project4	_project5	_project6	_project7	_project8
	Social landlords, Dijon Métropole, Region, State, private owners	Social landlords, Dijon Métropole						
	Metropolitan actions: Renoveco and SEM habitat funds	Response project						

Key policies, documents or strategic studies

	_document1	_document2	_document3	_document4	_document5	_document6	_document7	_document8
	Urban planning	RENOVECO	PLUi-HD					
	Eco-districts and urban design practices	Renoveco Urban renovation program	PLUIHD - local urban plan (regulatory)					

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 6

Action sheet name	_name: Decarbonizing and reducing energy consumption of existing housing

Person responsible for the action sheet	_manager: Dijon métropole - Housing Department

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	adapting / changing heating systems connection to RCU	building renovation and efficiency work work on energy efficiency (LEDs, sensors, optimization, flexibility)	PV production on roofs, facades or parking lots deployment of electric charging stations for vehicles and bicycles
	_techno4	_techno5	_techno6
	work on water infiltration in plots / condominiums / neighborhoods	work on indoor air quality in buildings integration of anti-heat solutions (caps, BSO, tree/shrub planting, etc.)	promote the use of low-tech solutions (useful, sustainable, economical) for building renovation
	governance1	governance2	_governance3
Governance, policy & regulation	changing regulations to encourage thermal renovation of buildings		
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	6	Action sheet name	Decarbonizing and reducing energy consumption of existing housing

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Housing Department	Main area	Building	Action period	2024-2030	Advancement	In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	implementation of load shedding / sobriety solutions	rainwater storage (watering, washing, etc.) structure re-use and promote the use of recycled materials	home energy efficiency support program
	_social4	_social5	_social6
	promote individual or collective self-consumption of energy optimize floor space in the tertiary and residential sectors: pooling uses	deploying suitable parking facilities for bicycles	organize and manage local engineering resources to boost building renovation
	capacities1	capacities2	capacities3
Capacity & capabilities	Promoting the use of bio-sourced materials and reducing construction waste	Structuring renewable energy production with extra-territorial players	Structuring the energy and building sectors (including renewable energies and eco-construction), and enhancing their attractiveness
	capacities4	capacities5	capacities6
	Working on data / intelligent buildings		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 6

Action sheet name	_name: Decarbonizing and reducing energy consumption of existing housing

Person responsible for the action sheet	_manager: Dijon métropole - Housing Department

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Implement measures to combat and reduce economic vulnerability (housing)	Challenge the economic models of renovation projects to massify the approach and reduce costs	Structuring renewable energy procurement to ensure a secure supply for buildings
	_finance4	finance5	finance6
	Challenge financing solutions (bank loans, guarantee funds) for renovation projects		

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	75 993	tCO2eq		
Greenhouse gases	Reducing energy consumption in housing	-225	GWh / year		
Greenhouse gases	Share of consumption from petroleum products (heat) - conversion to other heating methods	0	%		
Greenhouse gases	Gradual reduction in heat consumption from gas boilers, and promotion of biogas use	-152	GWh / year		
Resources	Development and stabilization of heat consumption by the Urban Heat Network (UHN)	41,34	GWh / year		
Social inclusion	Social housing ECD A, B, C	70	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 6

Action sheet name	_name: Decarbonizing and reducing energy consumption of existing housing

Person responsible for the action sheet	_manager: Dijon métropole - Housing Department

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents	O	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3: O	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4: O	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5: O	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 6

Action sheet name	_name: Decarbonizing and reducing energy consumption of existing housing

Person responsible for the action sheet	_manager: Dijon métropole - Housing Department

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: In progress

Adaptation

WATER	_contribution11		Restore the natural cycle of stormwater on our territory and use it sustainably	_contribution12		Adapting our water consumption to availability, reducing it and optimizing its use	
SUSTAINABLE FOOD	_contribution13		Promoting healthy, sustainable food accessible to all	_contribution14		Increase local sourcing and guarantee fair remuneration for producers	
SOCIAL JUSTICE	contribution15	O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	O	Supporting residents most at risk	
ECONOMIC MUTATIONS	_contribution17		Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	O	Promote a sustainable economic development model that creates wealth throughout the urban area	_contribution19 O Supporting professional transitions and enhancing the attractiveness of professions
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	O	Promoting a culture of risk and hazard management in our territory	_contribution21	O	Offering everyone a resilient, healthy region with a high quality of life	
SERVICES PROVIDED BY NATURE	_contribution22		Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	O	Making biodiversity an ally in our region's transition	

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 6

Action sheet name	_name: Decarbonizing and reducing energy consumption of existing housing

Person responsible for the action sheet	_manager: Dijon métropole - Housing Department

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27 o	Strengthening reciprocity between territories
MOBILIZATION	_contribution28 o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29 o	Building and sharing a common culture of climate and biodiversity in the region	_contribution30 o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	7	**Action sheet name**	**Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Energy Strategy Department**	**Main area**	**Building**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Trajectory

	description
Action description	**The decarbonization and reduction of energy consumption in the commercial and industrial sectors (excluding processes) aims to optimize the energy efficiency of office buildings, retail outlets and industrial facilities, excluding energy requirements linked to production processes. This includes measures such as improving insulation, installing more efficient heating and cooling systems, LED lighting, and integrating renewable energies. The aim is to reduce greenhouse gas emissions, cut energy costs, and promote a more sustainable and comfortable working environment.**

	_stakeholder1		_stakeholder3		_stakeholder5
Stakeholders involved	**O**	**Dijon metropole**	**O**	**Actors socio-economic players**		**Municipalities and extra-territorial institutional players**
	_stakeholder2		_stakeholder4		_stakeholder6
	O	**Municipalities and institutional players**		**Residents & users**		**Actors socio-economic actors**

	_milestone 1		_milestone 2		_milestone 3
Main milestones	**2027**	**Structuring regional cooperation**	**2029**	**First renovation experiments**	**2030**	**Assessment and start of the massification phase**

	_cost1		_cost2		_CO2_cost
Financial estimate	**Estimated cost 2030 Ambitious scenario**	**1 658 000 000 €**	**Estimated cost 2030 Neutrality scenario**	**2 079 000 000 €**	**Cost in € / tCO2 (Ambitious)**	**37 700 €**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**7**	**Action sheet name**	**Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Energy Strategy Department**	**Main area**	**Building**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	**Reducing greenhouse gas emissions, Optimizing costs, Improving brand image, Creating jobs, Energy transition, Economic stability, Improving working conditions, Spillover effects on the supply chain**	**o**	**Energy-efficient building renovation**		**Space planning and efficient building construction**

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	**Flexibility and usage control**	**o**	**Development of renewable energies (electricity, gas, heat)**	**o**	**Optimizing and decarbonizing mobility flows within the region**		**Reducing, optimizing and decarbonizing incoming and outgoing mobility flows**

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	**Promoting alternative modes of consumption and waste management**	**o**	**Promoting alternative waste production and management methods**		**Evolution of new management methods for nature areas**	**o**	**Water conservation on our territory**

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	**Supporting those most vulnerable to change**	**o**	**Supporting economic players in meeting the challenges of decarbonization**	**o**	**Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion**		**Development favorable to the development of natural ecosystem functions**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	7	Action sheet name	Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Building	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole	Programm of metropolitan building renovation	Private and public players	Building renovation projects of partners involved into the Metropolitan Climate & Biodiversity Contract	PLUi-HD	PLUIHD - local urban plan (regulatory)	SCOT	SCOT - Territorial Coherence Scheme
	_project3		_project4		_document3		_document4
	_project5		_project6		_document5		_document6
	_project7		_project8		_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 7

Action sheet name	_name: Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	adapting / changing heating systems connection to RCU	building renovation and efficiency work work on energy efficiency (LEDs, sensors, optimization, flexibility) Optimize energy consumption in public lighting	PV production on roofs, facades or parking lots deployment of electric charging stations for vehicles and bicycles
	_techno4	_techno5	_techno6
	work on water infiltration in plots / condominiums / neighborhoods	work on indoor air quality in buildings integration of anti-heat solutions (caps, BSO, tree/shrub planting, etc.)	promote the use of low-tech solutions (useful, sustainable, economical) for building renovation
	governance1	governance2	_governance3
Governance, policy & regulation	Organize feedback between property managers (e.g. Décret Tertiaire)	Studying the location of companies, taking into account environmental and social issues	
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	7	Action sheet name	Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Building	Action period	2024-2030	Advancement	In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	implementation of load shedding / sobriety solutions	rainwater storage (watering, washing, etc.) structure re-use and promote the use of recycled materials	home energy efficiency support program
	_social4	_social5	_social6
	promote individual or collective self-consumption of energy optimize floor space in the tertiary and residential sectors: pooling uses	deploying suitable parking facilities for bicycles	organize and manage local engineering resources to boost building renovation
	capacities1	capacities2	capacities3
Capacity & capabilities	Promoting the use of bio-sourced materials and reducing construction waste	Structuring renewable energy production with extra-territorial players	Structuring the energy and building sectors (including renewable energies and eco-construction), and enhancing their attractiveness
	capacities4	capacities5	capacities6
	Working on data / intelligent buildings		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 7	Action sheet name	_name: Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Building	Action period	_period: 2024-2030	Advancement	progress: In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Offer a shared energy purchasing center for the tertiary sector	Challenge the economic models of renovation projects to massify the approach and reduce costs	Structuring renewable energy procurement to ensure a secure supply for buildings
	_finance4	finance5	finance6
	Challenge financing solutions (bank loans, guarantee funds) for renovation projects		

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	43 996	tCO2eq		
Greenhouse gases	Reducing energy consumption in commercial and industrial buildings (excluding processes)	-120	GWh / year		
Greenhouse gases	Share of consumption from petroleum products (heat) - conversion to other heating methods	0	%		
Greenhouse gases	Gradual reduction in heat consumption from gas boilers, and promotion of biogas use	-65	GWh / year		
Greenhouse gases	Reducing energy consumption in public lighting DM	-65	%		
Greenhouse gases	Reducing energy consumption in commercial buildings >1000m² (80%)	-40	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 7	Action sheet name	_name: Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Building	Action period	_period: 2024-2030	Advancement	progress: In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3: O	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4: O	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5: O	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 7	Action sheet name	_name: Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Building	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	Promoting a culture of risk and hazard management in our territory	_contribution21	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

_contribution19	
O	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 7	Action sheet name	_name: Decarbonizing and reducing energy consumption in the commercial and industrial sectors (excluding processes)

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Building	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27 o	Strengthening reciprocity between territories
MOBILIZATION	_contribution28 o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29 o	Building and sharing a common culture of climate and biodiversity in the region	_contribution30 o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	8	Action sheet name	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

_number _name

Person responsible for the action sheet	Dijon métropole - Direction PLUI-HD	Main area	Building	Action period	2024-2030	Advancement	Under study

_manager _domain _period progress

Trajectory

description

Action description	Reducing the climate and biodiversity impacts of development and construction projects involves integrating sustainable practices into the design and construction of infrastructure, public spaces and buildings. This includes the use of environmentally-friendly materials, the preservation of local ecosystems, stormwater management, and the consideration of climate issues in urban planning. The aim is to minimize the environmental footprint of projects, promote resilience in the face of climate change, and protect biodiversity, while creating healthy, pleasant living spaces for users.

Stakeholders involved	_stakeholder1		_stakeholder3		_stakeholder5	
	O	Dijon metropole	O	Actors socio-economic players		Municipalities and extra-territorial institutional players
	_stakeholder2		_stakeholder4		_stakeholder6	
	O	Municipalities and institutional players	O	Residents & users		Actors socio-economic actors

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2026	Delivery of studies	2026	Start of field infiltration experiments	2027	Project start-up

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	404 600 000 €	Estimated cost 2030 Neutrality scenario	732 200 000 €	Cost in € / tCO2 (Ambitious)	30 300 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	8	Action sheet name	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Direction PLUI-HD	Main area	Building	Action period	2024-2030	Advancement	Under study

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2	
Expected co-benefits	Preserving biodiversity, Climate resilience, Improving quality of life, Reducing greenhouse gas emissions, Resource efficiency, Community involvement, Education and awareness, Positive impact on health			Energy-efficient building renovation	O	Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control	O	Development of renewable energies (electricity, gas, heat)	O	Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
O	Promoting alternative modes of consumption and waste management	O	Promoting alternative waste production and management methods	O	Evolution of new management methods for nature areas	O	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
O	Supporting those most vulnerable to change	O	Supporting economic players in meeting the challenges of decarbonization	O	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	O	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	8	Action sheet name	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Direction PLUI-HD	Main area	Building	Action period	2024-2030	Advancement	Under study

Main reference projects identified in the region

	_project1		_project2
Private owners, condominiums, Dijon Métropole	Micro-projects plot-based infiltration	Dijon metropole	Eco-district porte Agripa
Dijon metropole	Development of the southern entrance to the town		

Key policies, documents or strategic studies

	_document1		_document2
PLUi-HD	PLUIHD - local urban plan (regulatory)	SCOT	SCOT - Territorial Coherence Scheme

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 8	Action sheet name	_name: Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

Person responsible for the action sheet	_manager: Dijon métropole - Direction PLUI-HD	Main area	_domain: Building	Action period	_period: 2024-2030	Advancement	progress: Under study

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	promote soil biodiversity in urban spaces, encourage water infiltration and create islands of coolness	Go beyond the regulatory requirements for building construction by integrating innovations that diversify the range of expected systemic effects.	
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Monitoring the implementation of the plot biotope coefficient in the Plui-HD	Pursue a policy of sober land use to move towards ZAN	Incorporate new land management methods defined at the urban area level into the PLUI-HD and SCOT.
	_governance4	_governance5	governance6
	Studying the location of companies, taking into account environmental and social issues		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	8	Action sheet name	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Direction PLUI-HD	Main area	Building	Action period	2024-2030	Advancement	Under study

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Integrate environmental issues into development and construction projects (air quality, noise, biodiversity, etc.)	Support projects that promote water and biodiversity (vegetation, infiltration, water drainage, creation of cool islands, etc.).	Organize new ways of managing land, taking into account different uses (agriculture, energy, housing, biodiversity, parks and private gardens) and changes in resources (water, land, etc.) on an urban scale
	_social4	_social5	_social6
	Organize and manage local engineering resources to maximize the systemic effects expected from development projects.		
	capacities1	capacities2	capacities3
Capacity & capabilities	Raise the skills of land-use planners in biodiversity and water management issues	Promoting the use of bio-sourced materials and the reduction of construction site waste in building projects	Structure the energy and building sectors (including renewable energies and eco-construction), and enhance their attractiveness for construction.
	capacities4	capacities5	capacities6
	Working on data / intelligent buildings		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**8**	**Action sheet name**	**Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Direction PLUI-HD**	**Main area**	**Building**	**Action period**	**2024-2030**	**Advancement**	**Under study**

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	**Collectively define purchasing clauses to reduce the environmental impact of development and construction projects.**		
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	13 332	tCO2eq		
Resources	Reducing consumption of natural and agricultural areas	-30	%		
Resources	Reducing consumption of natural and agricultural areas	-100	ha		
Resources	Urbanized areas	32	%		
Social inclusion	Number of new housing units to be built in 2020	16260	units		
Social inclusion	Of which % subsidized housing	50	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 8

Action sheet name	_name: Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

Person responsible for the action sheet	_manager: Dijon métropole - Direction PLUI-HD

Main area	_domain: Building

Action period	_period: 2024-2030

Advancement	progress: Under study

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY	O	Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	O	Reduce energy consumption and greenhouse gas emissions in buildings	O	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	O	Developing the local production of renewable and recovered energies	O	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE		Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity		Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 8	Action sheet name	_name: Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)

Person responsible for the action sheet	_manager: Dijon métropole - Direction PLUI-HD	Main area	_domain: Building	Action period	_period: 2024-2030	Advancement	progress: Under study

Adaptation

	_contribution11		_contribution12	
WATER	O	Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15 O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16 O	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17 O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18 O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20 O	Promoting a culture of risk and hazard management in our territory	_contribution21 O	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22 O	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23 O	Making biodiversity an ally in our region's transition

_contribution19	
O	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**8**	**Action sheet name**	**Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Direction PLUI-HD**	**Main area**	**Building**	**Action period**	**2024-2030**	**Advancement**	**Under study**

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	**o**	Developing and strengthening areas of cooperation and response construction	**o**	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION		**Building strategic alliances for the gradual relocation of certain sectors of economic activity**	**o**	**Strengthening reciprocity between territories**

	_contribution28	
MOBILIZATION	**o**	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	**o**	**Building and sharing a common culture of climate and biodiversity in the region**	**o**	**Sharing and leveraging experience to accelerate the transition**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	9		Development of renewable electricity generation

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Power generation		2024-2030		In progress

Trajectory

	description
Action description	The development of renewable electric power generation involves increasing the capacity to generate electricity from sustainable sources such as solar, wind, hydro and biomass. This involves building new facilities, optimizing existing infrastructures and setting up energy storage systems. The aim is to reduce dependence on fossil fuels, cut greenhouse gas emissions, and foster the energy transition to a more sustainable, environmentally-friendly model.

Stakeholders involved		_stakeholder1		_stakeholder3		_stakeholder5	
		o	Dijon metropole	o	Actors socio-economic players		Municipalities and extra-territorial institutional players
		_stakeholder2		_stakeholder4		_stakeholder6	
		o	Municipalities and institutional players	o	Residents & users		Actors socio-economic actors

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2025	Launch of SEM Energies	2027	First regional ENR projects launched	2030	Delivery of first regional ENR projects

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	154 000 000 €	Estimated cost 2030 Neutrality scenario	300 000 000 €	Cost in € / tCO2 (Ambitious)	- €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	9	Action sheet name	Development of renewable electricity generation

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2	
Expected co-benefits	Energy security, Energy access, Job creation, Community integration, Local economic impact	o	Energy-efficient building renovation	o	Space planning and efficient building construction	

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	Flexibility and usage control	o	Development of renewable energies (electricity, gas, heat)	o	Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas		Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion		Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	9	Action sheet name	Development of renewable electricity generation

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole, Private players	Airport photovoltaic power plant / BA 102	Dijon Métropole, Private players	Photovoltaic power plant CET Sud	SDE	Energy master plan (strategic and programming)	SEM ENERGIES	Mixed Economy Company dedicated to renewable energies and energy transition
	_project3		_project4		_document3		_document4
Dijon Métropole, Private players	Collective self-consumption loop on the Chevigny / Excellence 2000 business park	Dijon Métropole, Private players	Collective self-consumption loop on the Longvic / Oscara business park				
	_project5		_project6		_document5		_document6
Dijon Métropole, Private players	Collective self-consumption loop on CHU / UB zone	Dijon metropole, City of Dijon	Solarisation of the built and non-built heritage of Dijon Métropole and the City of Dijon				
	_project7		_project8		_document7		_document8
Dijon Métropole, Private players	Agronov zone agrivoltaic project						

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	9		Development of renewable electricity generation

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Power generation		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Deploy ground-based production projects on derelict land or in agrivoltaics	Deploy production projects on urban rooftops and parking lots (shading)	
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Define rules authorizing the deployment of ground-mounted solar systems outside urban areas in the PLUIHD	Study the feasibility of developing solar production outside the region to meet local needs.	
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	9	Action sheet name	Development of renewable electricity generation

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Organize new forms of land management, taking into account different uses (agricultural, energy, housing, biodiversity, parks and private gardens) and changes in resources (water, land, etc.) on an urban scale	Develop citizen and participative renewable energy production projects (investment or financing)	Encourage individual or collective self-consumption and storage in projects
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Structure a territory-wide project portfolio to facilitate and consolidate project financing (third-party investors)	Structuring the energy and building sectors (including renewable energies and eco-construction), and enhancing their attractiveness	
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 9	Action sheet name	_name: Development of renewable electricity generation

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Developing extra-territorial cooperation in electricity supply	Developing and organizing private-public PPPs	Study the possibility of solarizing roadways (ring road, major roads)
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	0	tCO2eq		
Resources	Ground-mounted solar PV	110	GWh / year		
Resources	Soalire PV roofs	7	GWh / year		
Resources	Solar PV parking lot shading	32	GWh / year		
Resources	Waste - heat cogeneration	-54	GWh / year		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	9		Development of renewable electricity generation

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Power generation		2024-2030		In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	O	_contribution6	O
		Developing the local production of renewable and recovered energies		Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	O	_contribution8	O
		Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.		Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 9	Action sheet name	_name: Development of renewable electricity generation

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	O Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	O Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	O Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	O Promoting a culture of risk and hazard management in our territory	_contribution21	O Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

_contribution19	
O	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 9	Action sheet name	_name: Development of renewable electricity generation

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	o	Building strategic alliances for the gradual relocation of certain sectors of economic activity	o	Strengthening reciprocity between territories
MOBILIZATION	o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	o	Building and sharing a common culture of climate and biodiversity in the region	o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	10		Development of renewable gas production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Power generation		2024-2030		In progress

Trajectory

Action description	description
	The development of renewable gas production involves increasing the capacity to produce gas from sustainable sources, such as biogas, green hydrogen and syngas. This includes processes such as methanization of organic waste, electrolysis of water to produce hydrogen from renewable electricity, and valorization of agricultural resources. The aim is to diversify energy sources, reduce greenhouse gas emissions, and foster an energy transition towards more sustainable solutions, while contributing to energy security and the circular economy.

Stakeholders involved		_stakeholder1		_stakeholder3		_stakeholder5	
		O	Dijon metropole	O	Actors socio-economic players	O	Municipalities and extra-territorial institutional players
		_stakeholder2		_stakeholder4		_stakeholder6	
		O	Municipalities and institutional players		Residents & users	O	Actors socio-economic actors

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2025	Delivery of STEP methanization unit	2026	Hydrogen station delivery	2028	Commissioning of agricultural methanization

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	98 000 000 €	Estimated cost 2030 Neutrality scenario	155 000 000 €	Cost in € / tCO2 (Ambitious)	- €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	10	Action sheet name	Development of renewable gas production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Reducing greenhouse gas emissions, Recycling waste, Energy security, Energy system flexibility, Stimulating the local economy, Integration into existing networks, Technological innovation	o	Energy-efficient building renovation		Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	Flexibility and usage control	o	Development of renewable energies (electricity, gas, heat)	o	Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas		Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	10	Action sheet name	Development of renewable gas production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

	_project1		_project2
Dijon Métropole	Biomethane production from Sewage Water Treatment Plant	Dijon Métropole, Private players	Hydrogen production stations
Private players	Agricultural methanisation unit		

	_project3		_project4

	_project5		_project6

	_project7		_project8

Key policies, documents or strategic studies

	_document1		_document2
SDE	Energy master plan (strategic and programming)	SEM ENERGIES	Mixed Economy Company dedicated to renewable energies and energy transition

	_document3		_document4

	_document5		_document6

	_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	10		Development of renewable gas production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Power generation		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Development of methane gas energy	Hydrogen energy development	
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Develop a strategy for adapting the gas network to changing usage patterns		
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	10	Action sheet name	Development of renewable gas production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Energy Strategy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Promoting the use of renewable gas in the region	Implementation of load-shedding / sobriety solutions	
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Technically structuring the local hydrogen ecosystem	Structuring the energy and building sectors (including renewable energies and eco-construction), and enhancing their attractiveness	
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	10		Development of renewable gas production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Energy Strategy Department		Power generation		2024-2030		In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Developing extra-territorial cooperation in biomethane energy supply	Developing extra-territorial cooperation in hydrogen energy supply	
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	0	tCO2eq		
Greenhouse gases	ENR rate GAS network	15	%		
Resources	Methanization - biogas	30	GWh / year		
Resources	Hydrogen	18	GWh / year		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 10	Action sheet name	_name: Development of renewable gas production

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	O	_contribution6	O
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	O	_contribution8	O
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Developing the local production of renewable and recovered energies	Controlling the impact of renewable energy development on resources	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	Reducing the environmental impact of local industries

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 10	Action sheet name	_name: Development of renewable gas production

Person responsible for the action sheet	_manager: Dijon métropole - Energy Strategy Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	Promoting a culture of risk and hazard management in our territory	_contribution21	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

	_contribution19	
ECONOMIC MUTATIONS	O	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**10**	**Action sheet name**	**Development of renewable gas production**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Energy Strategy Department**	**Main area**	**Power generation**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	**o**	Developing and strengthening areas of cooperation and response construction	**o**	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION	**o**	**Building strategic alliances for the gradual relocation of certain sectors of economic activity**		**Strengthening reciprocity between territories**

	_contribution28	
MOBILIZATION	**o**	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	**o**	**Building and sharing a common culture of climate and biodiversity in the region**	**o**	**Sharing and leveraging experience to accelerate the transition**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	11		Development of renewable thermal energy production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Building and Energy Department		Power generation		2024-2030		In progress

Trajectory

Action description	description
	The development of renewable thermal energy production aims to increase the use of sustainable energy sources for heating and cooling. This includes technologies such as biomass boilers, geothermal systems and solar thermal collectors. The aim is to reduce dependence on fossil fuels, cut greenhouse gas emissions, and promote more sustainable, environmentally-friendly heating solutions, while improving the energy efficiency of buildings and infrastructure.

Stakeholders involved		_stakeholder1		_stakeholder3		_stakeholder5	
		O	Dijon metropole	O	Actors socio-economic players		Municipalities and extra-territorial institutional players
		_stakeholder2		_stakeholder4		_stakeholder6	
		O	Municipalities and institutional players	O	Residents & users		Actors socio-economic actors

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2027	UVE modernization start-up	2028	Start-up of industrial heat production project		

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	205 000 000 €	Estimated cost 2030 Neutrality scenario	441 000 000 €	Cost in € / tCO2 (Ambitious)	10 500 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	11		Development of renewable thermal energy production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Building and Energy Department		Power generation		2024-2030		In progress

Expected systemic effects

Expected co-benefits	_cobenefits		_systemic_effect1		_systemic_effect2
	Reducing greenhouse gas emissions, Improving air quality, Energy security, Circular economy, Stimulating the local economy, Energy system flexibility, Access to energy	o	Energy-efficient building renovation	o	Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	Flexibility and usage control	o	Development of renewable energies (electricity, gas, heat)		Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas		Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	11	Action sheet name	Development of renewable thermal energy production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Building and Energy Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

	_project1		_project2
Dijon Métropole, Private players	New heat production unit in southern Dijon / buffer storage / industrial waste heat recovery	Dijon Métropole, Private players	New heat production unit in eastern Dijon / buffer storage / industrial waste heat recovery

	_project3		_project4
Dijon Métropole	Renovation of the UVE / buffer storage / recovery of waste heat Zone Activité Cap Nord		

	_project5		_project6

	_project7		_project8

Key policies, documents or strategic studies

	_document1		_document2
SDE	Energy master plan (strategic and programming)	SEM ENERGIES	Mixed Economy Company dedicated to renewable energies and energy transition

	_document3		_document4
SD RCU	Master plan for heating networks (strategic & programming)		

	_document5		_document6

	_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	11		Development of renewable thermal energy production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Building and Energy Department		Power generation		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Development of heat production from heat pumps	Development of geothermal heat production	Developing heat production from solar thermal energy
	_techno4	_techno5	_techno6
	Stabilization of biomass heat production (excluding RCU) Development of biomass-fired heating networks and recovery of waste heat from industrial processes	RCU - Development of biomass heat production for the RCU RCU - Limitation of gas-fired heat production for RCU RCU - Optimization of waste heat production for RCU	Development of moderate use of cold production from air conditioning or heat pumps Development of moderate use of cold production from the Urban Cold Network
	governance1	governance2	_governance3
Governance, policy & regulation	Develop a strategy for adapting the RCU to changing usage patterns		
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	11		Development of renewable thermal energy production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Building and Energy Department		Power generation		2024-2030		In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Implementation of load-shedding / sobriety solutions	Organize new forms of land management, taking into account different uses (agricultural, energy, housing, biodiversity, parks and private gardens) and changes in resources (water, land, etc.) on an urban scale	Promote self-consumption in projects using heat storage
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Structure a territory-wide project portfolio to facilitate and consolidate project financing (third-party investors)	Structuring the energy and building sectors (including renewable energies and eco-construction), and enhancing their attractiveness	
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 11

Action sheet name	_name: Development of renewable thermal energy production

Person responsible for the action sheet	_manager: Dijon métropole - Building and Energy Department

Main area	_domain: Power generation

Action period	_period: 2024-2030

Advancement	progress: In progress

Systemic action levers

Finance & business models	finance1: Developing extra-territorial cooperation in biomethane energy supply	finance2: Developing extra-territorial cooperation in biomass energy supply	_finance3: Development of heat networks dedicated to industrial uses and recovery of waste energy
	_finance4: Implement actions to combat and reduce economic vulnerability (energy)	finance5:	finance6:

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	19 440	tCO2eq		
Resources	Increase in ENR RCU rate	10	%		
Resources	Solar thermal roofing	2	GWh / year		
Resources	Aerothermal / heat pump	92	GWh / year		
Resources	Geothermal heat	2	GWh / year		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	11		Development of renewable thermal energy production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Building and Energy Department		Power generation		2024-2030		In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	O	_contribution6	O
		Developing the local production of renewable and recovered energies		Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	O	_contribution8	O
		Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.		Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	11		Development of renewable thermal energy production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Building and Energy Department		Power generation		2024-2030		In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	Promoting a culture of risk and hazard management in our territory	_contribution21	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

	_contribution19	
ECONOMIC MUTATIONS		Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 11	Action sheet name	_name: Development of renewable thermal energy production

Person responsible for the action sheet	_manager: Dijon métropole - Building and Energy Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26: o	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27: o	Strengthening reciprocity between territories
MOBILIZATION	_contribution28: o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29: o	Building and sharing a common culture of climate and biodiversity in the region	_contribution30: o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number	_name
Action sheet number	12	
Action sheet name		Energy management development

	_manager	_domain	_period	progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department			
Main area		Power generation		
Action period			2024-2030	
Advancement				In progress

Trajectory

	description
Action description	The development of energy management involves implementing strategies and practices to optimize energy consumption within organizations, businesses or communities. This includes energy audits, the implementation of energy management systems (such as ISO 50001), and the training of teams in energy efficiency. The aim is to reduce energy costs, improve energy performance, and minimize environmental impact by promoting more responsible and sustainable use of energy resources.

Stakeholders involved		_stakeholder1		_stakeholder3		_stakeholder5
	O	Dijon metropole	O	Actors socio-economic players		Municipalities and extra-territorial institutional players
		_stakeholder2		_stakeholder4		_stakeholder6
	O	Municipalities and institutional players	O	Residents & users		Actors socio-economic actors

Main milestones	_milestone 1		_milestone 2		_milestone 3	
	2025	Asset consumption balance	2027	Territory consumption balance	2030	End-of-period energy balance 2024-2030

Financial estimate	_cost1		_cost2		_CO2_cost	
	Estimated cost 2030 Ambitious scenario	205 000 000 €	Estimated cost 2030 Neutrality scenario	441 000 000 €	Cost in € / tCO2 (Ambitious)	10 500 €

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number (_number)	Action sheet name (_name)
12	Energy management development

Person responsible for the action sheet (_manager)	Main area (_domain)	Action period (_period)	Advancement (progress)
Dijon métropole - Urban Ecology Department	Power generation	2024-2030	In progress

Expected systemic effects

Expected co-benefits (_cobenefits)
Reducing greenhouse gas emissions, Improving air quality, Energy security, Circular economy, Stimulating the local economy, Energy system flexibility, Access to energy

_systemic_effect1		_systemic_effect2	
o	Energy-efficient building renovation	o	Space planning and efficient building construction

_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6	
o	Flexibility and usage control		Development of renewable energies (electricity, gas, heat)	o	Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10	
o	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas		Water conservation on our territory

_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14	
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion		Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	12	Action sheet name	Energy management development

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

_project1		_project2	
Dijon Métropole, Public players, Private players	Dijon metropolis building energy consumption and production managment	Dijon Métropole, Public players, Private players	Public and Private building energy consumption and production managment
_project3		_project4	
_project5		_project6	
_project7		_project8	

Key policies, documents or strategic studies

_document1		_document2	
SDE	Energy master plan (strategic and programming)	SEM ENERGIES	Mixed Economy Company dedicated to renewable energies and energy transition
_document3		_document4	
_document5		_document6	
_document7		_document8	

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	12		Energy management development

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Urban Ecology Department		Power generation		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Deployment of load shedding, inertia, control and energy consumption reduction solutions		
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Develop a coordinated strategy for the evolution of the electricity, gas and RCU networks	Develop a strategy for adapting the power grid to changing usage patterns (mobility, CAP, etc.)	Organizing and coordinating departments and municipalities within a structured framework to meet the challenges of the climate plan
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	12		Energy management development

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Urban Ecology Department		Power generation		2024-2030		In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Share knowledge of the region's energy and climate situation with stakeholders and residents	Promote the implementation of load-shedding/energy-saving and energy-efficient solutions	
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Development of a secure energy-climate data platform for the region	Structuring the energy and building sectors (including renewable energies and eco-construction), and enhancing their attractiveness	
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	12	Action sheet name	Energy management development

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department	Main area	Power generation	Action period	2024-2030	Advancement	In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Encourage the emergence of systems to manage energy consumption in public and private buildings	Calculating the costs of the energy transition	Encouraging the emergence of new financing models
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG emission savings	4 860	tCO2eq		
Greenhouse gases	Daily storage capacity % electricity consumption	5	%		
Greenhouse gases	daily storage capacity % heat consumption	5	%		
Greenhouse gases	Reducing the capacity of heating systems	100	MW		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	12		Energy management development

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Urban Ecology Department		Power generation		2024-2030		In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 12	Action sheet name	_name: Energy management development

Person responsible for the action sheet	_manager: Dijon métropole - Urban Ecology Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	O — Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	O — Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	O — Promoting a culture of risk and hazard management in our territory	_contribution21	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

_contribution19	
O	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 12	Action sheet name	_name: Energy management development

Person responsible for the action sheet	_manager: Dijon métropole - Urban Ecology Department	Main area	_domain: Power generation	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION		Building strategic alliances for the gradual relocation of certain sectors of economic activity		Strengthening reciprocity between territories

	_contribution28	
MOBILIZATION	o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	o	Building and sharing a common culture of climate and biodiversity in the region	o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 13	Action sheet name	_name: Promote the consumption of local products and support changes in behavior

Person responsible for the action sheet	_manager: Dijon métropole - Public Procurement Department	Main area	_domain: Production and consumption of goods and services	Action period	_period: 2024-2030	Advancement	progress: Under study

Trajectory

Action description	description: Encouraging the consumption of local products and supporting changes in behavior involves promoting the purchase of products grown or produced locally, in order to support the local economy, reduce the carbon footprint linked to transport, and reinforce sustainability. This can include awareness-raising campaigns, local market promotion events, educational workshops on the benefits of local produce, and initiatives to encourage consumers to change their purchasing habits. The aim is to create a culture of responsible and committed consumption, while strengthening links between producers and consumers.

Stakeholders involved					
_stakeholder1: o	Dijon metropole	_stakeholder3: o	Actors socio-economic players	_stakeholder5:	Municipalities and extra-territorial institutional players
_stakeholder2:	Municipalities and institutional players	_stakeholder4: o	Residents & users	_stakeholder6:	Actors socio-economic actors

Main milestones			_milestone 1		_milestone 2		_milestone 3
	2028	Conclusion of working groups on drafting common clauses		2028	Creation of pooled purchasing groups for at least 3 themes		

Financial estimate		_cost1		_cost2		_CO2_cost
	Estimated cost 2030 Ambitious scenario	408 000 000 €	Estimated cost 2030 Neutrality scenario	1 374 000 000 €	Cost in € / tCO2 (Ambitious)	Not evaluated

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	13	Action sheet name	Promote the consumption of local products and support changes in behavior

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Public Procurement Department	Main area	Production and consumption of goods and services	Action period	2024-2030	Advancement	Under study

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2	
Expected co-benefits	Supporting the local economy, Reducing the carbon footprint, Improving food quality, Strengthening community links, Raising awareness of sustainability, Preserving biodiversity, Food resilience	o	Energy-efficient building renovation	o	Space planning and efficient building construction	

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control	o	Development of renewable energies (electricity, gas, heat)	o	Optimizing and decarbonizing mobility flows within the region	o	Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods	o	Evolution of new management methods for nature areas	o	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**13**	**Action sheet name**	**Promote the consumption of local products and support changes in behavior**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Public Procurement Department**	**Main area**	**Production and consumption of goods and services**	**Action period**	**2024-2030**	**Advancement**	**Under study**

Main reference projects identified in the region

	_project1		_project2
Dijon Métropole and its communes	**Collective energy purchase in metropolitan area**		

	_project3		_project4

	_project5		_project6

	_project7		_project8

Key policies, documents or strategic studies

	_document1		_document2
SPASER - scheme to promote socially and economically responsible public procurement	**undertaking responsible public procurement and promote working groups to elaborate sustainable and local requirements provisions**	**Prodij 'Eat Better, Produce Better' program**	**Joint contract for the preparation and supply of meals for school restaurants, out-of-school facilities and early childhood facilities for 23 cities of the metropolis**

	_document3		_document4
Dijon sustainable food 2030	**Food transition towards local, quality production, including processing and distribution.**	**Territory Industry**	**supporting the transition to a green industry, developing industrial sectors and expertise**

	_document5		_document6

	_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	13		Promote the consumption of local products and support changes in behavior

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Public Procurement Department		Production and consumption of goods and services		2024-2030		Under study

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Traceability systems: technologies such as blockchain can guarantee the provenance of products, boosting consumer confidence in local products		
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Collaborate with local and extra-territorial businesses, communities and associations to develop joint initiatives that support local consumption.	Identify price and impact comparison tools that guide local consumers in their choices to compare the price and environmental impact of local versus imported products can influence consumer choices.	Pursue the land acquisition strategy to manage the various "competing" uses (sustainable food, housing, biodiversity, parks and gardens), and implement land management methods to take account of changing resources (water, etc.).
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**13**	**Action sheet name**	**Promote the consumption of local products and support changes in behavior**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Public Procurement Department**	**Main area**	**Production and consumption of goods and services**	**Action period**	**2024-2030**	**Advancement**	**Under study**

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	**Implement actions to combat and reduce economic vulnerability (housing, mobility, energy, food, water)**	**Social networks: awareness campaigns on social networks can encourage consumers to choose local products. Influencers can also play a key role in promoting these products.**	**Education and awareness: Set up educational programs in schools and awareness campaigns to inform the population about the benefits of local consumption.**
	_social4	_social5	_social6
	Local markets and fairs: Organize local farmers' markets and food fairs to facilitate direct access to local products and promote encounters between producers and consumers.	**Support for short circuits: Promote short circuits by facilitating producers' access to sales outlets and supporting initiatives such as AMAPs (Associations pour le Maintien d'une Agriculture Paysanne).**	
	capacities1	capacities2	capacities3
Capacity & capabilities	**Mobile applications and online platforms: Applications can be used to locate producers and sales outlets for local products. They can also provide information on product origin and production methods.**	**Accessibility to information: Create information platforms where citizens can easily access data on local producers, available markets, and the benefits of local consumption.**	**Skills development: Offer training courses to help citizens develop skills in gardening, food preservation or processing local products, thereby strengthening their food self-sufficiency.**
	capacities4	capacities5	capacities6
	Creation of support networks: Establish links between producers, consumers and local institutions to strengthen mutual support and the exchange of best practices.		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 13

Action sheet name	_name: Promote the consumption of local products and support changes in behavior

Person responsible for the action sheet	_manager: Dijon métropole - Public Procurement Department

Main area	_domain: Production and consumption of goods and services

Action period	_period: 2024-2030

Advancement	progress: Under study

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Economic accessibility: implement initiatives to make local products more financially accessible, such as subsidy programs for low-income households or service exchange systems.	Participatory financing programs: encourage participatory financing initiatives to support projects linked to local agriculture or the creation of farmers' markets.	Support for innovation: fund innovative projects aimed at creating solutions to improve the distribution and visibility of local products, such as mobile applications or online platforms.
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	Reducing GHG waste	-51	%		
Greenhouse gases	Waste energy reduction	-16	%		
Resources	Reduction of household and similar waste (HWW)	-15	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 13	Action sheet name	_name: Promote the consumption of local products and support changes in behavior

Person responsible for the action sheet	_manager: Dijon métropole - Public Procurement Department	Main area	_domain: Production and consumption of goods and services	Action period	_period: 2024-2030	Advancement	progress: Under study

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1	_contribution2
MOBILITY	Contribute to a gradual reduction in the role of the car in the daily lives of residents	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3: Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4: Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5: Developing the local production of renewable and recovered energies	_contribution6: Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: O — Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9: Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10: Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	13		Promote the consumption of local products and support changes in behavior

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Public Procurement Department		Production and consumption of goods and services		2024-2030		Under study

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably	O	Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13		_contribution14	
	O	Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15		_contribution16	
	O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	O	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17		_contribution18	
		Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20		_contribution21	
		Promoting a culture of risk and hazard management in our territory		Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22		_contribution23	
		Strengthening and improving the quality of our ecological continuity and ecosystem services		Making biodiversity an ally in our region's transition

_contribution19	
	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 13	Action sheet name	_name: Promote the consumption of local products and support changes in behavior

Person responsible for the action sheet	_manager: Dijon métropole - Public Procurement Department	Main area	_domain: Production and consumption of goods and services	Action period	_period: 2024-2030	Advancement	progress: Under study

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27	Strengthening reciprocity between territories
MOBILIZATION	_contribution28	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29	Building and sharing a common culture of climate and biodiversity in the region	_contribution30	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**14**	**Action sheet name**	**Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Waste Recovery Department**	**Main area**	**Production and consumption of goods and services**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Trajectory

	description
Action description	**Promoting the circular economy and reducing the impact of industrial processes involves transforming production and consumption patterns to minimize waste and optimize the use of resources. This includes strategies such as the reuse, recycling and recovery of waste, as well as innovation in industrial processes to make them more sustainable. The aim is to create economic systems that respect the environment, preserve biodiversity, reduce greenhouse gas emissions and protect human health, while promoting long-term sustainability.**

		_stakeholder1		_stakeholder3		_stakeholder5	
Stakeholders involved	**o**	**Dijon metropole**	**o**	**Actors socio-economic players**		**Municipalities and extra-territorial institutional players**
		_stakeholder2		_stakeholder4		_stakeholder6	
		Municipalities and institutional players	**o**	**Residents & users**		**Actors socio-economic actors**

	_milestone 1		_milestone 2		_milestone 3	
Main milestones	**2024**	**Modernized sorting center commissioned**	**2027**	**Launch of work to modernize the Energy Recovery Unit**	**2029**	**Commissioning of the Energy Recovery Unit**

	_cost1		_cost2		_CO2_cost	
Financial estimate	**Estimated cost 2030 Ambitious scenario**	**6 237 000 000 €**	**Estimated cost 2030 Neutrality scenario**	**12 180 000 000 €**	**Cost in € / tCO2 (Ambitious)**	**Not evaluated**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	14	Action sheet name	Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Waste Recovery Department	Main area	Production and consumption of goods and services	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2	
Expected co-benefits	Optimizing resources, Innovation and competitiveness, Improving quality of life, Strengthening economic resilience, Preserving biodiversity, Cross-sector collaboration, Reducing inequalities	o	Energy-efficient building renovation	o	Space planning and efficient building construction	

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	Flexibility and usage control		Development of renewable energies (electricity, gas, heat)		Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas		Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion		Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	14	Action sheet name	Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Waste Recovery Department	Main area	Production and consumption of goods and services	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

	_project1		_project2
Dijon Métropole	Modernisation of the household waste incineration and energy recovery center	Dijon Métropole	Modernisation of the sorting center
	_project3		_project4
	_project5		_project6
	_project7		_project8

Key policies, documents or strategic studies

	_document1		_document2
Territory Industry	supporting the transition to a green industry, developing industrial sectors and expertise	Territorial Objective Contract (COT) with ADEME	Scheme proposed by the French Agency for Ecological Transition to accelerate changes in internal practices
	_document3		_document4
	_document5		_document6
	_document7		_document8

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	14		Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Waste Recovery Department		Production and consumption of goods and services		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	New production inputs (plant fibers, biomimetics, biotech, etc.) with less impact on biodiversity	New production machines and processes that save water, energy, resources and GHG emissions	Developing collection means and equipment, and resource exchange and reuse facilities in the region
	_techno4	_techno5	_techno6
	Developing sorting and recovery facilities		
	governance1	governance2	_governance3
Governance, policy & regulation	Development of Territorial Industrial Ecology (TIE) to support industrial transformation towards decarbonization and the consideration of climate and biodiversity issues, and to encourage cooperation between existing industrial networks.	Organizing and leading services within a structured framework to meet the challenges of the climate plan	
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**14**	**Action sheet name**	**Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Waste Recovery Department**	**Main area**	**Production and consumption of goods and services**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	**Improve collection management, in particular to support Extended Producer Responsibility (EPR) channels**	**Promoting the circular economy: adapting uses (reduce, reuse, recycle), developing and encouraging initiatives**	**Promoting the circular economy: sharing and pooling the use of consumer goods**
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	**Supporting the development of sustainable industrial purchasing/sourcing channels**	**Support the structuring of R&D and eco-design activities in local industrial sectors (agri-food, pharmaceuticals-health-biotechnologies, electronics-electrotechnology).**	**Study on the establishment of a biotechnology engineering school**
	capacities4	capacities5	capacities6
	Structuring circular economy employment and training sectors and enhancing their attractiveness	**Structuring local recycling and re-use channels**	

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 14	Action sheet name	_name: Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health

Person responsible for the action sheet	_manager: Dijon métropole - Waste Recovery Department	Main area	_domain: Production and consumption of goods and services	Action period	_period: 2024-2030	Advancement	progress: In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Encourage the emergence of new financing models for circular economy initiatives	Developing common criteria among public purchasers to reduce the impact on the local environment	
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	GHG reduction industry	-54	%		
Greenhouse gases	Reduction Energy industry	-119	GWh / year		
Resources	Reduction in the quantity of waste from ecnomic activities per unit of value produced	-5	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**14**	**Action sheet name**	**Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Waste Recovery Department**	**Main area**	**Production and consumption of goods and services**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2		
MOBILITY		**Contribute to a gradual reduction in the role of the car in the daily lives of residents**		**Promote the development of solutions to reduce and optimize commuter and freight flows by car**

	contribution3		_contribution4		
BUILDING		**Reduce energy consumption and greenhouse gas emissions in buildings**		**Develop, renovate and build to enhance ecological functions and biodiversity**

	_contribution5		_contribution6		
POWER GENERATION		**Developing the local production of renewable and recovered energies**		**Controlling the impact of renewable energy development on resources**

	_contribution7		_contribution8		
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	**O**	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	**O**	**Reducing the environmental impact of local industries**

	_contribution9		_contribution10		
AGRICULTURE AND NATURE	**O**	**Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity**		**Promote ecological management of public and private natural areas and maintain carbon sinks**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	14		Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Waste Recovery Department		Production and consumption of goods and services		2024-2030		In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably	O	Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	O	Promoting healthy, sustainable food accessible to all	O	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE		Adapting metropolitan public policies to vulnerabilities linked to environmental crises		Supporting residents most at risk
ECONOMIC MUTATIONS	O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory		Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE		Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

	_contribution13		_contribution14		_contribution15		_contribution16		_contribution17		_contribution18		_contribution19		_contribution20		_contribution21		_contribution22		_contribution23	
SUSTAINABLE FOOD	O	Promoting healthy, sustainable food accessible to all	O	Increase local sourcing and guarantee fair remuneration for producers																		
SOCIAL JUSTICE						Adapting metropolitan public policies to vulnerabilities linked to environmental crises		Supporting residents most at risk														
ECONOMIC MUTATIONS									O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area	O	Supporting professional transitions and enhancing the attractiveness of professions							
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE																Promoting a culture of risk and hazard management in our territory		Offering everyone a resilient, healthy region with a high quality of life				
SERVICES PROVIDED BY NATURE																				Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 14	Action sheet name	_name: Promoting the circular economy, reducing the impact of industrial processes on climate, biodiversity, resources and health

Person responsible for the action sheet	_manager: Dijon métropole - Waste Recovery Department	Main area	_domain: Production and consumption of goods and services	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION	o	Building strategic alliances for the gradual relocation of certain sectors of economic activity	o	Strengthening reciprocity between territories

	_contribution28	
MOBILIZATION	o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	o	Building and sharing a common culture of climate and biodiversity in the region	o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 15	Action sheet name	_name: Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager: Dijon métropole - Water and Networks Department	Main area	_domain: Water	Action period	_period: 2024-2030	Advancement	progress: In progress

Trajectory

Action description	description: This aims to ensure sustainable and equitable water use in the face of the challenges posed by climate change. This includes assessing available water resources, protecting aquatic ecosystems, and setting up integrated management systems. Infrastructures, such as dams, pipelines and irrigation networks, need to be modernized and adapted to withstand extreme climatic events, such as floods or droughts. The aim is to secure water supplies, protect vulnerable populations and ensure the resilience of territories to the impacts of climate change, while promoting a participatory approach involving local stakeholders.

Stakeholders involved					
_stakeholder1: O	Dijon metropole	_stakeholder3: O	Actors socio-economic players	_stakeholder5: O	Municipalities and extra-territorial institutional players
_stakeholder2: O	Municipalities and institutional players	_stakeholder4: O	Residents & users	_stakeholder6: O	Actors socio-economic actors

Main milestones					
_milestone 1: 2025	Update water and wastewater scheme	_milestone 2: 2026	Early implementation of integrated stormwater management (16-23 million m3)	_milestone 3: 2030	adaptation change for runoff intensity knowledge

Financial estimate					
Estimated cost 2030 Ambitious scenario	_cost1: 173 400 000 €	Estimated cost 2030 Neutrality scenario	_cost2: 313 800 000 €	Cost in € / tCO2 (Ambitious)	_CO2_cost: Not evaluated

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	15	Action sheet name	Plan water resource management and adapt infrastructures

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Water and Networks Department	Main area	Water	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2	
Expected co-benefits	Sustainable water management, Resilience to climatic events, Protection of aquatic ecosystems, Improving public health, Local capacity building, Cross-sector synergies, Economic efficiency, Raising public awareness of water issues	o	Energy-efficient building renovation	o	Space planning and efficient building construction	

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control		Development of renewable energies (electricity, gas, heat)		Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	Promoting alternative modes of consumption and waste management		Promoting alternative waste production and management methods	o	Evolution of new management methods for nature areas	o	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change		Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	15	Action sheet name	Plan water resource management and adapt infrastructures

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Water and Networks Department	Main area	Water	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

	_project1		_project2
Dijon Métropole	Continuous improvment of water production units	Dijon Métropole	Continuous improvment of sewage water treatment unites
Dijon Métropole	Renewal of drinking water and wastewater networks		

Key policies, documents or strategic studies

	_document1		_document2
SAGE de l'Ouche, de la Vouge et de la Tille	Comprehensive water management policy on a watershed scale (protecting aquatic environments and satisfying water uses)	SEMOP Odivea	Public-private partnership dedicated to water production, distribution and treatment
Anticipating the effects of climate change on water resources	Prospective study to anticipate the effects of climate change and define an adaptation strategy		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 15	Action sheet name	_name: Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager: Dijon métropole - Water and Networks Department	Main area	_domain: Water	Action period	_period: 2024-2030	Advancement	progress: In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Encourage infiltration of water from sealed surfaces	Accelerate renovation of water networks (work on leakage reduction)	Implement integrated stormwater management
	_techno4	_techno5	_techno6
	Prioritize the reinforcement of network elements to better withstand climatic hazards	Strengthening drinking water treatment capacity	
	governance1	governance2	_governance3
Governance, policy & regulation	Develop a strategy for managing and scheduling works	Supervise water management at the parcel level in the PLUi-HD in compliance with the SAGE.	Establish regular territorial monitoring of water resources, using existing networks (Dreal, Agence de l'eau, syndicates, etc.).
	_governance4	_governance5	governance6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	15		Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Water and Networks Department		Water		2024-2030		In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Promote the reduction of consumption and the implementation of energy-saving solutions		
	_social4	_social5	_social6
	capacities1	capacities2	capacities3
Capacity & capabilities	Organize employment in water-related professions and make them more attractive	Structuring water conservation and reuse networks in the region	Working on data / observation and management of water resources
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 15	Action sheet name	_name: Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager: Dijon métropole - Water and Networks Department	Main area	_domain: Water	Action period	_period: 2024-2030	Advancement	progress: In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Integrate the challenges of reducing consumption into the network business model	Implement actions to combat and reduce economic vulnerability (water)	
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Resources	Network efficiency	90	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 15	Action sheet name	_name: Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager: Dijon métropole - Water and Networks Department	Main area	_domain: Water	Action period	_period: 2024-2030	Advancement	progress: In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 15	Action sheet name	_name: Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager: Dijon métropole - Water and Networks Department	Main area	_domain: Water	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER	O	Restore the natural cycle of stormwater on our territory and use it sustainably	O	Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	_contribution13	Promoting healthy, sustainable food accessible to all	_contribution14	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE	contribution15	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	_contribution16	Supporting residents most at risk
ECONOMIC MUTATIONS	_contribution17	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	_contribution18	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	_contribution20	Promoting a culture of risk and hazard management in our territory	_contribution21	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	_contribution22	Strengthening and improving the quality of our ecological continuity and ecosystem services	_contribution23	Making biodiversity an ally in our region's transition

_contribution19	
	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 15	Action sheet name	_name: Plan water resource management and adapt infrastructures

Person responsible for the action sheet	_manager: Dijon métropole - Water and Networks Department	Main area	_domain: Water	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	O	Developing and strengthening areas of cooperation and response construction	O	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26: O	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27: O	Strengthening reciprocity between territories
MOBILIZATION	_contribution28: O	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29: O	Building and sharing a common culture of climate and biodiversity in the region	_contribution30: O	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 16	Action sheet name	_name: Supporting local, environmentally-friendly food production

Person responsible for the action sheet	_manager: Dijon métropole - Sustainable Food Department	Main area	_domain: Sustainable Food	Action period	_period: 2024-2030	Advancement	progress: In progress

Trajectory

Action description	description: This aims to promote sustainable agricultural practices that respect the environment while strengthening local economies. This includes support for farmers who adopt ecological methods, such as organic farming, permaculture or agroforestry, as well as the creation of short distribution circuits. Initiatives can include subsidies, training and awareness-raising campaigns to encourage consumers to choose local produce. The aim is to guarantee healthy food, preserve biodiversity, reduce the carbon footprint of food, and promote the food sovereignty of communities.

Stakeholders involved						
	_stakeholder1: O	Dijon metropole	_stakeholder3: O	Actors socio-economic players	_stakeholder5:	Municipalities and extra-territorial institutional players
	_stakeholder2: O	Municipalities and institutional players	_stakeholder4: O	Residents & users	_stakeholder6:	Actors socio-economic actors

Main milestones		_milestone 1		_milestone 2		_milestone 3
	2030	Extension of the capacity of the regional vegetable factory to 1,000 t / year				

Financial estimate		_cost1		_cost2		_CO2_cost
	Estimated cost 2030 Ambitious scenario	1 562 000 000 €	Estimated cost 2030 Neutrality scenario	5 222 000 000 €	Cost in € / tCO2 (Ambitious)	Not evaluated

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	16	Action sheet name	Supporting local, environmentally-friendly food production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Sustainable Food Department	Main area	Sustainable Food	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Strengthening economic resilience, Improving public health, Reducing carbon footprint, Preserving biodiversity, Responsible purchasing behavior, Strengthening community ties, Agricultural innovation, Food sovereignty			Energy-efficient building renovation		Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control	o	Development of renewable energies (electricity, gas, heat)		Optimizing and decarbonizing mobility flows within the region	o	Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
o	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods		Evolution of new management methods for nature areas	o	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization		Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	16	Action sheet name	Supporting local, environmentally-friendly food production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Sustainable Food Department	Main area	Sustainable Food	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region

	_project1		_project2
Dijon Métropole	Metropolitan vegetable factory	Dijon Métropole	Collective catering in metropolitan area
	_project3		_project4
	_project5		_project6
	_project7		_project8

Key policies, documents or strategic studies

	_document1		_document2
Egalim	The EGALIM law sets a target of 50% 'sustainable' products, including 20% organic, in canteens	Agronov	Association that promotes innovation in agro-ecology, the driving force behind the agricultural transition
	_document3		_document4
Dijon sustainable food 2030	Food transition towards local, quality production, including processing and distribution.	"Chouette Cantine" program	The 'Chouette Cantine' program has been studying children's food satisfaction using a system of satisfaction terminals.
	_document5		_document6
Prodij 'Eat Better, Produce Better' program	Joint contract for the preparation and supply of meals for school restaurants, out-of-school facilities and early childhood facilities	Santenov Dijon Bourgogne	Technology park dedicated to developing innovation in healthcare, the growth of start-ups and the performance of healthcare companies
	_document7		_document8
Territorial Food Project (PAT)	Labellisation Level 2 labellization		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	16		Supporting local, environmentally-friendly food production

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Sustainable Food Department		Sustainable Food		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Encourage new practices: biotechnologies, development of plant varieties resistant to disease and extreme climatic conditions, while reducing the use of chemical products, fermentation, legumes, etc.	Geographic Information Systems (GIS): mapping resources, soils and agricultural practices for more efficient and sustainable land management	Better manage water use: technologies for recovering and treating wastewater for irrigation, as well as monitoring systems for more efficient use.
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Renewable energy: integrating renewable energy sources (solar, wind, biomass) into farms to reduce their carbon footprint.	Strengthening partnerships between metropolitan and neighbouring players	Agricultural cooperatives: encourage the creation of cooperatives that enable producers to pool their resources, share knowledge and access larger markets.
	_governance4	_governance5	governance6
	Use existing labels and certifications to promote sustainable practices and guarantee the quality of local products.		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	16	Action sheet name	Supporting local, environmentally-friendly food production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Sustainable Food Department	Main area	Sustainable Food	Action period	2024-2030	Advancement	In progress

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Promotion of quality agriculture, such as organic farming, permaculture and agroforestry, to encourage biodiversity and soil regeneration.	Encourage the creation of community gardens where residents can grow crops together, strengthen social ties and raise awareness of sustainable agriculture.	Set up local composting programs and reduce food waste
	_social4	_social5	_social6
	Set up school and community programs to raise awareness of sustainable agriculture and local food issues among young people and families.		
	capacities1	capacities2	capacities3
Capacity & capabilities	Create networks where farmers can exchange and conserve seeds and inputs adapted to local conditions and that promote biodiversity.	Setting up digital platforms to link producers and consumers, facilitating access to local products and reducing the number of intermediaries.	Reinforcing the quality of products used to distribute food to the needy
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	16	Action sheet name	Supporting local, environmentally-friendly food production

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Sustainable Food Department	Main area	Sustainable Food	Action period	2024-2030	Advancement	In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Strengthening the economic model of the regional vegetable factory	Enable consumers to group together to buy directly from local producers, promoting short distribution channels and responsible consumption (AMAP, Groupe d'Achats Solidaires).	Using crowdfunding tools to support local ecological farming projects
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Greenhouse gases	Agriculture GHG reduction	-43	%		
Greenhouse gases	Reduction Energy agriculture	-20	%		
Resources	Agricultural and forest area	36	%		
Resources	Share of regional supplies on the plate	30	%		
Social	number of vegetarian meals in catering establishments of the city of Dijon	2	Unit / Week		
Health	Reducing the use of pesticides	-50	%		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 16	Action sheet name	_name: Supporting local, environmentally-friendly food production

Person responsible for the action sheet	_manager: Dijon métropole - Sustainable Food Department	Main area	_domain: Sustainable Food	Action period	_period: 2024-2030	Advancement	progress: In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: O	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: O	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9: O	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 16	Action sheet name	_name: Supporting local, environmentally-friendly food production

Person responsible for the action sheet	_manager: Dijon métropole - Sustainable Food Department	Main area	_domain: Sustainable Food	Action period	_period: 2024-2030	Advancement	progress: In progress

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably	O	Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD	O	Promoting healthy, sustainable food accessible to all	O	Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE		Adapting metropolitan public policies to vulnerabilities linked to environmental crises	O	Supporting residents most at risk
ECONOMIC MUTATIONS	O	Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	O	Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

_contribution19	
O	Supporting professional transitions and enhancing the attractiveness of professions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 16	Action sheet name	_name: Supporting local, environmentally-friendly food production

Person responsible for the action sheet	_manager: Dijon métropole - Sustainable Food Department	Main area	_domain: Sustainable Food	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	O	Developing and strengthening areas of cooperation and response construction	O	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION	O	Building strategic alliances for the gradual relocation of certain sectors of economic activity	O	Strengthening reciprocity between territories

	_contribution28	
MOBILIZATION	O	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	O	Building and sharing a common culture of climate and biodiversity in the region	O	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	17	Action sheet name	Reducing vulnerability to natural and health risks exacerbated by climate change

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department	Main area	Health and lifestyle	Action period	2024-2030	Advancement	Under study

Trajectory

	description
Action description	This involves identifying, assessing and mitigating the potential impacts of extreme climatic events, such as floods, droughts or heat waves, as well as the resulting health threats. This includes setting up early warning systems, strengthening infrastructure to withstand disasters, and promoting sustainable resource management practices. Awareness-raising campaigns and training courses can be organized to inform populations about risks and adaptation strategies. The aim is to strengthen community resilience, protect ecosystems, and ensure the health and safety of populations.

	_stakeholder1		_stakeholder3		_stakeholder5	
Stakeholders involved	o	Dijon metropole	o	Actors socio-economic players		Municipalities and extra-territorial institutional players
	_stakeholder2		_stakeholder4		_stakeholder6	
	o	Municipalities and institutional players	o	Residents & users		Actors socio-economic actors

	_milestone 1		_milestone 2		_milestone 3	
Main milestones	2027	Mid-term assessment of the ZFE-m and air quality trends	2028	Update vulnerability diagnosis, link with the intercommunal safeguard plan	2028	Updating the Local Health Contract

	_cost1		_cost2		_CO2_cost	
Financial estimate	Estimated cost 2030 Ambitious scenario	1 070 000 000 €	Estimated cost 2030 Neutrality scenario	3 279 000 000 €	Cost in € / tCO2 (Ambitious)	Not evaluated

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	17	Action sheet name	Reducing vulnerability to natural and health risks exacerbated by climate change

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department	Main area	Health and lifestyle	Action period	2024-2030	Advancement	Under study

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2
Expected co-benefits	Improving governance and community resilience, Cross-sectoral synergies, Protecting ecosystems, Reducing economic costs, Strengthening infrastructure, Promoting public health, Raising awareness of climate change risks		Energy-efficient building renovation	o	Space planning and efficient building construction

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
	Flexibility and usage control		Development of renewable energies (electricity, gas, heat)		Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
	Promoting alternative modes of consumption and waste management	o	Promoting alternative waste production and management methods	o	Evolution of new management methods for nature areas	o	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
o	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	17	Action sheet name	Reducing vulnerability to natural and health risks exacerbated by climate change

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department	Main area	Health and lifestyle	Action period	2024-2030	Advancement	Under study

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole	Energy and Climate Platform	Dijon Métropole	Programm of public spaces vegetalization	The intercommunal safeguard plan (PICS)	Linking local risk prevention and crisis management policies	Social cohesion policies	Integrating social cohesion to strengthen the impact of climate and biodiversity actions and the resilience of the region
	_project3		_project4		_document3		_document4
				Partnership with ATMO BFC	Air quality monitoring and studies	Local Health Contract	Improving access to rights and healthcare
	_project5		_project6		_document5		_document6
				Partnership with Université de Bourgogne Europe	Characterization and monitoring of urban heat islands	Vulnerability diagnosis	Provides a vision of risks in 2022
	_project7		_project8		_document7		_document8
				Low emission zone - mobility	Reduce nitrogen dioxide (NO2) emissions by banning polluting vehicle		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	17		Reducing vulnerability to natural and health risks exacerbated by climate change

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Urban Ecology Department		Health and lifestyle		2024-2030		Under study

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Enhancing ecosystem services: promoting soil biodiversity in urban areas, encouraging water infiltration to create cool islands, limiting subsidence and the effects of flooding.	Strengthening infrastructures to adapt to climate hazards and change	Revegetate the most urbanized areas of the region to provide access to natural spaces
	_techno4	_techno5	_techno6
	governance1	governance2	_governance3
Governance, policy & regulation	Develop a strategy for adapting to hot weather and deploying cool islands	Developing a flood adaptation strategy	Drawing up a drought adaptation strategy
	_governance4	_governance5	governance6
	Implement a strategy to combat and reduce economic vulnerability (housing, mobility, energy, food, water) by type of stakeholder		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	17	Action sheet name	Reducing vulnerability to natural and health risks exacerbated by climate change

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Urban Ecology Department	Main area	Health and lifestyle	Action period	2024-2030	Advancement	Under study

Systemic action levers to mobilize

	social1	_social2	_social3
Social innovation & social change	Sharing knowledge about extreme heat and urban heat islands with stakeholders and residents	Promoting the implementation of urban refreshment solutions	Reinforcing the flood and drought risk culture with stakeholders and residents
	_social4	_social5	_social6
	Sharing knowledge on the proliferation of the tiger mosquito and the transmission of arboviroses	Raise awareness and understanding of air quality issues	Develop environmental awareness tools for the general public
	capacities1	capacities2	capacities3
Capacity & capabilities	Develop a secure energy-climate data platform for the region on adaptation issues	Systematize the monitoring of engineering structures and infrastructures with regard to the challenges of adapting to change	Strengthen tools for understanding ozone in the region
	capacities4	capacities5	capacities6

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 17

Action sheet name	_name: Reducing vulnerability to natural and health risks exacerbated by climate change

Person responsible for the action sheet	_manager: Dijon métropole - Urban Ecology Department

Main area	_domain: Health and lifestyle

Action period	_period: 2024-2030

Advancement	progress: Under study

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Study the health impacts of climate change, and their financial consequences (vulnerability)	Study the impact of climate change on infrastructures and buildings, and their financial consequences (claims, etc.).	Study the cost of conservation measures and compare them with the cost of the consequences of inaction
	_finance4	finance5	finance6
	Implement actions to combat and reduce economic vulnerability (housing, mobility, energy, food, water)		

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Health	PM2.5 concentration	6	(µg/m3) annual average		
Health	PM10 concentration	15	(µg/m3) annual average		
Health	NO2 concentration	15	(µg/m3) annual average		
Health	Ozone concentration	120	(µg/m3) 8-hour average / day		
Health	Impact of hot days	80	number of days per year > 25° C		

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	17		Reducing vulnerability to natural and health risks exacerbated by climate change

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Urban Ecology Department		Health and lifestyle		2024-2030		Under study

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1		_contribution2	
MOBILITY		Contribute to a gradual reduction in the role of the car in the daily lives of residents		Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3	Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4	Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5	Developing the local production of renewable and recovered energies	_contribution6	Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7	Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8	Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9	Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10	Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
	17		Reducing vulnerability to natural and health risks exacerbated by climate change

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Urban Ecology Department		Health and lifestyle		2024-2030		Under study

Adaptation

	_contribution11		_contribution12	
WATER		Restore the natural cycle of stormwater on our territory and use it sustainably	O	Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD		Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE		Adapting metropolitan public policies to vulnerabilities linked to environmental crises	O	Supporting residents most at risk
ECONOMIC MUTATIONS		Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment		Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE		Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

	_contribution13		_contribution14	
SUSTAINABLE FOOD		Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers

	contribution15		_contribution16	
SOCIAL JUSTICE	O	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	O	Supporting residents most at risk

	_contribution17		_contribution18		_contribution19	
ECONOMIC MUTATIONS		Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment		Promote a sustainable economic development model that creates wealth throughout the urban area	O	Supporting professional transitions and enhancing the attractiveness of professions

	_contribution20		_contribution21	
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE	O	Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life

	_contribution22		_contribution23	
SERVICES PROVIDED BY NATURE	O	Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 17	Action sheet name	_name: Reducing vulnerability to natural and health risks exacerbated by climate change

Person responsible for the action sheet	_manager: Dijon métropole - Urban Ecology Department	Main area	_domain: Health and lifestyle	Action period	_period: 2024-2030	Advancement	progress: Under study

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy

	_contribution26		_contribution27	
EXTRA-TERRITORIAL COOPERATION		Building strategic alliances for the gradual relocation of certain sectors of economic activity		Strengthening reciprocity between territories

	_contribution28	
MOBILIZATION	o	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.

	_contribution29		_contribution30	
SHARING KNOWLEDGE AND SKILLS	o	Building and sharing a common culture of climate and biodiversity in the region	o	Sharing and leveraging experience to accelerate the transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	**18**	**Action sheet name**	**Strengthening biodiversity and natural ecosystems in the region**

	_manager		_domain		_period		progress
Person responsible for the action sheet	**Dijon métropole - Biodiversity Department Jardin de l'Arquebuse**	**Main area**	**Services provided by nature**	**Action period**	**2024-2030**	**Advancement**	**In progress**

Trajectory

	description
Action description	**This involves protecting, restoring and managing natural habitats to promote species diversity and ecosystem health. This can include initiatives such as the creation of protected areas, the restoration of degraded environments, and the implementation of sustainable agricultural and forestry practices. Awareness-raising and education programs can also be set up to involve local communities in biodiversity conservation. The aim is to preserve essential ecosystem functions such as pollination, water regulation and carbon sequestration, while ensuring a balance between human development and nature conservation.**

		_stakeholder1		_stakeholder3		_stakeholder5	
Stakeholders involved	**0**	**Dijon metropole**	**0**	**Actors socio-economic players**		**Municipalities and extra-territorial institutional players**
	_stakeholder2		_stakeholder4		_stakeholder6	
	0	**Municipalities and institutional players**	**0**	**Residents & users**		**Actors socio-economic actors**

	_milestone 1		_milestone 2		_milestone 3	
Main milestones	**2027**	**Definition of indicators dedicated to the biodiversity footprint**				

	_cost1		_cost2		_CO2_cost	
Financial estimate	**Estimated cost 2030 Ambitious scenario**	**509 520 000 €**	**Estimated cost 2030 Neutrality scenario**	**1 579 340 000 €**	**Cost in € / tCO2 (Ambitious)**	**Not evaluated**

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	18	Action sheet name	Strengthening biodiversity and natural ecosystems in the region

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Biodiversity Department Jardin de l'Arquebuse	Main area	Services provided by nature	Action period	2024-2030	Advancement	In progress

Expected systemic effects

	_cobenefits		_systemic_effect1		_systemic_effect2	
Expected co-benefits	Ecosystem stability, Regulating ecosystem services, Improving quality of life, Promoting sustainable agriculture, Raising public awareness, Improving natural resource management, Recovering degraded ecosystems	o	Energy-efficient building renovation	o	Space planning and efficient building construction	

	_systemic_effect3		_systemic_effect4		_systemic_effect5		_systemic_effect6
o	Flexibility and usage control		Development of renewable energies (electricity, gas, heat)		Optimizing and decarbonizing mobility flows within the region		Reducing, optimizing and decarbonizing incoming and outgoing mobility flows

	_systemic_effect7		_systemic_effect8		_systemic_effect9		_systemic_effect10
	Promoting alternative modes of consumption and waste management		Promoting alternative waste production and management methods	o	Evolution of new management methods for nature areas	o	Water conservation on our territory

	_systemic_effect11		_systemic_effect12		_systemic_effect13		systemic_effect14
	Supporting those most vulnerable to change	o	Supporting economic players in meeting the challenges of decarbonization	o	Strengthening our resilience to better manage the hazards of climate change and resource scarcity and erosion	o	Development favorable to the development of natural ecosystem functions

Dijon Metropolis - CCC / Action Plan - Transition Pathway

	_number		_name
Action sheet number	18	Action sheet name	Strengthening biodiversity and natural ecosystems in the region

	_manager		_domain		_period		progress
Person responsible for the action sheet	Dijon métropole - Biodiversity Department Jardin de l'Arquebuse	Main area	Services provided by nature	Action period	2024-2030	Advancement	In progress

Main reference projects identified in the region				Key policies, documents or strategic studies			
	_project1		_project2		_document1		_document2
Dijon Métropole	Sentinel bee program	Dijon Métropole	"Territoires engagés pour la nature" program	PLUi-HD	PLUiHD - local urban plan (regulatory)	SCOT	SCOT - Territorial Coherence Scheme
	_project3		_project4		_document3		_document4
				ECO garden label	Communication and recognition tool for the public, maintenance crews and elected representatives	JET Cities - Boosting Green Workforce in cities	Supporting the development of training and skills to accelerate the implementation of the ecological transition
	_project5		_project6		_document5		_document6
				Open2Horizon #Biodiversity Innovation Challenge	develop an innovative solution for analyzing and visualizing the region's biodiversity	"Expert Soils" and "Soil change" projects	Territorial studies concerning the brown grid which encompasses all types of soil, whether natural, agricultural, forestry or even urban
	_project7		_project8		_document7		_document8

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Action sheet number	_number	Action sheet name	_name
	18		Strengthening biodiversity and natural ecosystems in the region

Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Biodiversity Department Jardin de l'Arquebuse		Services provided by nature		2024-2030		In progress

Systemic action levers to mobilize

	_techno1	_techno2	_techno3
Technology	Strengthening the region's pollination function	Providing a home for non-invasive species	Reinforcing green, blue and brown corridors in the region
	_techno4	_techno5	_techno6
	Reinforce differentiated management of green spaces in public and private areas		
	governance1	governance2	_governance3
Governance, policy & regulation	Reinforce the black grids in the territory and surrounding EPCIs	Study the integration of the results and recommendations of the "Nature in the City" study and the soil biological quality study into PLUiHD.	Develop a tree strategy for the region (public and private)
	_governance4	_governance5	governance6

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Action sheet number	_number	Action sheet name	_name
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	Dijon métropole - Biodiversity Department Jardin de l'Arquebuse		Services provided by nature		2024-2030		In progress

Systemic action levers to mobilize

Social innovation & social change	social1	_social2	_social3
	Promoting participatory biodiversity actions in the region	Disseminate practical advice and biodiversity preservation measures to local residents	Promote biodiversity footprint calculations for socio-economic players (CSRD)
	_social4	_social5	_social6
	Support for the integration of biodiversity issues in the upstream phase of public and private projects		
Capacity & capabilities	capacities1	capacities2	capacities3
	Study the integration of biodiversity issues into dedicated sectors and increase the skills of land-use planners in biodiversity and water management issues.	Manage the acquisition, structuring, promotion and sharing of knowledge about the region's biodiversity	Working with data / naturalist data
	capacities4	capacities5	capacities6
	Supporting participatory science initiatives to observe biodiversity		

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Action sheet number	_number	Action sheet name	_name
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	Dijon métropole - Biodiversity Department Jardin de l'Arquebuse		Services provided by nature		2024-2030		In progress

Systemic action levers

	finance1	finance2	_finance3
Finance & business models	Define collective purchasing clauses to reduce our impact on biodiversity	Encourage the emergence of new financing models for biodiversity-friendly actions	
	_finance4	finance5	finance6

Impacts & Co-benefits

Domain	Indicator	Objective 2030	Unit	Reference	Reference year
Resources	Public and private parks, natural areas	32	%	32	2022

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Action sheet number	_number: 18

Action sheet name	_name: Strengthening biodiversity and natural ecosystems in the region

Person responsible for the action sheet	_manager: Dijon métropole - Biodiversity Department Jardin de l'Arquebuse

Main area	_domain: Services provided by nature

Action period	_period: 2024-2030

Advancement	progress: In progress

Contribution to the objectives of the climate and biodiversity plan

Attenuation

	_contribution1	_contribution2
MOBILITY	Contribute to a gradual reduction in the role of the car in the daily lives of residents	Promote the development of solutions to reduce and optimize commuter and freight flows by car
BUILDING	contribution3: Reduce energy consumption and greenhouse gas emissions in buildings	_contribution4: Develop, renovate and build to enhance ecological functions and biodiversity
POWER GENERATION	_contribution5: Developing the local production of renewable and recovered energies	_contribution6: Controlling the impact of renewable energy development on resources
PRODUCTION AND CONSUMPTION OF GOODS AND SERVICES	_contribution7: Adopt consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production.	_contribution8: Reducing the environmental impact of local industries
AGRICULTURE AND NATURE	_contribution9: Promote low-carbon agricultural practices throughout the urban area that preserve and enhance biodiversity	_contribution10: O — Promote ecological management of public and private natural areas and maintain carbon sinks

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number	Action sheet name	_name
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Person responsible for the action sheet	_manager	Main area	_domain	Action period	_period	Advancement	progress
	Dijon métropole - Biodiversity Department Jardin de l'Arquebuse		Services provided by nature		2024-2030		In progress

Adaptation

	_contribution11		_contribution12	
WATER	O	Restore the natural cycle of stormwater on our territory and use it sustainably		Adapting our water consumption to availability, reducing it and optimizing its use
SUSTAINABLE FOOD		Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers
SOCIAL JUSTICE		Adapting metropolitan public policies to vulnerabilities linked to environmental crises		Supporting residents most at risk
ECONOMIC MUTATIONS		Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life
SERVICES PROVIDED BY NATURE	O	Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

	_contribution13		_contribution14	
SUSTAINABLE FOOD		Promoting healthy, sustainable food accessible to all		Increase local sourcing and guarantee fair remuneration for producers

	contribution15		_contribution16	
SOCIAL JUSTICE		Adapting metropolitan public policies to vulnerabilities linked to environmental crises		Supporting residents most at risk

	_contribution17		_contribution18		_contribution19	
ECONOMIC MUTATIONS		Stimulating and supporting the decarbonization of economic activities and reducing their impact on the environment	O	Promote a sustainable economic development model that creates wealth throughout the urban area	O	Supporting professional transitions and enhancing the attractiveness of professions

	_contribution20		_contribution21	
HEALTH, LIVING ENVIRONMENT, QUALITY OF LIFE		Promoting a culture of risk and hazard management in our territory	O	Offering everyone a resilient, healthy region with a high quality of life

	_contribution22		_contribution23	
SERVICES PROVIDED BY NATURE	O	Strengthening and improving the quality of our ecological continuity and ecosystem services	O	Making biodiversity an ally in our region's transition

Dijon Metropolis - CCC / Action Plan - Transition Pathway

Action sheet number	_number: 18	Action sheet name	_name: Strengthening biodiversity and natural ecosystems in the region

Person responsible for the action sheet	_manager: Dijon métropole - Biodiversity Department Jardin de l'Arquebuse	Main area	_domain: Services provided by nature	Action period	_period: 2024-2030	Advancement	progress: In progress

Cooperation

	_contribution24		_contribution25	
SHARED GOVERNANCE	o	Developing and strengthening areas of cooperation and response construction	o	Putting science, research and innovation at the service of public policy
EXTRA-TERRITORIAL COOPERATION	_contribution26	Building strategic alliances for the gradual relocation of certain sectors of economic activity	_contribution27	Strengthening reciprocity between territories
MOBILIZATION	_contribution28	Informing, reporting on and actively mobilizing all residents and socio-economic players to consolidate actions on the territory and increase their impact.		
SHARING KNOWLEDGE AND SKILLS	_contribution29	Building and sharing a common culture of climate and biodiversity in the region	_contribution30	Sharing and leveraging experience to accelerate the transition

Table of expected impacts by action sheet

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
				Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)
Mitigation				GHG reduction rate %	-7	-34							Reduction in Nox emissions (t/year)	-72	-360	cycling/walking/ public transport modal shift	3%	15%			
				Energy reduction rate %	-5	-27							Reduction in PM10 emissions (t/year)	-5	-23						
				Decarbonisation and reduction of energy consumption for mobility (goods and people) (GWh)	-57	-287							Emissions reduction PM2.5 (t/year)	-4	-18						
	Mobility	-Contribute to a gradual reduction in the role of the car in the daily lives of residents	Developing active mobility and encouraging calmer public spaces	Development of electrically assisted bicycles (GWh)	0,10	0,50										Modal split by bicycle	2.4E-2	12%			
																Pedestrian modal share	6%	30%			
			Developing public transport services	% of Dijon metropolitan authority's bus fleet is carbon-free		71							Reduction in Nox emissions from off-road transport (t/year)	-1	-5	modal share of public transport		20%			
				Development of the tramway - increase in electricity consumption in GWh		1,5							Reduction in PM10 emissions from non-road transport (t/year)	0	-2						
													Reduction in PM2.5 emissions from non-road transport (t/year)	0	-1						
			Development of low-carbon and carbon-free vehicles	Percentage of electric cars in the fleet	2	10							Reducing Nox emissions from light-duty vehicles (t/year)	-71	-255	modal share by car		38%			

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
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				Development of battery-powered light electric vehicles and optimisation of flows (GWh)	5	23							Reduction of PM10 emissions from light-duty vehicles (t/year)	-4	-14	reducing the proportion of flows entering the metropolis	2%	10%			
				Reducing the number of vehicles running on hydrocarbons, optimising flows and promoting alternative fuels (GWh)	-61	-305							Reduction in PM2.5 emissions from light-duty vehicles (t/year)	-3	-12	Light thermal vehicle fleet as a percentage of total light vehicles	96%	90%			
																reduction in the proportion of flows within the metropolitan area	1%	5%			
		Encourage the development of solutions to reduce and optimise commuter and freight flows by car	Developing sustainable urban logistics	Fleet of electric heavy goods vehicles as a proportion of total heavy goods vehicles %	1	6							Reduction in Nox emissions from heavy goods vehicles (t/year)	-20	-100				Reduction in the proportion of freight entering metropolitan France % compared with 2022	stagnation in inbound freight	0% (trend +10%)
				Development of the fleet of fuel cell vehicles (heavy goods vehicles) and optimisation of flows (GWh)	4	18							Reduction in PM10 emissions from heavy goods vehicles (t/year)	-2	-7						
				Thermal heavy goods vehicles as a percentage of total heavy goods vehicles %		94							Reduction in PM2.5 emissions from heavy goods vehicles (t/year)	-1	-5						

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
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				Development of battery-electric HGVs and optimisation of flows (GWh)		1															
				Reducing the number of vehicles running on hydrocarbons, optimising flows and promoting alternative fuels (GWh)	-5	-25															
			Developing a coordinated transport offer for the urban area													Reduction in the flow of light vehicles commuting on their own %	-2	-10			
Building	Reducing energy consumption and greenhouse gas emissions from buildings	Decarbonising and reducing energy consumption in existing homes	GHG reduction rate Residential		-67%	Development of heat production from heat pumps (GWh)	2,30	11,5				Reduction in residential Nox emissions (t/year)	-9	-44	Percentage of homes with DPE F/G % of homes with DPE F/G		8			
			Residential Energy discount rate		-41%	Development of heat consumption from solar thermal energy (GWh)	0,16	0,8				Reduction in PM10 emissions from the residential sector (t/year)	-9	-45	Percentage of homes with DPE A/B/C		40			
			Reduction in residential energy consumption (GWh)	-45	-225,52	Development and stabilisation of district heating consumption (GWh)	8,27	41,34				Reduction in residential PM2.5 emissions (t/year)	-12	-59	Social dwellings DPE A, B, C % (social housing)		70			
			Share of consumption from petroleum products (heat) - conversion to other heating methods		0%	Development of geothermal heat consumption (GWh)	0,07	0,34							Ratio of social housing to total housing stock		20%			

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
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				Reduction in electrical energy consumption excluding heat (GWh)	-1,96	-9,8	Development of heat consumption from solar thermal energy (GWh)	0,16	0,8												
				Reduction in heat production from electric convectors (GWh)	-12,00	-60	Stabilisation of biomass heat consumption (excluding RCU) (GWh)	-1,08	-5,4												
				Gradual reduction in the consumption of heat from gas boilers, and promotion of the use of biogas from methanisation (excluding RCU) (GWh)	-30,38	-151,9	Development of moderate use of cooling production from air conditioning or heat pumps (GWh)	0,56	2,8												
				Elimination of heat consumption from fuel oil (GWh)	-11,04	-55,2	Development of moderate use of cold production from the district cooling network (GWh)		0												
			Decarbonising and reducing energy consumption in the tertiary and industrial sectors (excluding processes)	GHG reduction rate Commercial sector		-57	Development and stabilisation of district heating consumption (GWh)	7	36,7				Reduction in Nox emissions from the tertiary sector (t/year)	-4	-18						
				Reduction rate Energy Tertiary % (%)		-24	(GWh)Development of heat production from heat	4	11,5												
				Reduction in energy consumption in the tertiary sector >1000m² (80%) % (%)	-8	-40	Development of geothermal heat consumption (GWh)		0,51												

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
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				Reduction in public lighting energy consumption DM	-50	-65	Development of heat consumption from solar thermal energy (GWh)		0,1												
				Rate of use of petroleum products (heat) - conversion to other forms of heating % (in %)		0%	Stabilisation of biomass heat consumption (excluding RCU) (GWh)		-0,3												
				Decarbonisation and reduction of energy consumption by commercial and industrial buildings (excluding processes) (GWh)	-24	-120,73	Limiting the development of cooling production from air conditioning / heat pumps (GWh)	1	2,7												
				Reduction in electrical energy consumption excluding heat (GWh)	-5	-24,5	Development of moderate use of cooling production from air conditioning or heat pumps (GWh)		0												
				Reduction in heat production from electric convectors (GWh)	-8	-40	Development of moderate use of cold production from the district cooling network (GWh)		-5,5												

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				Gradual reduction in the consumption of heat from gas boilers, and promotion of the use of biogas from methanisation (excluding RCU) (GWh)	-13	-65,1															
				Reduction in consumption of heat from fuel oil (GWh)	-10	-36,8															
		Develop, renovate and build to enhance ecological functions and biodiversity	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)				Reduction in % and ha in the consumption of natural and agricultural areas		-30% -100 ha							Number of new homes to be built by 2020		16 260			
							Built-up area		32%							of which % of subsidised housing		50%			
				reduction in GHG emissions	-15	-74	ENR production (GWh/year)	160	800				Reduction of PM2.5 emissions	-1,4	-7						
							share of renewable energy consumption		30,00				Reduction in PM10 emissions		-1						
													Reduction of NO2 emissions		-1						
Energy production		Developing local production of renewable and recovered energy sources	Developing renewable electricity generation	GHG reduction rate electricity mix		33	Ground-mounted solar PV (GWh)	22	110												
							Soalire PV roofs (GWh)	1	7												
							Solar PV car park shade (GWh)	6	32												
							Waste - combined heat and power (GWh)	-11	-54												

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			Developing renewable gas production	rate of renewable energies on the GAS network	3	15	Methanisation - biogas (GWh)	6	30												
							hydrogen (GWh)	4	18												
			Developing the production of renewable thermal energy	reduction in GHG emissions		-74	Increase in ENR RCU rate	2%	10%				Reduction in Nox emissions in t/year	-1,4	-7						
							Wood energy for heating (GWh)	49	244				Reduction in PM10 emissions in t/year		-1						
							Cogeneration (GWh)	18	91				Reduction in PM2.5 emissions in t/year		-1						
							Roof-top solar thermal energy (GWh)		2												
							Aerothermal / heat pump (GWh)	18	92												
		Controlling the impact of the development of renewable energies on resources					Household wood	14	69												
							Biomass excludin	31	153												
							Waste - combined heat and power (GWh)	5	25												
							Waste heat (GWh)	4	20												
							Geothermal heat (GWh)		2												
			Development of energy management	Daily storage capacity % electricity consumption		5															
				daily storage capacity % heat consumption		5															
				seasonal storage capacity		1															
				Reducing the capacity of heating installations MW		1000															

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	Production and consumption of goods and services	Adopting consumption patterns that emit less greenhouse gas, are more respectful of resources and reduce our waste production	Encouraging the consumption of local products and supporting changes in behaviour	Reducing greenhouse gas emissions from waste	-10	-51	Reduction in household and similar waste (HHW) % Reduction in household and similar waste (HHW) % Reduction in household and similar waste (HHW)	-3	-15				Reduction in Nox emissions from waste t/year		-6						
				Reducing energy consumption and waste	-3	-16	material and organic recovery rate %.	-8	-40												
							% of waste reused and re-used (tonnage of household waste) % of waste reused and re-used (tonnage of household waste)	1	5												
		Helping to reduce the environmental impact of the region's industries	Promoting the circular economy, reducing the impact of industrial processes on the climate, biodiversity, resources and health	Reduction in industrial GHG emissions	-11	-54	reduction in the quantity of waste from ecnomic activities per unit of value generated % reduction in the quantity of waste from ecnomic activities per unit of value generated	-1	-5				Reduction of Nox emissions from industry t/year		-17 -85						
				Reduction Energy industry	-7	-37							Reduction in PM10 emissions from industry t/year		-3 -16						

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
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				Decarbonisation and reduction of energy consumption by the region's industrial sector GWh	-24	-119							Reduction in PM2.5 emissions from industry t/year	-3	-13						
				Development of heat consumption by an Industrial Heat Network using biomass to cover part of the industrial needs (RCIndustrial) GWh		0															
				Electrification and optimisation of electrical energy consumption in the industrial sector GWh	-3	-14,7	Stabilisation of biomass heat consumption to cover part of industrial needs GWh		-0,3												
				Development of geothermal heat consumption to cover part of industrial needs GWh		0,85	Development of solar thermal heat consumption to cover part of industrial needs GWh		0,1												
				Gradual reduction in gas consumption in industrial processes and promotion of the use of biogas from methanisation GWh	-13	-65	Development of geothermal heat consumption to cover part of industrial needs GWh		0,85												

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
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				Gradual reduction in hydrocarbon consumption in industrial processes GWh	-8	-40															
	Agriculture and nature	Encouraging low-carbon farming practices throughout the urban area that preserve and enhance biodiversity	(Included in the action sheet Supporting local and ecological agri-food production)	GHG reduction in agriculture	-9	-43	agricultural and forestry land		36%				Reduction in the use of plant protection products	-10	-50						
				Energy reduction in agriculture	-4	-20							Reduction in Nox emissions t/year	-51	-256						
				Decarbonising and reducing energy consumption in the region's agricultural sector GWh		-0,5							Reduction in PM10 emissions t/year	-6	-30						
				Moderate growth in electricity consumption in the agricultural sector linked to the electrification of uses GWh		0,1							Reduction in PM2.5 emissions t/year	-3	-16						
				Gradual reduction in gas consumption in agricultural production and promotion of the use of biogas from methanisation GWh		-0,1															
				Gradual reduction in hydrocarbon consumption in agricultural production GWh		-0,5															

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
				Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)
		Promoting ecological management of public	(Transversal to action sheets)				Public and private parks, natural areas	32	32												
							carbon storage	27 800	27 800												
Adaptation																					
	Water	Restore the natural cycle of rainwater in our region and use it sustainably	Planning the management of water resources and adapting infrastructures							network efficiency (%)		90%									
		Adapting our water consumption to availability, reducing it and optimising its use																			
	Sustainable food	Promoting healthy, sustainable food accessible to all	Supporting local, environmentally-friendly food production	reducing greenhouse gas emissions by increasing the number of vegetarian meals in the catering industry		-14%	Share of regional supplies on the plate		30%							number of vegetarian meals per week in public canteens		2			
		Increase the proportion of local supplies and ensure that producers are fairly remunerated		Rate of organic UAA at regional level		20%															
	Social justice	Adapting metropolitan public policies to vulnerabilities linked to environmental crises	(Transversal to action sheets)																		

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
				Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)
		Supporting residents most at risk																			
	Economic change	Stimulating and supporting the decarbonisation of economic activities and reducing their impact on the environment	(Transversal to action sheets)																		
		Promoting a sustainable economic development model that creates wealth throughout the urban																			
		Supporting professional transitions and the attractiveness of professions																			
	Health, living environment, quality of life	Promoting a culture of risk and hazard management in our region	Reducing vulnerability to natural and health risks exacerbated by climate change																		
		Offering everyone a resilient, healthy region with a	(Transversal to action sheets)										PM2.5 concentration (µg/m3) annual average		6						

Axis	Domains	Objectives	Action Sheets	GHG emissions			Resources			Water and biodiversity			Health and lifestyle			Social inclusion			Economy		
				Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)	Indicators concerned	early change (2027)	Late outcome (target 2030)
		high quality of life											PM10 concentration (µg/m3) annual average		15						
													NO2 concentration (µg/m3) annual average		15						
													Ozone concentration (µg/m3) average / day over 8h		120						
	Services provided by nature	Strengthening and improving the quality of our ecological continuity and ecosystem services	Strengthening biodiversity and natural ecosystems in the region																		
		Making biodiversity an ally in the transition of our region																			

3.2 Module B-2 Climate Neutrality Portfolio Design

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3.2 Module B-2 Climate Neutrality Portfolio Design

B-2.1: Description of action portfolios and B-2.2: Individual action outlines - MOBILITY portfolio

Fields of Action	Action / Indicator	Main Capital Intensive Projects	Project description	Place	Capex (€)	Direct impacts (Emission reductions)	Cost Effectiveness	Generated renewable energy	Co-benefits identified	Responsible bodies/person	Stakdholders involved	Estimated operation date
						tCO2eq saved	(EUR/tCO2e)	GWh				
Mobility	Developing active mobility and encouraging calmer public spaces	Projets of public spaces modernization (30 Octobre, rue Monge)	Green areas, cycle lanes	Dijon	*20 000 000 €*	*1 023*	*19 550 €*	-	*Public health improvment Noise reduction Air quality improvment Traffic fluidification Improved purchasing power*	*Dijon Metropolis*		*2025*
		Programm of public spaces modernization	Green areas, cycle lanes	Metropolis area	*30 000 000 €*	*3 069*	*9 775 €*	-	*Public health improvment Noise reduction Air quality improvment Traffic fluidification Improved purchasing power*	*Dijon Metropolis*		*2030*
		Development of the Burgundy canal in the Dijon metropolitan area - Mobility section	development of sites to accommodate cyclists and cycle tourists; development of the banks of the canal for soft mobility, development of cycle connections, urban river logistics, etc.	Metropolis area	*10 000 000 €*	*1 023*	*9 775 €*	-	*Public health improvment Noise reduction Air quality improvment Traffic fluidification Improved purchasing power*	*Dijon Metropolis*	*Public Sector*	*2030*
	Developing public transport services	Tramway extension	Increasing number of stations and frequency	Metropolis area	*100 000 000 €*	*2 046*	*48 875 €*	-	*Energy efficiency Improved purchasing power*	*Dijon Metropolis*		*2030*
		Transport on Demand	Proposing customized services to increase public transport use	Metropolis area	*60 000 000 €*	*2 046*	*29 325 €*	-	*Energy efficiency Improved purchasing power*	*Dijon Metropolis*		*2030*
	Development of low carbon and carbon-free vehicles	Devabonization of bus fleet	100% carbon-free buses by 2035 (172 electric and H2 buses)	Metropolis area	*190 000 000 €*	*18 414*	*10 318 €*	*1,00*	*Energy efficiency Noise reduction Air quality improvment Jobs conversion*	*Dijon Metropolis*		*2035*
		Decabonization of metropolitan service fleet	H2 heavy duty vehicles, electric and H2 service vehicles	Metropolis area	*5 000 000 €*	*2 302*	*2 172 €*	-	*Energy efficiency Noise reduction Air quality improvment*	*Dijon Metropolis*		*2035*
		Decabonization of the service fleet of partners involved into the Metropolitan Climate & Biodiversity Contract	H2 heavy duty vehicles, electric and H2 service vehicles	Metropolis area	*10 000 000 €*	*4 604*	*2 172 €*	-	*Energy efficiency Noise reduction Air quality improvment*	*Public Sector Private Secotr*	*Dijon Metropolis*	*2035*
	Developing sustainable urban logistics	Experimentation of Urban Logistics solutions	Studying the implementation of a cycling hub as part of the interlud / ludic charter	Dijon	*5 000 000 €*	*256*	*19 550 €*	-	*Energy efficiency Noise reduction Air quality improvment*	*Private Sector*	*Dijon Metropolis*	*2028*
	Developing a coordinated transport offer for the urban area	Experimentation of Energy Mobilty hubs	Propose multimodal transportation zone with development of electrical charge systems	Dijon	*5 000 000 €*	*1 023*	*4 888 €*	*1,00*	*Territorial cooperation enhancement Energy efficiency Traffic fluidification*	*Private Sector*	*Dijon Metropolis*	*2028*
		Schéma Express Regional Métropolitain (SERM)	Improve services between the city centre and its suburban area by strengthening rail services and other modes	Metropolis area	*20 000 000 €*	*3 069*	*6 517 €*	-	*Territorial cooperation enhancement Energy efficiency Traffic fluidification*	*Public Sector*	*Dijon Metropolis*	*2030*

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3.2 Module B-2 Climate Neutrality Portfolio Design

B-2.1: Description of action portfolios and B-2.2: Individual action outlines - BUILDING portfolio

Fields of Action	Action / Indicator	Main Capital Intensive Projects	Project description	Place	Capex (€)	Direct impacts (Emission reductions)	Cost Effectiveness	Generated renewable energy	Co-benefits identified	Responsible bodies/person	Stakdholders involved	Estimated operation date
						tCO2eq saved	(EUR/tCO2e)	GWh				
Housing and Buildings	Decarbonising and reducing energy consumption in existing homes	Metropolitan actions : Renoveco and SEM habitat funds	Organising and managing local engineering resources to boost building renovation	Metropolis area	*66 000 000 €*	*22 798*	*2 895 €*	-	*Housing improvment Energy efficiency Jobs creation*	*Dijon Metropolis*		*2030*
		Response project	Involved in the ecological transition, residents are invited to define their needs, monitor the implementation and test innovations in the fields of intelligent buildings, electric mobility, renewable energy storage, etc.	Dijon	*40 000 000 €*	*3 800*	*10 527 €*	*4,00*	*Housing improvment Energy efficiency Jobs creation Promoting circular economy*	*Dijon Metropolis*	*Public Sector*	*2030*
	Decarbonising and reducing energy consumption in the tertiary and industrial sectors (excluding processes)	Programm of metropolitan building renovation	Insulation, energy managment	Dijon	*150 000 000 €*	*4 400*	*34 094 €*	*4,00*	*Energy efficiency Jobs creation Promoting circular economy*	*Dijon Metropolis*		*2030*
		Building renovation projects of partners involved into the Metropolitan Climate & Biodiversity Contract	Insulation, energy managment	Dijon	*70 000 000 €*	*4 400*	*15 911 €*	*8,00*	*Energy efficiency Jobs creation Promoting circular economy*	*Private Sector Public Sector*	*Dijon Metropolis*	*2030*
	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)	Micro-projects plot-based infiltration	Support projects that promote water and biodiversity (revegetation, infiltration, deconnection of wastewater, creation of cool islands, etc.).	Dijon	*18 000 000 €*	*4 000*	*4 500 €*	-	*Biodiversity perservation Water managment Saving ressources Citizen mobilization*	*Dijon Metropolis*	*Citizens*	*2030*
		Eco-district porte Agripa	Restructuration of the East railstation area with the aim of improving mobilty, quality of life, and housing renovation	Dijon	*30 000 000 €*	*4 000*	*7 501 €*	*2,00*	*Biodiversity perservation Water managment Saving ressources Citizen mobilization*	*Dijon Metropolis*	*Private Sector Public Sector*	*2035*
		Development of the southern entrance to the town	Restructuration of the South neignourhood area with the aim of improving mobilty, quality of life, and housing renovation	Dijon	*50 000 000 €*	*4 000*	*12 501 €*	*2,00*	*Biodiversity perservation Water managment Saving ressources Citizen mobilization*	*Dijon Metropolis*	*Private Sector Public Sector*	*2035*

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3.2 Module B-2 Climate Neutrality Portfolio Design

B-2.1: Description of action portfolios and B-2.2: Individual action outlines - ENERGY portfolio

Fields of Action	Action / Indicator	Main Capital Intensive Projects	Project description	Place	Capex (€)	Direct impacts (Emission reductions)	Cost Effectiveness	Generated renewable energy	Co-benefits identified	Responsible bodies/person	Stakdholders involved	Estimated operation date
						tCO2eq saved	(EUR/tCO2e)	GWh				
Energy Production	Developing renewable electricity generation	Airport photovoltaic power plant / BA 102	Grid resale via CRE call for tenders	Ouges	*120 000 000 €*	-		*120,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
		Photovoltaic power plant CET Sud	Grid resale via CRE call for tenders	Dijon	*20 000 000 €*	-		*20,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
		Collective self-consumption loop on the Chevigny / Excellence 2000 business park	Collective self-consumption (industry and local authorities)	Chevigny Saint Sauveur	*20 000 000 €*	-		*20,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
		Collective self-consumption loop on the Longvic / Oscara business park	Collective self-consumption (industry and local authorities)	Longvic	*20 000 000 €*	-		*20,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
		Collective self-consumption loop on CHU / UB zone	Collective self-consumption (industry and local authorities)	Dijon	*20 000 000 €*	-		*20,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
		Solarisation of the built and non-built heritage of Dijon Métropole and the City of Dijon	Collective self-consumption (metropolitan uses)	Dijon	*20 000 000 €*	-		*20,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
		Agronov zone agrivoltaic project	Resale to the grid and collective self-consumption (Agronov, farmers, MagaPom)	Bretenière	*10 000 000 €*	-		*10,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*		*2030*
	Developing renewable gas production	Biomethane production from Sewage Water Treatment Plant	Resale to the grid	Ouges	*10 000 000 €*	-		*10,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis*		*2025*
		Hydrogen production stations	Bus and garbage truck ecosystem supplied by the H2 stations	Dijon	*30 000 000 €*	-		*30,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis*	*Private secrtor*	*2028*
		Agricultural methanisation unit	Resale to the grid	Magny sur Tille	*40 000 000 €*	-		*40,00*	*Territorial cooperation enhancement Jobs creation*	*Private secrtor*	*Dijon Metropolis*	*2028*
	Developing the production of renewable thermal energy	New heat production unit in southern Dijon / buffer storage / industrial waste heat recovery	Supply of industrial heat to Chenôve, supply of heat to RCU Sodien, supply of tertiary/residential heat to ave R.Carraz + supply of industrial heat to Longvic/Oscara	Chenôve	*50 000 000 €*	*6 221*	*8 038 €*	*50,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*	*Private secrtor*	*2030*
		New heat production unit in eastern Dijon / buffer storage / industrial waste heat recovery	Industrial heat supply ZA Excellence 2000, industrial heat supply ZA Chevigny Est, tertiary/residential heat supply Chevigny, connection RCU Dijon Energies	Chevigny Saint Sauveur	*50 000 000 €*	*6 221*	*8 038 €*	*50,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis / SEM Energies*	*Private secrtor*	*2030*
		Renovation of the UVE / buffer storage / recovery of waste heat Zone Activité Cap Nord	Metropolitan Heating Network	Dijon	*45 000 000 €*	*6 221*	*7 234 €*	*45,00*	*Territorial cooperation enhancement Jobs creation*	*Dijon Metropolis*		*2030*
	Development of energy management	Dijon metropolis building energy consumption and production managment	Energy management system	Dijon	*5 000 000 €*	*486*	*10 288 €*	-	*Energy savings*	*Dijon Metropolis*		*2030*
		Public and Private building energy consumption and production managment	Energy management system	Dijon	*20 000 000 €*	*486*	*41 152 €*	-	*Energy savings*	*Private Sector Public Sector*		*2030*

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3.2 Module B-2 Climate Neutrality Portfolio Design

B-2.1: Description of action portfolios and B-2.2: Individual action outlines - OTHER SECTORS portfolio

Fields of Action	Action / Indicator	Main Capital Intensive Projects	Project description	Place	Capex (€)	Direct impacts (Emission reductions)	Cost Effectiveness	Generated renewable energy	Co-benefits identified	Responsible bodies/person	Stakdholders involved	Estimated operation date
						tCO2eq saved	(EUR/tCO2e)	GWh				
Production and consommation of good and services	Encouraging the consumption of local products and supporting changes in behaviour	Collective energy purchase in metropolitan area	Consolidating municipal energy needs and purchasing	Metropolitan area	*1 200 000 €*	-		-	*Jobs creation* *Saving ressources*	*Dijon Metropolis*	*Public Sector*	*2030*
						-						
	Promoting the circular economy, reducing the impact of industrial processes on the climate, biodiversity, resources and	Modernisation of the household waste incineration and energy recovery centre	maintain treatment capacity to cover needs arising from the closure of landfill sites	Dijon	*120 000 000 €*	-		-	*Jobs creation* *Saving ressources*	*Dijon Metropolis*		*2030*
		Modernisation of the sorting centre	increased sorting capacity (quality and quantity)	Dijon	*35 000 000 €*	-		-	*Jobs creation* *Saving ressources*	*Dijon Metropolis*		*2025*
						-						
Water	Planning the management of water resources and adapting infrastructures	Continous improvment of water production units	Improving drinking water production capacity	Metropolitan area	*12 000 000 €*	-		-	*Biodiversity perservation* *Water managment* *Saving ressources* *Citizen mobilization*	*Dijon Metropolis*		*2030*
		Continous improvment of sewage water treatment unites	Improving wastewater treatment capacity	Metropolitan area	*12 000 000 €*	-		-	*Biodiversity perservation* *Water managment* *Saving ressources* *Citizen mobilization*	*Dijon Metropolis*		*2030*
		Renewal of drinking water and wastewater networks	Improving network capacity	Metropolitan area	*12 000 000 €*	-		-	*Biodiversity perservation* *Water managment* *Saving ressources* *Citizen mobilization*	*Dijon Metropolis*		*2030*
Sustainable agriculture	Supporting local, environmentally-friendly food production	Metropolitan vegetable factory	structuring the economic model linking local producers and local consumers	Ouges	*5 000 000 €*	-		-	*Jobs creation* *Saving ressources* *Water managment*	*Dijon Metropolis*		*2030*
		Collective catering in metropolitan area	Consolidating municipal catering services to promote sustainable food	Metropolitan area	*1 200 000 €*	-		-	*Jobs creation* *Saving ressources* *Water managment*	*Dijon Metropolis*		*2026*
						-						
Health and living environment	Reducing vulnerability to natural and health risks exacerbated by climate change	Energy and Climate Platform	Monitoring energy consumption, greenhouse gas emissions, air quality and urban heat islands	Metroplitan area	*1 200 000 €*	-		-	*Public health improvment* *Improved purchasing power* *Saving ressources*	*Dijon Metropolis*	*Private Sector* *Public Sector*	*2030*
		Programm of public spaces vegetalization	Planting trees when modernizing public spaces	Metropolis area	*1 200 000 €*	-		-	*Public health improvment* *Improved purchasing power* *Saving ressources*	*Dijon Metropolis*		*2030*
Services provided by nature	Strengthening biodiversity and natural ecosystems in the region	Sentinel bee programme	Safeguarding biodiversity by protecting bees and wild pollinators	Metroplitan area	*1 200 000 €*	-		-	*Territorial cooperation enhancement* *Biodiversity perservation* *Water managment*	*Dijon Metropolis*	*Private Sector* *Public Sector*	*2030*
		"Territoires engagés pour la nature" programme	Integrating biodiversity conservation issues into operational work through dedicated action plan	Metropolis area	*1 200 000 €*	-		-	*Territorial cooperation enhancement* *Biodiversity perservation* *Water managment*	*Dijon Metropolis*	*Private Sector* *Public Sector*	*2030*
						-						

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
Mobility	*Developing active mobility and encouraging calmer public spaces*	Safety	If the infrastructure is not adapted, this can lead to accidents, particularly between cyclists, pedestrians and motor vehicles. In addition, there is a risk of inequality of access: certain populations may not benefit from the facilities if they are not designed with their needs in mind. Finally, resistance to change may also emerge, particularly from users accustomed to the car, which may complicate the transition to more sustainable modes of transport.	Listed actions have systemic effects	Do a global combination of : improving Infrastructure actions, traffic Calming measures, urban planification, public awareness campaigns
	Developing public transport services	Public acceptance	The main risk associated with developing public transport services in urban areas is the issue of public acceptance. If new lines or services do not meet the needs of users or are not perceived as reliable, this can lead to low usage, which compromises the economic viability of the system. What's more, major investment is often required to develop this offer, and if users fail to turn up, this can lead to financial losses and political tensions. Problems with intermodality and connections with other modes of transport can also reduce the system's effectiveness.	Listed actions have systemic effects	Do a global combination of : various mode of transports integration, high quality infrastructures investments, user centric services design, real-time information system development, safety and security enhancements, keep fares affordable, settle public engagement
	Development of low-carbon and carbon-free vehicles	Technological transition and the infrastructure needed to support it	Inadequate infrastructure: A lack of charging points for electric vehicles or appropriate facilities for other types of carbon-free vehicles may limit their uptake. Initial costs: Decarbonised vehicles may have higher purchase costs, which may deter some consumers, especially if financial incentives are not sufficient. Supply of materials: Increased demand for battery materials (such as lithium or cobalt) may lead to supply problems and raise ethical issues relating to extraction. Industry transition: Traditional manufacturers of combustion vehicles will have to adapt, which may lead to job losses and economic tensions in certain regions. Public acceptance: There may be reticence or concerns about the performance and reliability of these new vehicles.	Listed actions have systemic effects	Create a supportive ecosystem that encourages adoption and infrastructure development by charging infrastructure development, public transport electrification, Research and Development funding, public awareness campaign
	Developing sustainable urban logistics	Complex coordination between the various players involved.	Intermodal collaboration: The need to synchronise different modes of transport (electric vehicles, cargo bikes, public transport) can be difficult, especially with private and public players. Implementation costs: The development of suitable infrastructure (such as specific delivery zones or collection points) can require considerable investment, which may hold back the initiative. Resistance to change: Companies may be reluctant to change their logistics practices, particularly if they fear it will affect their efficiency or costs. Fairness: Ensuring fair accessibility for all players, including small businesses and underserved areas, can be a challenge. Regulation: Unstable regulations can create uncertainty for businesses, making long-term planning difficult.	Listed actions have systemic effects	Integrated and collaborative approach
	Developing a coordinated transport offer for the urban area	Harmonise the various existing transport systems, which may belong to several authorities or operators	Organisational complexity: Coordination between several players, such as municipalities, regions and private operators, can lead to conflicts of interest and communication difficulties. Disparate infrastructures: Differences in infrastructure and technology can complicate the integration of transport systems, making the user experience less seamless. Funding and budget: Securing adequate funding and allocating costs between different entities can be complex, especially if the benefits are not immediately visible. User acceptance: Users may be reluctant to change their transport habits if the new offer is not perceived as more convenient or advantageous. Risk of inequalities: Poorly managed coordination could create disparities in access to transport between different areas of the urban area, exacerbating socio-economic inequalities.	Listed actions have systemic effects	Rigorous planning and close collaboration between all those involved

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
Housing and Buildings	*Decarbonising and reducing energy consumption in existing homes*	Financial accessibility	Cost of works: The renovations required to improve energy efficiency can represent a substantial investment, which can be a barrier for many homeowners, particularly those on low incomes. Appropriateness of support: Subsidies and financial incentives must be sufficient and well-targeted to encourage renovations, but there are often gaps in their availability or effectiveness. Regional disparities: Household resources and capacities vary considerably from one region to another, which can lead to inequalities in access to low-carbon housing. Complexity of the work: Managing renovation projects can be complex and require specific skills, making it difficult for some homeowners to navigate the process. Temporary disruption: Renovation work can cause inconvenience to occupants, and poor management can lead to delays or extra costs.	Listed actions have systemic effects	Implement comprehensive energy retrofit programs with : financial incentives, home energy audits, targeted programs, training and certification, awareness campaigns and community Engagement
	Decarbonising and reducing energy consumption in the tertiary and industrial sectors (excluding processes)	Managing the costs and investments required to implement effective solutions	High levels of investment: Energy retrofits, the adoption of new technologies (such as more efficient heating or lighting systems), and the integration of renewable energy can require significant investment, which can be difficult to justify for some businesses. Uncertain returns on investment: Energy savings can take time to materialise, and businesses may be reluctant to commit to expenditure with no guarantee of a quick return, especially in an uncertain economic climate. Technical complexity: Implementing decarbonisation solutions may require specific technical skills, and companies may not have the necessary resources to manage these changes. Operational disruption: Renovation work or the installation of new technologies can lead to business interruptions, which can affect productivity and revenues. Regulatory compliance: Businesses must navigate an evolving regulatory landscape, and new or changing requirements can create additional uncertainties and challenges.	Listed actions have systemic effects	Implement comprehensive sustainability and energy management programs including : energy efficiency audits, incentives for upgrades, employee training and engagement, decarbonization roadmaps, renewable energy integration, monitoring and reporting
	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)	Difficulty in effectively integrating these objectives into the planning and design processes	Conflicts of interest: Economic and development priorities may conflict with environmental objectives, leading to inappropriate trade-offs in project design. Lack of awareness and training: Those involved in planning and construction may not have a sufficient understanding of climate and biodiversity issues, which can lead to ill-informed decisions. Regulatory complexity: Navigating an evolving regulatory framework for environmental protection can be difficult, and new requirements can complicate the project approval process. Impact assessment : Environmental impact assessment may be insufficient or incomplete, leading to negative consequences for climate and biodiversity after construction. Additional costs: Solutions aimed at reducing environmental impacts can be perceived as additional costs, which can act as a brake on the adoption of sustainable practices	Listed actions have systemic effects	An integrated and collaborative approach, involving environmental experts, town planners and stakeholders, to ensure that sustainability objectives are fully integrated from the earliest stages of planning
	Developing renewable electricity generation	Intermittent production	Variability of production: Renewable energy sources, such as wind and solar power, are dependent on weather conditions, which can lead to fluctuations in the amount of energy produced. Supply management: Intermittency can complicate power grid management, requiring efficient storage solutions and demand management systems to balance supply and demand. Inadequate infrastructure: Existing electricity grids may not be adapted to efficiently integrate a growing share of renewable energy, requiring significant investment in infrastructure. Storage and flexibility costs: The development of storage technologies (such as batteries) and flexible solutions (such as gas-fired power stations that can be brought on stream quickly) may represent an additional cost. Social and environmental acceptability: Renewable energy projects may encounter local resistance, particularly due to concerns about the impact on the landscape, biodiversity or health.	Listed actions have systemic effects	Involving local communities in the project planning and implementation process

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
Energy production	*Developing renewable gas production*	The complexity and cost of the infrastructure required for its production, distribution and use	High investment costs: Renewable gas production facilities, as well as transmission and distribution infrastructure, require high levels of investment, which may hamper large-scale development. Immature technology: Some renewable gas production technologies are still in the development phase, which may lead to uncertainty as to their long-term efficiency and profitability. Competition with other uses: Biomethane production may compete with land use for agriculture or biodiversity conservation, raising questions about sustainability. Social acceptability: Renewable gas production projects may give rise to local concerns about environmental impacts, such as noise pollution or waste management. Regulations and standards: Regulations surrounding the production and use of renewable gas can be complex and constantly evolving, which can create uncertainty for investors and developers.	Listed actions have systemic effects	Promote supportive policies, encourage research and development, and engage with local communities to ensure acceptance of projects
	Developing the production of renewable thermal energy	Resource management and the environmental impact associated with their use	Sustainability of resources: The production of thermal energy from biomass can raise questions about the sustainability of raw material sources, particularly if they come from intensive agricultural practices that damage biodiversity or soil quality. Greenhouse gas emissions: Although renewable thermal energies are generally considered to be more sustainable, their use can still result in emissions, particularly when biomass is burnt, if it is not managed appropriately. Social acceptability: Thermal energy projects, particularly those involving biomass, may encounter local resistance due to concerns about environmental impact, noise pollution or land use. Installation and operating costs: The infrastructure needed to produce renewable thermal energy can require significant investment, and it can be expensive to operate, depending on the resources available. Regulatory complexity: Regulatory frameworks for renewable thermal power generation can vary considerably, creating uncertainty for investors and developers.	Listed actions have systemic effects	Adopt sustainable management practices, promote clear policies and engage with local stakeholders from the earliest stages of project development.
	Development of energy management	Resistance to change within organisations	Organisational culture: Employees and management may be reluctant to adopt new energy management practices or technologies, especially if this requires adjustments to their day-to-day working habits. Lack of awareness: Lack of training and information on the benefits of energy management can limit the commitment and motivation of teams to get involved in these initiatives. Upfront investment: The costs associated with implementing energy management systems (such as software or metering equipment) can be perceived as a barrier, especially in organisations with tight budgets. Data and technology: Successful energy management relies on the collection and analysis of accurate data. Faulty systems or incomplete data can hamper decision-making and the effectiveness of actions taken. Evaluating results: It can be difficult to quantify the benefits of energy management, which makes it difficult to justify efforts and investments to stakeholders.	Listed actions have systemic effects	Promote an energy culture within the organisation, provide appropriate training and clearly demonstrate the economic and environmental benefits of energy management initiatives
Production and consommation of	*Encouraging the consumption of local products and supporting changes in behaviour*	Consumer resistance to change	Entrenched habits: Consumers often have well-established habits regarding their food and consumption choices, and it can be difficult to encourage them to adopt new practices, even if these are more sustainable. Perception of cost: Local products are sometimes perceived as more expensive than imported ones, which can deter consumers, especially those with budget constraints. Availability and accessibility: The availability of local products may be limited, particularly in certain regions or at certain times of the year, making it difficult for them to be widely adopted. Awareness and information: A lack of awareness of the environmental and socio-economic benefits of local consumption can lead to low motivation to change behaviour. Social inequalities: Encouraging the consumption of local products can exacerbate inequalities if certain populations do not have fair access to these products or if they cannot afford to pay higher prices.	Listed actions have systemic effects	Set up awareness campaigns, promote initiatives to support local production and work with communities to make local products more accessible and attractivese

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
consommation of good and services	*Promoting the circular economy, reducing the impact of industrial processes on the climate, biodiversity, resources and health*	Difficulty in integrating new business models into existing structures	Resistance to change: Companies may be reluctant to change their established practices, especially if they perceive these changes as costly or disruptive to their operations. Initial investment: The transition to more sustainable processes often requires significant investment in new technology or infrastructure, which can be a barrier, particularly for small and medium-sized businesses. Complexity of implementation: The circular economy involves complex changes to the supply chain and resource management, which can make the transition difficult to plan and execute. Lack of awareness and training: Employees may not be sufficiently trained or informed about circular economy principles, which can limit their commitment and effectiveness in implementing new practices. Impact assessment: Measuring the results of the transition to a circular economy can be complex, making it difficult to demonstrate the economic and environmental benefits to stakeholders.	Listed actions have systemic effects	Engage all stakeholders, provide financial and technical support, and promote a culture of innovation and sustainability within organisations
Water	*Planning the management of water resources and adapting infrastructures*	Climate uncertainty and variations in water availability	Resource variability: Climate change can lead to unpredictable fluctuations in the availability of water resources, making long-term infrastructure planning difficult. High adaptation costs: Upgrading or building resilient infrastructure can require significant investment, which can be a barrier for some communities, especially in times of budget constraints. Social acceptability: Adaptation projects can raise concerns within communities, particularly because of potential impacts on the environment or biodiversity, which can lead to opposition. Coordination between stakeholders: Water resource management involves a large number of stakeholders (local authorities, farmers, industry, etc.), and coordination between them can be complex. Assessing future needs: Anticipating future demand for water, particularly taking into account population growth and changes in use, can be difficult, which can lead to mismatches between supply and demand.	Listed actions have systemic effects	Adopting an integrated and adaptive approach, involving stakeholders from the outset and using reliable data to guide planning and decision-making
Sustainable agriculture	*Supporting local, environmentally-friendly food production*	Economic viability of these initiatives	Production costs: Ecological production methods can be more expensive than conventional practices, which can make local products less competitive in terms of market price. Market access: Local producers may find it difficult to access wider markets, due to competition with large agri-food companies or the lack of suitable distribution networks. Seasonality and availability: Local production is often subject to seasonal constraints, which can lead to fluctuations in product availability, making it difficult to meet consumer expectations. Consumer awareness: Consumers may not be sufficiently informed about the benefits of local, environmentally-friendly production, which may limit demand for these products. Inequalities of access: Support initiatives may not benefit all producers equally, creating disparities between farmers and exacerbating social inequalities.	Listed actions have systemic effects	Promote financial support programmes, raise consumer awareness of the benefits of local products and encourage distribution models that facilitate market access for local producers
Health and living environment	*Reducing vulnerability to natural and health risks exacerbated by climate change*	Complexity and uncertainty in planning and implementing adaptation measures	High costs: The investment required to strengthen infrastructure and improve resilience can be considerable, posing budgetary challenges, particularly for local authorities. Uncertainty of future impacts: Predicting the effects of climate change is complex, and projections can vary. This makes it difficult to assess the most effective measures to implement. Conflicting priorities: Limited resources can lead to conflicts of interest between different stakeholders, with each group having its own priorities in terms of adaptation or risk reduction. Awareness and community involvement: There may be a lack of awareness among populations about the risks associated with climate change and the measures needed to reduce their vulnerability, which may hinder the implementation of effective strategies. Social inequalities: The most vulnerable groups may not benefit equally from adaptation measures, exacerbating existing inequalities.	Listed actions have systemic effects	Develop and implement comprehensive resilience and adaptation strategies, which include : risk assessments, community engagement, strengthening infrastructure, Public Health initiatives, education and awareness, ecosystem restoration, policy frameworks
Services provided by nature	*Strengthening biodiversity and natural ecosystems in the region*	Competition for space and resources, which can lead to conflicts of use	Planning conflicts: The integration of green spaces and biodiversity initiatives may conflict with other urban needs, such as housing development or transport infrastructure. Maintenance costs: Projects to enhance biodiversity may require ongoing maintenance and financial resources, which can be a challenge for local authorities. Social acceptability: Some initiatives may meet with resistance from local residents, particularly if they are perceived as neglecting immediate community needs (such as accessibility or safety). Impact on local species: Introducing new species or creating new habitats can have unforeseen consequences on existing ecosystems, particularly by disturbing local species or encouraging invasive species. Measuring results: Assessing the impact of actions on biodiversity can be complex, making it difficult to justify efforts and investments to stakeholders.	Listed actions have systemic effects	Engage communities early in the process, plan in an integrated way and ensure that biodiversity initiatives are compatible with other urban needs

B-2.3: Summary strategy for residual emissions

Carbon sequestration is the long-term removal of carbon from the atmosphere to prevent it from contributing to climate change. This subject has taken on new importance with the 2015 Paris Agreement and the French Climate Plan, which aim to achieve carbon neutrality in the long term. This implies that residual greenhouse gas emissions that cannot be eliminated will have to be captured.

Carbon sequestration refers to the capture and storage of CO2 in ecosystems (soils and forests) and in wood products.
43% of Dijon Metropole's land has been artificially developed, while 57% remains undeveloped.

In 2018, the metropolitan area captured 13,400 tonnes of CO2, or 1.6% of 2018 total greenhouse gas emissions (scope 1 & 2).

Land use change was a net greenhouse gas emitter of 498 teCO2 in 2018. This means that artificial surfaces release more CO2 than CO2 captured by the development of meadows. However, this relatively low figure is the direct result of controlled urban sprawl.
The target for 2030 is to achieve 27,800 tCO2 sequestered, for all land uses combined, by maintaining agricultural and natural areas and changing farming practices.

The challenges of project portfolio management :

Dijon métropole has adopted a comprehensive approach to manage its portfolio of climate and biodiversity transition projects. This systematic framework encompasses several key elements :

- Project Portfolio Management

Robust project management methods and tools are utilized to coordinate the diverse project mix, allocate resources effectively, and mitigate risks across the portfolio.

- Opportunity identification and project selection

New project ideas are proactively scanned to identify opportunities for multi-stakeholder cooperation that align with strategic objectives. Rigorous selection criteria are applied to choose the most impactful initiatives.

- Project maturity assessment and financing

The readiness and feasibility of project proposals are carefully evaluated. Suitable funding sources and financing mechanisms are identified to ensure the viability of each project.

- Impact and co-benefits evaluation

Peer review sessions are conducted to assess the expected impacts and synergies of projects. The contributions of individual initiatives towards the overarching Action Plan objectives are quantifies.

- Legal structuring

Dedicated legal entities are created and managed to facilitate project implementation, with appropriate governance, contractual framewors and financing arrangements.

The following SWOT analysis completes the review of key elements for the systemic management of Dijon métropole's transition project portfolio.
It highlights the strengths on which the metropolis relies, as well as the weaknesses and threats it must overcome if it is to manage its portfolio of transition projects systemically and effectively. It underlines the importance of a cooperative approach, financial innovation and consolidation of resources to meet these complex challenges.

Strengths	Weaknesses
- Mastery of transition project management thanks to a structured project portfolio methodology - Unified climate and biodiversity assessment and scoring system applicable to all projects - Iterative consultation process with stakeholders to ensure operationality and efficiency of project portfolios - Clear strategic direction for PC&B, enabling projects to be carried out within a framework that meets local challenges - DM's assertive positioning as a territorial coordinator, providing institutional support and facilitating the networking of local players and investors.	- Limited economic profitability of transition projects (reflected in lack of previous implementation) - Lack of risk management tools that take account of territorial balances and dynamics - Predominance of the private sector in projects, complicating coordination and implementation between stakeholders - Complexity of data collection from stakeholders, preventing effective monitoring and benchmarking of project results
Opportunities	**Threats**
- Foster innovation in project financing through public-private partnerships - Develop the economic potential of the co-benefits of climate transition projects - Strengthen and unify a global territorial vision to guide action - Compare and challenge this working approach by collaborating with European partners - Massify and consolidate funding by aggregating resources between stakeholders - Capitalize on user experience to improve the projects of local economic players.	- Fragmented stakeholder/actor approaches, lack of shared vision and inability to optimize value creation - Fluctuating stakeholder, political and regulatory changes exacerbate cooperation problems - Restrictive regulatory environment hinders long-term planning - Conflicts of interest between public and private sectors (land, energy, etc.) lead to tensions and complicate partnerships - Unfavorable presentation of the investments required to bring project portfolios to fruition, risking political approval of the budget or potential investors.

In order to optimize the opportunities identified during the identification of projects relating to climate transition and biodiversity, an evaluation table has been drawn up. This method favors the prioritization of actions according to two essential factors: the impact level of the opportunity on strategic goals, and the probability that the opportunity will be realized.

This matrix guides the setting of strategic priorities and implementation plans, identifying high-impact, high-probability opportunities as essential catalysts for accelerating the transition :

		Impact level		
		Low	Average	Important
	Low			

Probability level	Average		Develop the economic potential of the co-benefits of climate transition projects Strengthen and unify a global territorial vision to guide action	Massify and pool financing by aggregating resources among stakeholders
	High	Capitalize on user experience to improve the projects of local economic players.		Foster innovation in project financing through public-private partnerships Compare and challenge this working approach by collaborating with European partners

Opportunities	Impact of the opportunity	Impact level	Probability level	Priority level	Deployment strategy
Innovative project financing through public-private partnerships	Unlocking new sources of financing	Important	High	1	SEM ENERGIES
Developing the economic potential of the co-benefits of climate transition projects	Make certain investments more attractive	Average	Average	2	SEM ENERGIES
Strengthen and unify a global territorial vision to guide action	Strengthen stakeholder commitment, optimize prioritization of actions and resources	Average	Average	2	SEM ENERGIES
Compare and challenge this working approach by collaborating with European partners	Improve work structure	Important	High	1	SEM ENERGIES
Massify and pool financing by aggregating resources among stakeholders	Greater investment capacity, lower individual costs, more attractive projects	Important	Average	1	SEM ENERGIES

Capitalize on user experience to improve the projects of local economic players.	Optimize the project's correspondence to user needs, and thus its usefulness, acceptability and effectiveness	Low	High	2	Ithake - ECO

Once the opportunities to be maximized have been identified, it is equally important to manage the risks that could impede the realization of climate and biodiversity projects. To this end, a specialized matrix, based on the same model as the first, has been designed to classify risks according to their probability and possible impact on global goals.

This approach makes it easier to focus action on the most crucial risks, while favouring a systematic approach to minimizing their adverse impacts.

		Impact level		
		Low	Average	Important
Probability level	Low			
	Average		Conflicts of interest between the public and private sectors (land, energy, etc.) lead to tensions and complicate partnerships.	Fluctuating stakeholder, political and regulatory changes exacerbate cooperation problems Unfavorable presentation of the investments required to bring project portfolios to fruition may jeopardize political approval of the budget or the willingness of potential investors
	High		Fragmented stakeholder/actor approaches, lack of common vision and inability to optimize value creation	Restrictive regulatory environment hinders long-term planning

Threaths	Risk impact	Impact level	Probability level	Priority level	Deployment strateegy

Fragmented stakeholder/actor approaches, lack of common vision and inability to optimize value creation	Limits the coordination of actions, efficiency and synergies between projects, and therefore the achievement of objectives.	Average	High	1	SWOT
Fluctuating stakeholders, political and regulatory changes exacerbate cooperation problems	Slows down decision-making processes and makes projects more vulnerable	Important	Average	1	SWOT
Conflicts of interest between the public and private sectors create tensions and complicate partnerships	Hinders project implementation, management of shared resources and weakens trust between partners	Average	Average	2	SWOT
Restrictive regulatory environment hinders long-term planning	Burdensome administrative and legal procedures, hinders innovation in the solutions to be deployed and reduces flexibility in project adjustment.	Important	High	1	SWOT
An unfavourable presentation of the investments required to implement the project portfolios could compromise the political approval of this budget or the willingness of potential investors.	Reduced attractiveness of projects to financial partners, funding of initiatives	Important	Average	1	SWOT

Dijon Métropole uses the opportunity maximization and risk minimization matrices to establish its strategic and operational priorities when implementing its Climate and Biodiversity Plan. They help to determine which actions to prioritize and which risk to mitigate, thus helping to steer initiatives towards highly beneficial solutions while minimizing the barriers likely to slow down their implementation.

Dijon Métropole uses the opportunity maximization and risk minimization matrices to establish its strategic and operational priorities when implementing its Climate and Biodiversity Plan. They help to determine which actions to prioritize and which dangers to mitigate, thus helping to steer initiatives towards highly beneficial solutions while minimizing the obstacles likely to slow down their implementation.

Among the strategic options recognized, the establishment of a SEM ENERGIES illustrates a practical, forward-looking approach to structuring and developing energy transition projects on a local scale. This tool demonstrates how Dijon Métropole leverages its resources and collaborations to convert opportunities into tangible measures.

A SEM ENERGIES for energy transition projects

Dijon Métropole has a key role to play in structuring and leading the Energy Master Plan, an integral part of the Climate and Biodiversity Plan:

- Produce an operational strategy and monitor its implementation over time
- Setting an example as a project owner and asset manager:
  - Manage the local authority's direct investments accordingly
  - Promote the production of renewable energy and the reduction of consumption in purchases/contracts
- Influencing the region and its stakeholders:
  - Communicating the Energy Transition
  - Organising regional governance and facilitating investment in renewable energy production and reducing consumption

Actions to be taken by the local authority	On internal assets	On managed infrastructures	With local players	With players from outside the region
Defining the level of comfort and maintenance	By use with agents	By infrastructure with operators and users	Organising feedback between public and private sector asset managers Organising the deployment of energy-saving measures	
Building awareness and training	The agents	Agents and customers Users	Reviewing standards of construction and use in the light of changes in climate and access to resources Examining uses according to seasonality Studying solutions for postponing consumption Studying and developing load shedding solutions	
Monitor performance	Energy Management System	Integrating monitoring into the Energy and Climate Platform	Question gains (avoid "rebound effects") Integrating monitoring into the Energy and Climate Platform	
Sharing and optimising uses			Work on recovering waste energy Setting up energy renovation projects at neighbourhood level (Response duplication) Developing energy storage and energy management solutions in the region	Coordinating and structuring sustainable mobility and freight services across the urban area

Actions to be taken by the local authority	On internal assets	On managed infrastructures	With local players	With players from outside the region
Electricity generation	Car parks and roofs	Car parks and roofs Brownfield sites Self-consumption	Organisation of collective self-consumption projects Facilitating the development of projects	Structuring energy purchases with remote producers
Gas production		Methanisation WWTP Hydrogen Project	Facilitating the development of projects	Structuring biomethane or hydrogen purchases with distant producers
Heat production	Connection to the RCU	Heat production RCU Studying an RFU	Work on the deployment of RCUs dedicated to industrial uses (and work on heat recovery). Encourage the production of heat by heat pumps or other renewable sources	Structuring biomass purchases with distant producers (private forest management plan)

In order to provide visibility on local investment needs and leverage the pooling of investments, it is planned to set up one or more local project portfolios, depending on the nature of the projects.

With regard to energy transition projects, and more specifically energy production projects, the creation of an SEM ENERGIE is envisaged, which would be responsible for managing a portfolio of energy production projects on a territorial scale.

The SEM ENERGIES is defined as an innovative investment solution for Dijon Métropole, facilitating the financing of energy transition initiatives identified in the Climate and Biodiversity Plan and the Climate City

Contract. The Energy Master Plan specifies financing requirements by type of energy carrier and by type of usage sector.

An innovative investment solution

A partnership with a private-sector player specializing in infrastructure financing to :

- Bring investment, attractiveness to the region for all types of projects, not just those with an obvious business model
- Work as closely as possible with market practices (we don't “change the rules”, but we do structure investment vehicles that are relevant to investors).
- Rely on a specialist in asset and infrastructure management, with specific investment and financial engineering capabilities, and a neutral, independent view of operating choices.
- Work in close partnership on “action research” to think through technical and economic packages with a long-term and regional vision, and rely on financial players to systematically benchmark the relevance of models.
- Structure industrial partnerships with a long-term, regional vision, rather than one based on “industrial silos”.
- Enhance the value of investments in infrastructures that contribute to the Climate Plan

Competences SEM Energies

Investments and minority stakes in SPVs

- Provides a vision of how to encourage private investment in all types of operation
- Allows you to observe the financial equilibrium of projects / SPVs
- Allows you to obtain technical information about companies, specifically energy consumption / production
- Enables dividends to be paid out to help finance engineering activities

An innovative investment solution

A partnership with a private sector player specialising in infrastructure financing to:

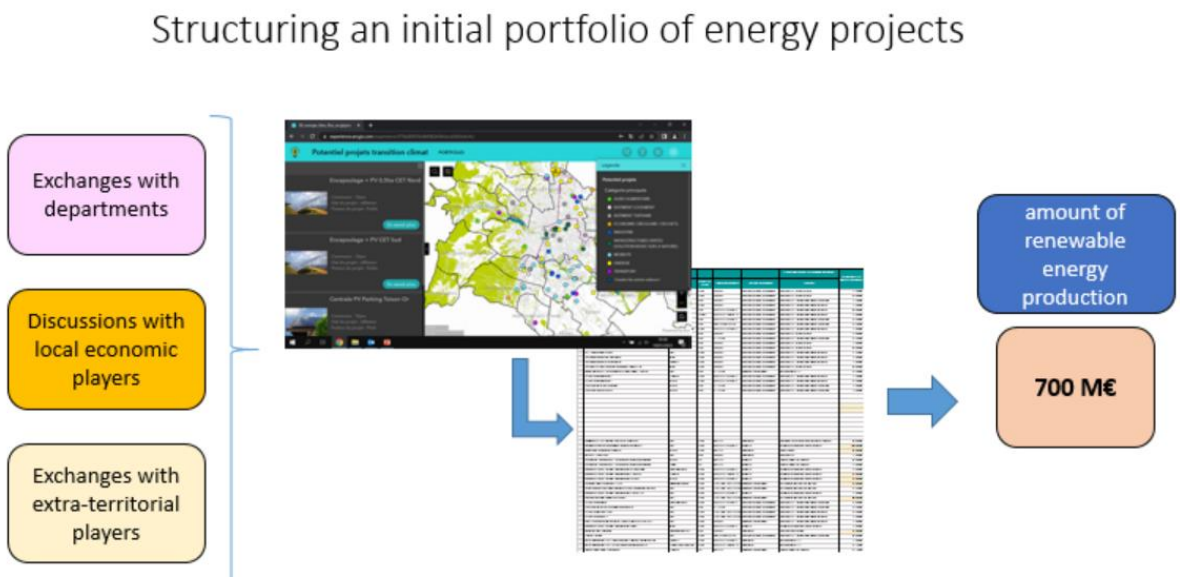
- Attracting investment/attractiveness to the region for all types of project, not just those with a clear business model
- Working as closely as possible to market practices (we don't "change the rules", but we do work to structure investment vehicles that are relevant to investors)
- Relying on a specialist in asset and infrastructure management, with specific investment and financial engineering capabilities, and with a neutral and independent view of operating choices.
- Closer partnership working on "action research" to think about technical and economic set-ups with a long-term and regional vision, and using financial players to systematically benchmark the relevance of models.
- Structuring industrial partnerships with a long-term and territorial vision, rather than an "industrial silo" vision
- Making the most of investment in infrastructure that contributes to the Climate Plan

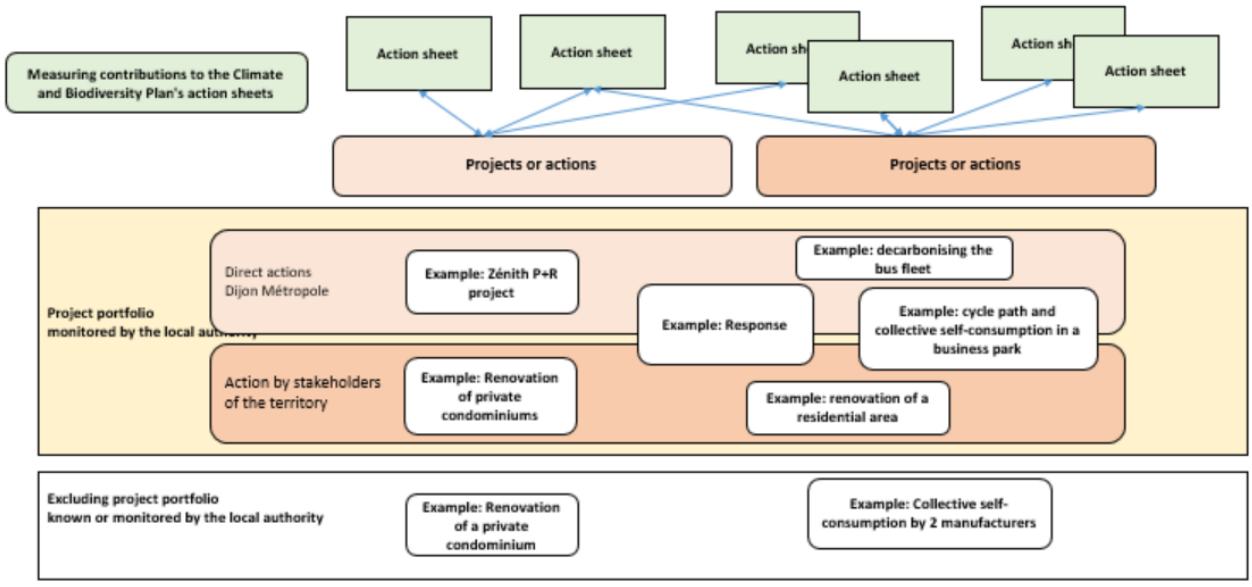
Strategic objective of SEM ENERGIES

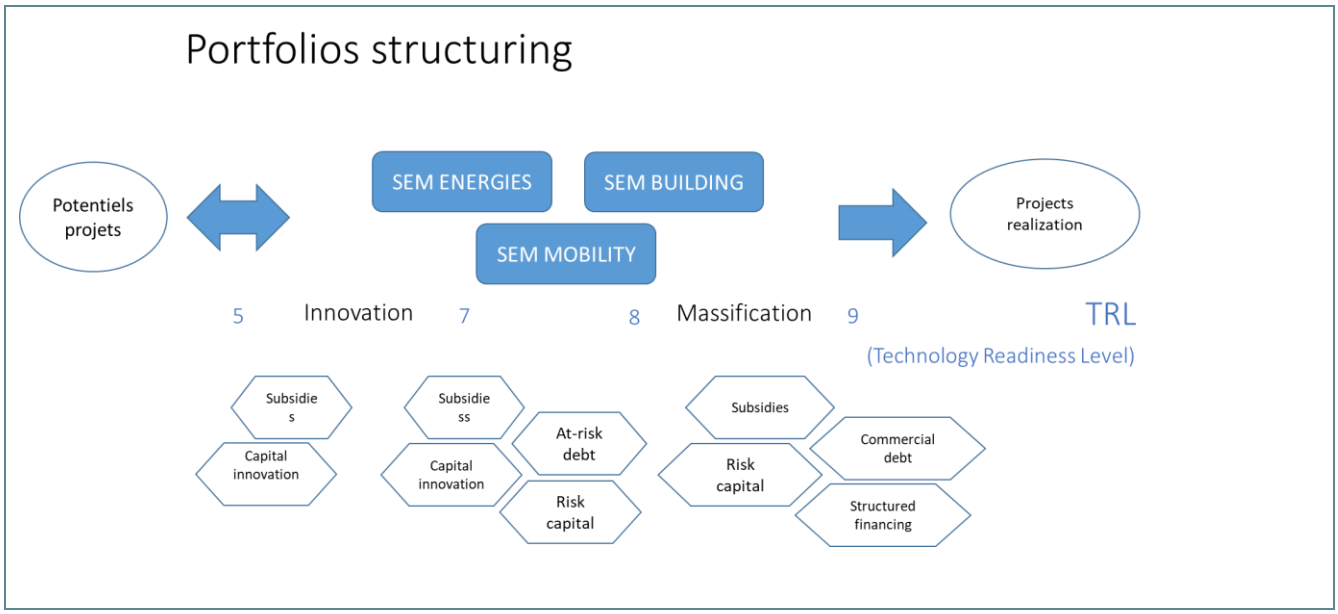
The project to create a SEM ENERGIES is part of the European Pilot Cities project, which aims to massify and accelerate the implementation of energy transition projects in the region.

Based on the work carried out in the Energu Master Plan (Schéma Directeur des Energies), a potential for additional energy production of around 500 GWh/year has been identified, mainly in photovoltaic and urban heat production.

Dijon Métropole therefore intends either to invest directly, or to facilitate private investment, so that SEM ENERGIES will be responsible for managing a portfolio of energy production projects on a territorial scale, representing a potential of around 350 GWh/year, divided into around 60 projects.



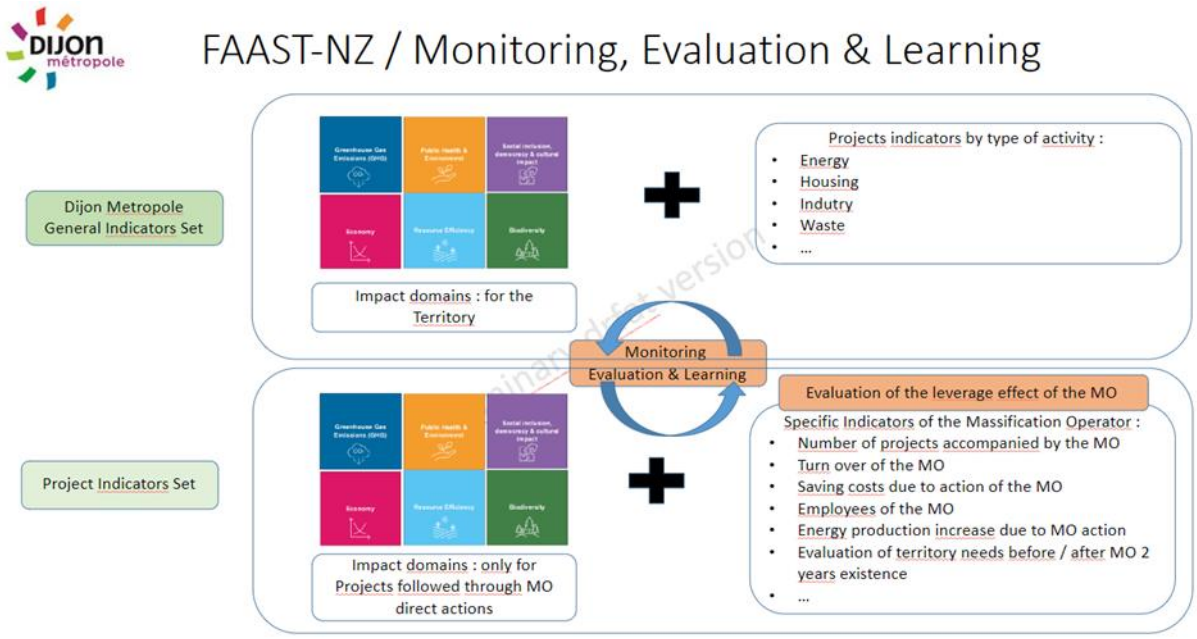



Portfolios structuring
Potentiels projets
SEM ENERGIES
SEM BUILDING
SEM MOBILITY
Projects realization
5
Innovation
7
8
Massification
9
TRL
(Technology Readiness Level)
Subsidies
Capital innovation
Subsidies
Capital innovation
At-risk debt
Risk capital
Subsidies
Risk capital
Commercial debt
Structured financing

3.3 Module B-3 Indicators for Monitoring, Evaluation and Learning

In the application file, we distinguished between two types of monitoring: Dijon Metropole General Indictors Set and the Project Indicators Set.

As a reminder, here is the proposal.



Based on your model, we have developed the Dijon Metropole General Indicators Set.

While all of these indicators are annual, not all of them are produced every year: often because they are complex to construct, or require data that is not readily available, and so on.

You will find below tables of indicators with the proposed frequency of production, but also when they can be constructed (for example, an indicator Y+1 will be produced the following year, Y+2 it will be produced two years after the year in which the data is required, and so on.). Finally, we have specified the sources of the indicators which allows us to update our products more regularly and more quickly.

B-3.1: Impact Pathways

Dijon Metropole has chosen to put the two major environmental crises on the same level: biodiversity and climate.

Moreover, in the Climate and Biodiversity Plan, a large number of co-benefits have been treated at the same level as the climate transition, so that the systemic approach can be used to take account of the various issues. This enables us to avoid duplicating costs and procedures, over-mobilising human resources and exhausting stakeholders.

The issues of mitigation, adaptation, air quality, resources, sustainable food, water management, social justice and a sustainable economy are addressed in the plan, with specific objectives, an action plan and accompanying quantified targets.

All the quantified objectives can be found in the table of expected impacts on page 233 of the document.

To complete the diagnosis, the tables below provide an overview of these main indicators.

Greenhouse Gas Emissions

DOMAIN	SUBDOMAIN	INDICATOR NAME	DATA	UNIT	REFERENCE YEAR
Greenhouse Gas Emissions (GHG)	Stationary Energy	Emissions from buildings (residential + tertiary)	298 072	tCO2	2022
	Transport	Transport emissions	265 706,81	tCO2	2020
		Energy consumption	1270	GWh	2022
	Waste	Waste emissions	77 375,44	tCO2	2020
	Industrial Processes and Product Use (IPPU)	Manufacturing industry emissions	77 297	tCO2	2022
	Agriculture	Emissions from agriculture	9 469	tCO2	2022
		Agricultural carbon storage	18	%	2022
	Energy	Local production of renewable energy	474	GWh	2021
	Grid-supplied energy	Emissions from the energy industry	54 038,61	tCO2	2020
	Carbon Capture and Residual Emissions	Quantity of permanent GHG sequestration	13 400	t	2018

Public health & environment

DOMAIN	SUBDOMAIN	INDICATOR NAME	DATA	UNIT	REFERENCE YEAR
Public health & environment	Air quality	PM2.5 concentration	7 (Péjoces)	µg/m3	2022
		PM10 concentration	16 (Péjoces)	µg/m3	2022
		NO2 concentration	19 (Trémouille)	µg/m3	2022
	Noise pollution	Exposed population LDEN >=55dB	58	%	Between 2014 and 2018
		Exposed population Lnight >=55dB	29,4	%	Between 2014 and 2018
	Urban heat island effect (UHI) Increased temperature and incidence of heat waves	Impact of the heatwave	9 à 10	Day > 30°	Between 1959 and 2009
	Quality of life, attractiveness and aesthetics of the built environment	Green spaces	74,4	Km²	2014
	Fair and affordable access to housing	Energy poverty	21	%	2022

Social inclusion, innovation, democracy and cultural impact Co Benefits

DOMAIN	SUBDOMAIN	INDICATOR NAME	DATA	UNIT	REFERENCE YEAR
Social inclusion, innovation, democracy and cultural impact Co Benefits	Improving social justice	GINI coefficient	0,348	✖	2009
	Functioning of democratic institutions	Voter participation	77,7	%	2022
	Behavior change in favorin favor of low-carbon lifestyles and practices	Modal share of green transport modes and public transport)	47	%	2016

Economy

DOMAIN	SUBDOMAIN	INDICATOR NAME	DATA	UNIT	REFERENCE YEAR
Economy	Investment in R&I	Research intensity	UB : 32 laboratory & 1500 researchers		2008
	Economic thriving	GDP Gross Domestic Product	69 714	Euros	2020
	Local entrepreurship & local businesses / ventures	New businesses registered	4 091		2022

Resource Efficiency

DOMAIN	SUBDOMAIN	INDICATOR NAME	DATA	UNIT	REFERENCE YEAR
Resource Efficiency	Deployment of material cycles & circular economy	Recycling rates for specific material flows	404	t	2023
	Water management	Household water consumption	104	litres/ capita/ day	2022
	Land use management practice	Growth rate of urbanized area	0,86	%	2012 à 2018

Biodiversity

DOMAIN	SUBDOMAIN	INDICATOR NAME	DATA	UNIT	REFERENCE YEAR
Biodiversity	Urban Forestry, Plantation & Improved Plant Health	Percentage of tree canopy within the city	17,5	%	2022
	Non-invasive species & polinators	Change in the number of species of birds in built-up areas in the city	277	Number of species	2023

B-3.2: Indicator Metadata

- Meaning of items :

- Frequency: Frequency is the regularity with which data is produced. For example, OPTEER produces consolidated GHG emissions data in even-numbered years.

- Availability: Availability refers to the time at which the data will be accessible. For example, OPTEER will release consolidated GHG emissions data for the year 2022 at the beginning of 2025. Only then will Dijon Métropole be able to access this data.
- Sources: This refers to the tool or structure that provides us with the data.

Greenhouse gas indicators

Area	Sub-area	Indicators	Frequency	Availability of sources		
Greenhouse gas emissions	Building	Emissions from buildings (residential + tertiary)	annual	N+1	ENERGY-CLIMATE PLATFORM	
		Energy consumption	annual	N+1	ENERGY-CLIMATE PLATFORM	
	Mobility	Transport emissions	Annual	N+1	ENERGY-CLIMATE PLATFORM	
		Energy consumption	Annual	N+1	ENERGY-CLIMATE PLATFORM	
	Waste	Waste emissions	Every year	N+1	ENERGY-CLIMATE PLATFORM	
	Manufacturing industry	Manufacturing industry emissions	Every year	N+1	ENERGY-CLIMATE PLATFORM	
		Energy consumption	Annual	N+1	ENERGY-CLIMATE PLATFORM	
	Agriculture	Emissions from agriculture	Every year		ENERGY-CLIMATE PLATFORM	
		Agricultural carbon storage	All the 6 years	N+3	OPTEER	
	Energy	Local production of renewable energy	Every year	N+1	ENERGY-CLIMATE PLATFORM	
	Energy industry	Emissions from the energy industry	Every year	N+1	ENERGY-CLIMATE PLATFORM	
	Carbon capture and residual emissions	Quantity of permanent GHG sequestration	Every 6 years	N+3	OPTEER	

Public Health & Environment

Area	Sub-area	Indicators	Frequency	Availability	Source
Public health & environment	Air quality	PM2.5 concentration	Each year	n+1	ATMO BFC
		PM10 concentration	Each year	n+1	ATMO BFC
		NO2 concentration	Each year	n+1	ATMO BFC
	Noise pollution	Exposed population LDEN >=55dB	Every 5 years	n+1	PPBE
		Population exposed Lnight >=55dB	Every 5 years	n+1	PPBE
	Urban heat island effect (UHI) Increased temperature and incidence of heat waves	Impact of the heatwave	Every year	n+1	ENERGY-CLIMATE PLATFORM
	Quality of life, attractiveness and aesthetics of the built environment	Green spaces	Every 5 years	N+1	DIJON METROPOLE
	Fair and affordable access to housing	Energy poverty	NON REGULAR	NON REGULAR	OPTEER

Social inclusion, social innovation, democracy and cultural co-benefits

Area	Sub-area	Indicators	Frequency	Availability	Source
Social inclusion, innovation, democracy and cultural impact Co Benefits	Improved social justice	Annual GINI coefficient		n+2	INSEE
	Functioning of democratic institutions	Voter turnout	annual	n+1	Territory Observatory
	Behavior change in in favor of a lifestyle and low-carbon practices	Modal share of green and public transport modes	Non-regular	Non-regular	Household Travel Survey

Economy

Area	Sub-area	Indicators	Frequency	Availability	Source
Economy	Investment in R&D	research intensity	Non-regular	Non-regular	University
	A thriving economy	GDP	Annual	n+1	Territory Observatory
	Local entrepreneurship and local businesses	New companies	Annual	n+1	INSEE

Resource efficiency

Area	Sub-area	Indicators	Frequency	Availability	Source
Resource efficiency	Deploying material cycles and the circular economy	Recycling rates for specific material flows	annual	N+1	Annual Waste Report
	Water management	Household water consumption	annual	N+1	Rapport Annuel Qualité Eau Assainissement
	Land use management practices	Growth rate of urbanized area	Every 6 years	N+1	DIJON METROPOLE SIG

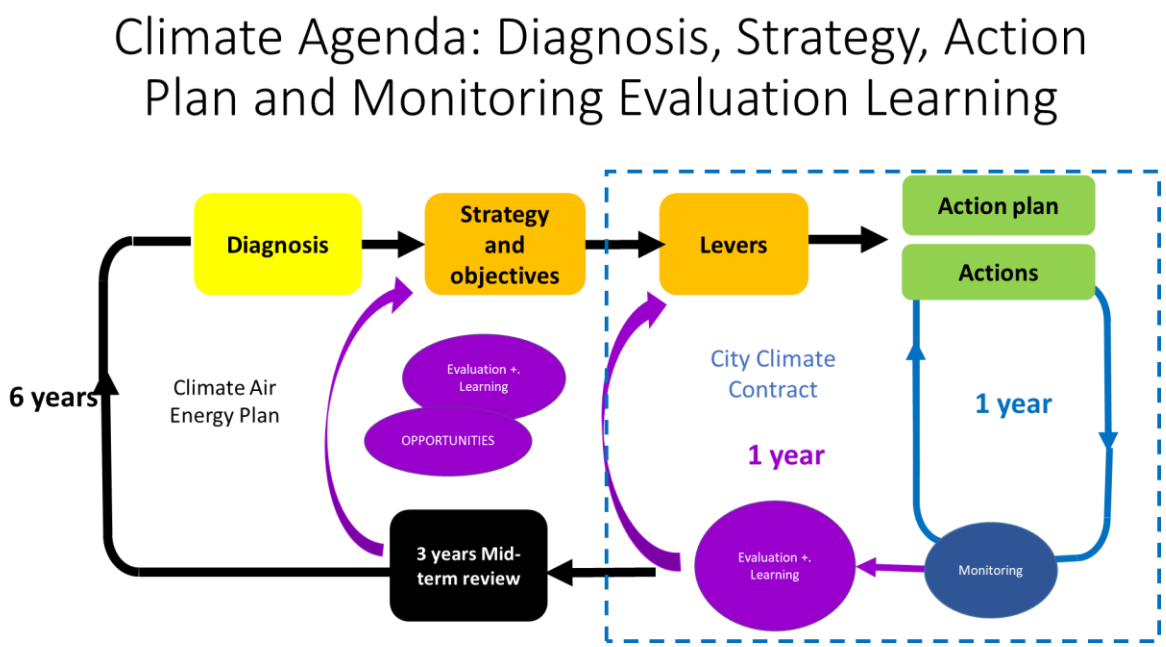
Biodiversity

Area	Sub-area	Indicators	Data	Units	Reference year
Biodiversity	Urban forest, planting and improving plant health	Percentage of vegetation cover in the city	annual	N+2	DIJON METROPOLE SIG
	Non-invasive species and pollinators	Changes in the number of bird species in the city's built-up areas	annual	N+1	DIJON METROPOLE

4 Part C – Enabling Climate Neutrality by 2030

4.1 Module C-1 Governance Innovation Interventions

C-1.1: Description or visualisation of the participatory governance model for climate neutrality



- The results monitoring system currently under construction will enable annual monitoring to be set up:
  - Monitoring of the territory at an annual time scale, with data available 6 months later for air-climate-energy data only (currently being consolidated).
  - Monitoring at a finer temporal scale (monthly) for certain indicators, with delivery at a tighter time step (4 months later) (currently being consolidated).
  - Get as close as possible to the action, with annual building data to monitor the impact of systemic action groups. (currently being tested)
  - Annual monitoring, excluding air-energy-climate data, is to be set up but will depend on data availability.
- Means indicators to verify the actions implemented will be evaluated every 3 years:
  - Means indicators will be available at variable time steps depending on data availability.
  - Monitoring indicators to assess project progress, which can be tracked on an annual basis.

The climate plan is monitored over three main periods:

- **Annual monitoring of the Climate City Contract (annual)**: during this phase, only energy production, consumption and greenhouse gas data will be updated from the indicator table.
- **Mid-term evaluation (3 years)**: during the mid-term evaluation, all data whose production recurrence is > 3 years will be updated, as well as all data for which it has been possible to collect more recent data.
- **Revision of the climate and biodiversity plan (6 years)**: all data will be updated. In addition, the indicator table will be revised to check that new data of interest for monitoring purposes cannot be updated.

Structure of Climate and Biodiversity Plan's internal governance bodies

Group of Climate and Biodiversity elected representatives

- Presentation of the body:

The Group of Climate and Biodiversity elected representatives is a major body in metropolitan climate governance, monitoring and coordinating Climate and Biodiversity Plan (PC&B)-related policies. This body meets five times a year, each month of the Metropolitan Council, to ensure continuous supervision of climate transition initiatives.

- Structure and organization:

The body is made up of: elected representatives in charge of policies linked to the CCC, the Climate and Biodiversity Plan, and the elected representative for Climate Transition.

The Executive Director in charge of the Climate Transition Executive Directorate sends information to the elected representative in charge of Climate Transition in advance of meetings, who then presents members with an overview of the plan.

- Impacts and Contributions:

This body strengthens internal climate governance by enabling elected representatives to maintain up-to-date knowledge of climate and biodiversity project developments in the area. This facilitates informed decision-making and contributes to the development of effective policies on these issues.

Climate Transition Management Committee (CODIR)

- Presentation of the body

The Climate Transition Management Committee (CODIR) is a weekly strategic body that ensures the operational management of climate and biodiversity policies. This regular frequency ensures optimum responsiveness and monitoring of ongoing initiatives.

- Structure and organization

The committee is chaired by the Director of the Climate Transition Executive Directorate, and includes all directors of the Executive Directorate. This composition guarantees a cross-functional vision and effective coordination within the department.

The CODIR has several key responsibilities:

- preparation, follow-up and supervision of thematic working groups

- monitoring of the Climate and Biodiversity Action Sheets

- Monitoring of major ongoing projects

- Impacts and Strategic Contributions

The CODIR plays a decisive role in harmonizing the Executive Directorate's actions by ensuring fluid coordination between the various directors, facilitating systematic monitoring of actions undertaken and developing a consolidated overview to inform strategic decisions.

Climate and Biodiversity Technical Committee (COTECH)

- Presentation of the body

The Climate and Biodiversity Technical Committee is an essential collaborative body in the operational implementation of the PC&B. Meeting five times a year, it produces operational recommendations for the implementation of climate and biodiversity actions, structures transition engineering and provides the group of elected representatives with technical analyses.

- Structure and organization

The COTECH brings together the directors of the various Executive Directorates of the metropolis, the referent directors of the Climate Transition Executive Directorate, specialized technicians and others.
The body's main missions are to draw up technical recommendations for the implementation of actions, to structure territorial engineering and to provide data and analysis to the Group of elected representatives and the Climate Transition Executive Directorate.

- Strategic impacts and contributions

This body makes a significant contribution to operational excellence by challenging existing regional engineering approaches and providing technical expertise for discussion. It also acts as a liaison between the technical and strategic aspects of projects, the various departments of the metropolis, the operational teams and the elected representatives in charge.

The metropolis' internal governance structure for the Climate and Biodiversity Plan (PC&B) is built around three complementary bodies that ensure integrated and effective steering :

The Climate Transition Management Committee (CODIR) ensures weekly monitoring of actions and ongoing operational coordination. This high frequency ensures the necessary responsiveness in implementing projects and allocating resources.

The Climate and Biodiversity Technical Committee (COTECH) provides the technical expertise essential to achieving the PC&B's objectives. Its recommendations and analyses, produced at five annual sessions, feed directly into the decision-making process and help optimize transition engineering.

The Group of Climate and Biodiversity elected representatives completes the system by providing political and strategic oversight. Also meeting five times a year, it validates major orientations and ensures that actions are consistent with the city's climate ambitions.

Structure of the PC&B animation

PC&B Monitoring Committee (Cosui)

- Presentation

The PC&B Monitoring Committee is the annual meeting that assesses progress towards the PC&B's objectives. This open meeting ensures that the commitments made by Dijon Métropole are followed up by all stakeholders in the area.

- Structure

The open meeting brings together a wide range of internal players (directors of all the Executive Directorates, managers and employees of the various local authority departments) and external players (institutional representatives, socio-economic and public players, territorial partners, citizens, etc.).

- Strategic contributions

The COSUI fulfills two essential functions:
- guaranteeing the transparency and accountability of PC&B actions
- Strengthen the shared culture of Climate and Biodiversity and the commitment of all local players.

Steering Committee of the Metropolitan Contract for Climate and Biodiversity (MCCB) (Copil CMCB)

- Presentation of the body

The Steering Committee of the MCCB is the annual meeting for assessing the financial commitments and impacts of climate-biodiversity actions. Held in June, it monitors the contributions of signatory partners in relation to established objectives.

- Structure and organization

This body brings together at least one representative from each partner signatory to the MCCB, as well as those responsible for steering the MCCB within the Climate Transition Executive Directorate.

The Copil CMCB assesses the financial contributions made by the partners, analyzes current progress in relation to set objectives, and provides a forum for dialogue between all partners and the project team.

- Strategic impact

The Copil CMCB fulfils two essential functions:

- monitoring the effectiveness of climate-biodiversity investments

- Maintain and strengthen the commitment of signatory partners

Prefiguration Operator Committee (POC) Pilot Cities

- Presentation

The Pilotes Cities Prefiguration Operator Committee (POC) is a quarterly forum for innovation in territorial governance. This meeting steers the development of new territorial engineering models and coordinates cooperation projects between partners.

- Structure and organization

The POC brings together all the Pilot Cities partners (CHU, GDH, UBE, CDC), the elected representative for Climate Transition, the Climate Transition Executive Directorate project team and representatives from EDF, EIFER and Europtimum.

The Committee fulfils a number of functions, from coordinating communication actions to steering cooperation projects, while providing the Cotech with work proposals.

- Strategic impact

Through its structure and functions, the POC helps to build innovative territorial governance and provide input for territorial engineering. The POC acts as an incubator for future territorial climate governance practices.

Workshops and working groups

- Introduction

Workshops and working groups are spaces for collective reflection that can be flexibly integrated into territorial climate governance. They can either fit into the framework of existing bodies, or be organized independently according to identified needs. Their purpose is to examine specific subjects requiring particular expertise, such as the analysis of transition management practices within Dijon metropole.

- Structure and organization

The composition of these groups can be adapted to the topics addressed, and can mobilize a wide range of expertise. At local level, experts from the metropolitan and extra-territorial areas, both public and private, can be called upon to contribute their expertise. International expertise is also provided in certain workshops by the Twin Cities project teams, the project teams of committed European cities with which Dijon metropole collaborates (Bristol, Lund, Leuven, Barcelona), accompanied by GNE Finance.

- Strategic impact

Workshops enable local authorities to benefit from complementary approaches and expertise. These forums for exchange help to challenge Dijon's practices in terms of transition management. The collective expertise mobilized helps identify areas for improvement and refine the systemic approach to implementation.

C.1.2: Sample Table: Relations between governance innovations, systems, and impact pathways					
Intervention name	Description	Systemic barriers / opportunities addressed	Leadership and stakeholders involved	Enabling impact	Co-benefits
Dijon métropole's internal steering bodies					
Group of Climate and Biodiversity elected representatives	The elected representative in charge of Climate Transition presents a global follow-up of the plan to the elected representatives in charge of PC&B-related policies. Held 5 times a year	Barriers overcome : Operating in silos Partial understanding of issues Complexity of implementation Levers : Strengthening cooperation between departments Sharing knowledge Strengthening links between different decision-making levels	Elected representatives in charge of PC&B-related policies, elected representatives in charge of Climate and Biodiversity. The Director of the Climate Transition Executive Directorate sends information upstream to the elected representative in charge of Climate Transition.	Enable elected representatives to keep abreast of the latest developments in these fields, facilitating informed decision-making and contributing to more effective policy-making.	See sections 3.1 and 3.2, as the methodological set-up is systemic.
Climate Transition Management Committee (CODIR)	Summary of topics to be communicated Preparation and follow-up of regular working groups Follow-up on thematic working groups and news, on Climate and Biodiversity action sheets, on major ongoing projects... Held weekly	Barriers overcome: Density of projects to be completed in a short space of time Time required to complete projects Silo structure within the DGD Levers : Realistic project planning Development of shared solutions	All Directors of the Climate Transition Executive Directorate The Executive Director of the Climate Transition Executive Directorate	Coordinate work and exchanges Facilitate action follow-up Provide a consolidated overview that facilitates strategic decision-making Ensure clear, concise communication on key issues to be shared	See sections 3.1 and 3.2, as the methodological set-up is systemic.
Climate and Biodiversity Technical	Works on cooperative projects and	Barriers overcome :	Directors of the various Executive	Challenge issues of territorial	See sections 3.1 and 3.2, as the

Committee (COTECH)	produces implementation recommendations Contributes to structuring transition engineering	Difficult access and lack of data-related co-skills Methodological differences between players Levers : Development of shared solutions Strengthening capacity to work on innovative projects Sharing knowledge	Directorates of the metropolis Directors responsible for the Climate Transition Executive Directorate	engineering and the implementation of PC&B projects with a view to continuous improvement.	methodological set-up is systemic.
CCC Management bodies (internal and external)					
PC&B Monitoring Committee (COSUI)	Overall monitoring of PC&B progress Once a year, every year	Barriers overcome : The large number of players involved Partial understanding of the issues Silos between local players Levers : Strengthening cooperation Long-term commitment strategy	Invited internal players: managers, employees, directors of all Executive Directorates Invited external players: regional and departmental representatives, socio-economic players, public players, partners, etc. The forum is open to all those who wish to attend.	Ensure transparency and accountability Strengthen coordination and territorial commitment	See sections 3.1 and 3.2, as the methodological set-up is systemic.
Steering Committee of the Metropolitan Contract for Climate and Biodiversity (Copil CMCB)	Annual meeting to monitor current contributions in €/points against targets Held in June, once a year	Barriers overcome : Financing actions Methodological differences between players Levers : Developing innovative financing solutions Strengthening cooperation	At least one representative per MCCB signatory partner The people in charge of steering the MCCB at the Climate Transition Executive Directorate	Monitor contributions, their impact and the effectiveness of investments in relation to objectives Strengthen partners' commitment	See sections 3.1 and 3.2, as the methodological set-up is systemic.

		Realistic planning Obstacles overcome : Difficult access to skills Methodological differences between players Levers : Strengthening capacity to work on innovative projects Development of shared solutions			
Prefiguration Operator Committee (POC) Pilot Cities	Regular updates with partners on communications, cooperative projects and engineering. Adjust planning and group meetings Propose work topics to CoTech Held every 3 months	Barriers overcome : Difficult access to skills Methodological differences between players Levers : Strengthening the ability to work on innovative projects Development of shared solutions	At least one representative per Pilot Cities partner (CHU, GDH, UB, CDC) The project team, made up of the people in charge of steering the Pilot Cities program at DM's Climate TransitionExecutive Directorate; EDF, EIFER and Europtimum The elected representative for Climate Transition	Prefiguring new territorial governance Define and implement a new territorial engineering system	See sections 3.1 and 3.2, as the methodological set-up is systemic.
Workshops and working groups	Workshops or working groups are held within existing bodies, or in addition to them, depending on needs and availability. They provide an opportunity for collective reflection, exchange and debate on a predefined subject on which needs	Barriers overcome : Complexity of issues and actions Methodological differences between players Levers : Sharing knowledge Development of shared solutions	Varies according to body and subject - Group of experts from the metropolitan area with expertise on the subjects in question - Cliamte Transition Executive Directorate project team members - Twin Cities project team	Cooperate for Climate Transition at different territorial levels Have a global and complete reflection Have an expertise to challenge the steering, the systemic approach of implementation and on any other	See sections 3.1 and 3.2, as the methodological set-up is systemic.

	have been expressed. (e.g.: identifying and challenging Dijon Métropole's work on transition management).	Strengthening cooperation	- NZC representative - Transition project team members from other European cities (Bristol, Lund, Leuven, Barcelona) GNE Finance	subject, according to the expressed needs. Compare and challenge the way in which European cities manage the transition on their territory in order to identify the best ways of working.	

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
Mobility	*Developing active mobility and encouraging calmer public spaces*	Safety	If the infrastructure is not adapted, this can lead to accidents, particularly between cyclists, pedestrians and motor vehicles. In addition, there is a risk of inequality of access: certain populations may not benefit from the facilities if they are not designed with their needs in mind. Finally, resistance to change may also emerge, particularly from users accustomed to the car, which may complicate the transition to more sustainable modes of transport.	Listed actions have systemic effects	Do a global combination of : improving Infrastructure actions, traffic Calming measures, urban planification, public awareness campaigns
	Developing public transport services	Public acceptance	The main risk associated with developing public transport services in urban areas is the issue of public acceptance. If new lines or services do not meet the needs of users or are not perceived as reliable, this can lead to low usage, which compromises the economic viability of the system. What's more, major investment is often required to develop this offer, and if users fail to turn up, this can lead to financial losses and political tensions. Problems with intermodality and connections with other modes of transport can also reduce the system's effectiveness.	Listed actions have systemic effects	Do a global combination of : various mode of transports integration, high quality infrastructures investments, user centric services design, real-time information system development, safety and security enhancements, keep fares affordable, settle public engagement
	Development of low-carbon and carbon-free vehicles	Technological transition and the infrastructure needed to support it	Inadequate infrastructure: A lack of charging points for electric vehicles or appropriate facilities for other types of carbon-free vehicles may limit their uptake. Initial costs: Decarbonised vehicles may have higher purchase costs, which may deter some consumers, especially if financial incentives are not sufficient. Supply of materials: Increased demand for battery materials (such as lithium or cobalt) may lead to supply problems and raise ethical issues relating to extraction. Industry transition: Traditional manufacturers of combustion vehicles will have to adapt, which may lead to job losses and economic tensions in certain regions. Public acceptance: There may be reticence or concerns about the performance and reliability of these new vehicles.	Listed actions have systemic effects	Create a supportive ecosystem that encourages adoption and infrastructure development by charging infrastructure development, public transport electrification, Research and Development funding, public awareness campaign
	Developing sustainable urban logistics	Complex coordination between the various players involved.	Intermodal collaboration: The need to synchronise different modes of transport (electric vehicles, cargo bikes, public transport) can be difficult, especially with private and public players. Implementation costs: The development of suitable infrastructure (such as specific delivery zones or collection points) can require considerable investment, which may hold back the initiative. Resistance to change: Companies may be reluctant to change their logistics practices, particularly if they fear it will affect their efficiency or costs. Fairness: Ensuring fair accessibility for all players, including small businesses and underserved areas, can be a challenge. Regulation: Unstable regulations can create uncertainty for businesses, making long-term planning difficult.	Listed actions have systemic effects	Integrated and collaborative approach
	Developing a coordinated transport offer for the urban area	Harmonise the various existing transport systems, which may belong to several authorities or operators	Organisational complexity: Coordination between several players, such as municipalities, regions and private operators, can lead to conflicts of interest and communication difficulties. Disparate infrastructures: Differences in infrastructure and technology can complicate the integration of transport systems, making the user experience less seamless. Funding and budget: Securing adequate funding and allocating costs between different entities can be complex, especially if the benefits are not immediately visible. User acceptance: Users may be reluctant to change their transport habits if the new offer is not perceived as more convenient or advantageous. Risk of inequalities: Poorly managed coordination could create disparities in access to transport between different areas of the urban area, exacerbating socio-economic inequalities.	Listed actions have systemic effects	Rigorous planning and close collaboration between all those involved

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
Housing and Buildings	*Decarbonising and reducing energy consumption in existing homes*	Financial accessibility	Cost of works: The renovations required to improve energy efficiency can represent a substantial investment, which can be a barrier for many homeowners, particularly those on low incomes. Appropriateness of support: Subsidies and financial incentives must be sufficient and well-targeted to encourage renovations, but there are often gaps in their availability or effectiveness. Regional disparities: Household resources and capacities vary considerably from one region to another, which can lead to inequalities in access to low-carbon housing. Complexity of the work: Managing renovation projects can be complex and require specific skills, making it difficult for some homeowners to navigate the process. Temporary disruption: Renovation work can cause inconvenience to occupants, and poor management can lead to delays or extra costs.	Listed actions have systemic effects	Implement comprehensive energy retrofit programs with : financial incentives, home energy audits, targeted programs, training and certification, awareness campaigns and community Engagement
	Decarbonising and reducing energy consumption in the tertiary and industrial sectors (excluding processes)	Managing the costs and investments required to implement effective solutions	High levels of investment: Energy retrofits, the adoption of new technologies (such as more efficient heating or lighting systems), and the integration of renewable energy can require significant investment, which can be difficult to justify for some businesses. Uncertain returns on investment: Energy savings can take time to materialise, and businesses may be reluctant to commit to expenditure with no guarantee of a quick return, especially in an uncertain economic climate. Technical complexity: Implementing decarbonisation solutions may require specific technical skills, and companies may not have the necessary resources to manage these changes. Operational disruption: Renovation work or the installation of new technologies can lead to business interruptions, which can affect productivity and revenues. Regulatory compliance: Businesses must navigate an evolving regulatory landscape, and new or changing requirements can create additional uncertainties and challenges.	Listed actions have systemic effects	Implement comprehensive sustainability and energy management programs including : energy efficiency audits, incentives for upgrades, employee training and engagement, decarbonization roadmaps, renewable energy integration, monitoring and reporting
	Reducing the climate and biodiversity impacts of development and construction projects (public spaces and buildings)	Difficulty in effectively integrating these objectives into the planning and design processes	Conflicts of interest: Economic and development priorities may conflict with environmental objectives, leading to inappropriate trade-offs in project design. Lack of awareness and training: Those involved in planning and construction may not have a sufficient understanding of climate and biodiversity issues, which can lead to ill-informed decisions. Regulatory complexity: Navigating an evolving regulatory framework for environmental protection can be difficult, and new requirements can complicate the project approval process. Impact assessment : Environmental impact assessment may be insufficient or incomplete, leading to negative consequences for climate and biodiversity after construction. Additional costs: Solutions aimed at reducing environmental impacts can be perceived as additional costs, which can act as a brake on the adoption of sustainable practices	Listed actions have systemic effects	An integrated and collaborative approach, involving environmental experts, town planners and stakeholders, to ensure that sustainability objectives are fully integrated from the earliest stages of planning
	Developing renewable electricity generation	Intermittent production	Variability of production: Renewable energy sources, such as wind and solar power, are dependent on weather conditions, which can lead to fluctuations in the amount of energy produced. Supply management: Intermittency can complicate power grid management, requiring efficient storage solutions and demand management systems to balance supply and demand. Inadequate infrastructure: Existing electricity grids may not be adapted to efficiently integrate a growing share of renewable energy, requiring significant investment in infrastructure. Storage and flexibility costs: The development of storage technologies (such as batteries) and flexible solutions (such as gas-fired power stations that can be brought on stream quickly) may represent an additional cost. Social and environmental acceptability: Renewable energy projects may encounter local resistance, particularly due to concerns about the impact on the landscape, biodiversity or health.	Listed actions have systemic effects	Involving local communities in the project planning and implementation process

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
Energy production	*Developing renewable gas production*	The complexity and cost of the infrastructure required for its production, distribution and use	High investment costs: Renewable gas production facilities, as well as transmission and distribution infrastructure, require high levels of investment, which may hamper large-scale development. Immature technology: Some renewable gas production technologies are still in the development phase, which may lead to uncertainty as to their long-term efficiency and profitability. Competition with other uses: Biomethane production may compete with land use for agriculture or biodiversity conservation, raising questions about sustainability. Social acceptability: Renewable gas production projects may give rise to local concerns about environmental impacts, such as noise pollution or waste management. Regulations and standards: Regulations surrounding the production and use of renewable gas can be complex and constantly evolving, which can create uncertainty for investors and developers.	Listed actions have systemic effects	Promote supportive policies, encourage research and development, and engage with local communities to ensure acceptance of projects
	Developing the production of renewable thermal energy	Resource management and the environmental impact associated with their use	Sustainability of resources: The production of thermal energy from biomass can raise questions about the sustainability of raw material sources, particularly if they come from intensive agricultural practices that damage biodiversity or soil quality. Greenhouse gas emissions: Although renewable thermal energies are generally considered to be more sustainable, their use can still result in emissions, particularly when biomass is burnt, if it is not managed appropriately. Social acceptability: Thermal energy projects, particularly those involving biomass, may encounter local resistance due to concerns about environmental impact, noise pollution or land use. Installation and operating costs: The infrastructure needed to produce renewable thermal energy can require significant investment, and it can be expensive to operate, depending on the resources available. Regulatory complexity: Regulatory frameworks for renewable thermal power generation can vary considerably, creating uncertainty for investors and developers.	Listed actions have systemic effects	Adopt sustainable management practices, promote clear policies and engage with local stakeholders from the earliest stages of project development.
	Development of energy management	Resistance to change within organisations	Organisational culture: Employees and management may be reluctant to adopt new energy management practices or technologies, especially if this requires adjustments to their day-to-day working habits. Lack of awareness: Lack of training and information on the benefits of energy management can limit the commitment and motivation of teams to get involved in these initiatives. Upfront investment: The costs associated with implementing energy management systems (such as software or metering equipment) can be perceived as a barrier, especially in organisations with tight budgets. Data and technology: Successful energy management relies on the collection and analysis of accurate data. Faulty systems or incomplete data can hamper decision-making and the effectiveness of actions taken. Evaluating results: It can be difficult to quantify the benefits of energy management, which makes it difficult to justify efforts and investments to stakeholders.	Listed actions have systemic effects	Promote an energy culture within the organisation, provide appropriate training and clearly demonstrate the economic and environmental benefits of energy management initiatives
Production and	*Encouraging the consumption of local products and supporting changes in behaviour*	Consumer resistance to change	Entrenched habits: Consumers often have well-established habits regarding their food and consumption choices, and it can be difficult to encourage them to adopt new practices, even if these are more sustainable. Perception of cost: Local products are sometimes perceived as more expensive than imported ones, which can deter consumers, especially those with budget constraints. Availability and accessibility: The availability of local products may be limited, particularly in certain regions or at certain times of the year, making it difficult for them to be widely adopted. Awareness and information: A lack of awareness of the environmental and socio-economic benefits of local consumption can lead to low motivation to change behaviour. Social inequalities: Encouraging the consumption of local products can exacerbate inequalities if certain populations do not have fair access to these products or if they cannot afford to pay higher prices.	Listed actions have systemic effects	Set up awareness campaigns, promote initiatives to support local production and work with communities to make local products more accessible and attractivese

Fields of Action	Action / Indicator	Main Risk Identified	Description of Risk	Risk Priority	Mitigation of Risk
consommation of good and services	*Promoting the circular economy, reducing the impact of industrial processes on the climate, biodiversity, resources and health*	Difficulty in integrating new business models into existing structures	Resistance to change: Companies may be reluctant to change their established practices, especially if they perceive these changes as costly or disruptive to their operations. Initial investment: The transition to more sustainable processes often requires significant investment in new technology or infrastructure, which can be a barrier, particularly for small and medium-sized businesses. Complexity of implementation: The circular economy involves complex changes to the supply chain and resource management, which can make the transition difficult to plan and execute. Lack of awareness and training: Employees may not be sufficiently trained or informed about circular economy principles, which can limit their commitment and effectiveness in implementing new practices. Impact assessment: Measuring the results of the transition to a circular economy can be complex, making it difficult to demonstrate the economic and environmental benefits to stakeholders.	Listed actions have systemic effects	Engage all stakeholders, provide financial and technical support, and promote a culture of innovation and sustainability within organisations
Water	*Planning the management of water resources and adapting infrastructures*	Climate uncertainty and variations in water availability	Resource variability: Climate change can lead to unpredictable fluctuations in the availability of water resources, making long-term infrastructure planning difficult. High adaptation costs: Upgrading or building resilient infrastructure can require significant investment, which can be a barrier for some communities, especially in times of budget constraints. Social acceptability: Adaptation projects can raise concerns within communities, particularly because of potential impacts on the environment or biodiversity, which can lead to opposition. Coordination between stakeholders: Water resource management involves a large number of stakeholders (local authorities, farmers, industry, etc.), and coordination between them can be complex. Assessing future needs: Anticipating future demand for water, particularly taking into account population growth and changes in use, can be difficult, which can lead to mismatches between supply and demand.	Listed actions have systemic effects	Adopting an integrated and adaptive approach, involving stakeholders from the outset and using reliable data to guide planning and decision-making
Sustainable agriculture	*Supporting local, environmentally-friendly food production*	Economic viability of these initiatives	Production costs: Ecological production methods can be more expensive than conventional practices, which can make local products less competitive in terms of market price. Market access: Local producers may find it difficult to access wider markets, due to competition with large agri-food companies or the lack of suitable distribution networks. Seasonality and availability: Local production is often subject to seasonal constraints, which can lead to fluctuations in product availability, making it difficult to meet consumer expectations. Consumer awareness: Consumers may not be sufficiently informed about the benefits of local, environmentally-friendly production, which may limit demand for these products. Inequalities of access: Support initiatives may not benefit all producers equally, creating disparities between farmers and exacerbating social inequalities.	Listed actions have systemic effects	Promote financial support programmes, raise consumer awareness of the benefits of local products and encourage distribution models that facilitate market access for local producers
Health and living environment	*Reducing vulnerability to natural and health risks exacerbated by climate change*	Complexity and uncertainty in planning and implementing adaptation measures	High costs: The investment required to strengthen infrastructure and improve resilience can be considerable, posing budgetary challenges, particularly for local authorities. Uncertainty of future impacts: Predicting the effects of climate change is complex, and projections can vary. This makes it difficult to assess the most effective measures to implement. Conflicting priorities: Limited resources can lead to conflicts of interest between different stakeholders, with each group having its own priorities in terms of adaptation or risk reduction. Awareness and community involvement: There may be a lack of awareness among populations about the risks associated with climate change and the measures needed to reduce their vulnerability, which may hinder the implementation of effective strategies. Social inequalities: The most vulnerable groups may not benefit equally from adaptation measures, exacerbating existing inequalities.	Listed actions have systemic effects	Develop and implement comprehensive resilience and adaptation strategies, which include : risk assessments, community engagement, strengthening infrastructure, Public Health initiatives, education and awareness, ecosystem restoration, policy frameworks
Services provided by nature	*Strengthening biodiversity and natural ecosystems in the region*	Competition for space and resources, which can lead to conflicts of use	Planning conflicts: The integration of green spaces and biodiversity initiatives may conflict with other urban needs, such as housing development or transport infrastructure. Maintenance costs: Projects to enhance biodiversity may require ongoing maintenance and financial resources, which can be a challenge for local authorities. Social acceptability: Some initiatives may meet with resistance from local residents, particularly if they are perceived as neglecting immediate community needs (such as accessibility or safety). Impact on local species: Introducing new species or creating new habitats can have unforeseen consequences on existing ecosystems, particularly by disturbing local species or encouraging invasive species. Measuring results: Assessing the impact of actions on biodiversity can be complex, making it difficult to justify efforts and investments to stakeholders.	Listed actions have systemic effects	Engage communities early in the process, plan in an integrated way and ensure that biodiversity initiatives are compatible with other urban needs

4.2 Module C-2 Social Innovation Interventions

C.2.1 Sample Table: Relations between social innovations, systems, and impact pathways					
Intervention name	Description	Systemic barriers / opportunities addressed	Leadership and stakeholders involved	Enabling impact	Co-benefits
Popular University on Climate and Biodiversity	Dijon metropole's initiative to raise awareness, mobilize and educate citizens on climate and biodiversity issues. It offers interactive conferences and workshops to encourage exchanges between researchers, popular education players and citizens.	Barriers overcome: Silo-based operations preventing the emergence of partnership-based and systemic projects, partial understanding and complexity of climate issues by stakeholders and residents, large number of stakeholders and residents to be involved in the transition. Opportunities: Strengthening cooperation, sharing knowledge and reinforcing communication, implementing a long-term commitment strategy and diversifying partners.	Dijon metropole (Climate Transition Executive Directorate) Researchers (INRAE, Université de Bourgogne Europe etc...), popular education structures (Latitude21, Maison Des Sciences de l'Homme de Dijon), local associations and citizens Director of Citizen Participation	Develop a common culture and in-depth understanding of local and global climate and biodiversity issues in an inclusive and participatory format. Increase understanding of climate issues. Encourage the adoption of sustainable practices	See sections 3.1 and 3.2, as the methodological set-up is systemic.
Development Council	Installed on June 11, 2022, the Dijon Metropole Development Council is a participatory democracy body made up of residents, qualified individuals and local socio-economic players. Its 150 members are	Barriers overcome: Silo structure preventing coordination between different players (local authorities, companies, associations, citizens). Partial understanding of the issues by stakeholders, requiring greater efforts to raise awareness. Opportunities :	Members of the Development Council: citizens, socio-economic, social and associative players. Director of Citizen Participation	Contribute to the reflection and development of local public policies through regular meetings and the drafting of opinions for decision-makers.	See sections 3.1 and 3.2, as the methodological set-up is systemic.

	responsible for formulating proposals to the elected representatives of the metropolis. The Development Council was asked on May 4, 2023 to provide input on the territory's climate plan, based on the following questions: In 2050, Dijon metropole will be a benchmark in terms of its climate and food transition policies and biodiversity preservation. It is recognized for its quality of life and its sustainable model, including social aspects. What has been its development model? Under what conditions, at individual and collective level, can the changes needed to achieve this vision be implemented?	Strengthen cooperation between local and institutional players to break down silos. Knowledge sharing between stakeholders to improve understanding of the issues. Development of innovative, shared solutions by drawing on citizens' ideas and expertise.			
Citizen concertation					
Local Debate	Local debates are a forum for citizens to discuss issues related to climate	Barriers overcome : Silos between players Opportunities :	Local associations Citizens Director of Citizen Participation	Raising public awareness of climate and	See sections 3.1 and 3.2, as the methodological set-up is systemic.

	change. The structures hosting the debates were asked to address to the participants : - 1 general question: Dijon metropole is currently revising its climate strategy. Its aim is to offer everyone the possibility of living (housing, transport, food, etc.) in an environment that respects the environment, biodiversity and social cohesion. To achieve this goal, what message(s) would you like to convey to the metropolis? Or 1 or more of the following questions: How can the metropolis help every inhabitant to have access to quality food? How can the metropolis strengthen sustainable mobility in the region? How can the metropolis help every inhabitant to	Limited capacity to mobilize a large number of residents		biodiversity issues Listening to and reporting on what citizens have to say in the Plan's design process	

	have access to comfortable, energy-efficient housing in periods of cold and heat?				
Participatory Workshops « La fresque du Climat »	La fresque du climat participative workshops were designed to raise awareness and encourage public participation. They were divided into 2 parts: 1. A time dedicated to deploying the collective intelligence workshop of La fresque du climat, as designed by the eponymous association; 2. A participatory session designed with the group of La fresque facilitators recruited for the project. The aim was to gather participants' observations (what seems difficult, easy, fair, unfair, etc.) and their proposals for mitigating and adapting to climate change.	Obstacles overcome: A partial and complex understanding of climate issues A large number of players to mobilize Opportunities : Sharing knowledge Diversification of partners	Local associations Workshop leaders Citizens Director of Citizen Participation	Raising public awareness of climate and biodiversity issues Listening to and reporting on what citizens have to say in the Plan's design process	See sections 3.1 and 3.2, as the methodological set-up is systemic.

Online questionnaire : Climate in questions	In particular, the online questionnaire aimed to gain a better understanding of residents' perceptions of the opportunities and obstacles to adopting more sustainable behaviors on an individual scale. It also included a space for free comments to the metropolis. The questionnaire was distributed via various Dijon metropole channels.	Barriers overcome : Partial understanding of climate issues and actions implemented Large number of players and residents to be involved in the climate transition Opportunities : Strengthen communication and awareness-raising, and help practices evolve over time. Sharing knowledge	Director of Citizen Participation, DGD Climate Transition All respondents to the questionnaire	Raising public awareness of climate and biodiversity issues Listening to and reporting on what citizens have to say in the Plan's design process	See sections 3.1 and 3.2, as the methodological set-up is systemic.
Demain la Vi(ll)e participatory travelling exhibition	Demain la Vi(ll)e is a participatory touring exhibition on climate change designed by Dijon Métropole and Latitude 21. The initial idea was to create a medium for information, dialogue and listening to local residents on climate issues, based on a non-anxiety-provoking approach that avoids value judgments. The exhibition is available to	Barriers overcome : Partial understanding and complexity of climate issues Compartmentalization of players and low involvement of local residents Density of projects and number of residents to mobilize Opportunities : Increased awareness and civic education Sharing knowledge on structuring projects Long-term mobilization	Director of Citizen Participation, Climate Transition Executive Directorate All respondents to the questionnaire Animators of the structures hosting the exhibition and of Dijon métropole Citizens Citizens Latitude21	- Contribute to raising public awareness of the challenges of ecological and climate transition; -Provide information on public action and key metropolitan projects in this field; -Gather public perceptions on the characteristics of a sustainable future, and on the difficulties associated with the various	See sections 3.1 and 3.2, as the methodological set-up is systemic.

	institutions wishing to host it, such as local authorities, socio-cultural structures and associations.			levers of action to achieve it, based on the 4 ADEME scenarios.	

C-2.2: Description of social innovation interventions

Popular Climate and Biodiversity University

Dijon Metropole's Popular Climate and Biodiversity University is a social innovation designed to change social and cultural representations of climate and biodiversity issues. It helps to overcome the lack of awareness, the lack of dialogue between experts and citizens, and the anxiety-inducing atmosphere that can be associated with these issues.

Through interactive exchanges between researchers, educators and citizens, the University seeks to deepen understanding of climate issues while mobilizing local residents around concrete initiatives and actions. The formats are designed to be as inclusive as possible: participatory conferences and discussion workshops encourage an open dialogue where everyone can make a contribution. Beyond the formats, and always with a view to reaching a wide audience, particular attention will be paid to the accessibility of the venues, the clarity of communication and the choice of adapted timetables.

The University's iterative approach enables it to continually adapt its formats and content to the needs expressed by the population. By emphasizing the development of local contributions and interdisciplinary networking, it lays the foundations for lasting impact. This model is intended to be replicated in other communities.

In this way, the University is helping to strengthen the commitment of the city's population, while creating a territorial dynamic conducive to achieving climate and biodiversity objectives.

Dijon Metropole Development Council

Dijon Métropole's Development Council is a fundamental forum for participative democracy. Comprising 150 members, including citizens, qualified experts and socio-economic players, its mission is to formulate proposals for the elected representatives of the metropolis.

Called upon on May 4, 2023 to contribute to the territory's Climate Plan, the Development Council is fully in line with a forward-looking vision for 2050, where Dijon Métropole is recognized as an exemplary model of climate and food transition and biodiversity preservation. This sustainable model is based on an inclusive and collaborative dynamic, integrating an interdisciplinary and participatory approach. By promoting greater cooperation between local and institutional players, the Development Council is helping to build a future where the necessary changes are brought about through innovative, shared solutions, enriched by the contributions and expertise of citizens.

5 Outlook and next steps

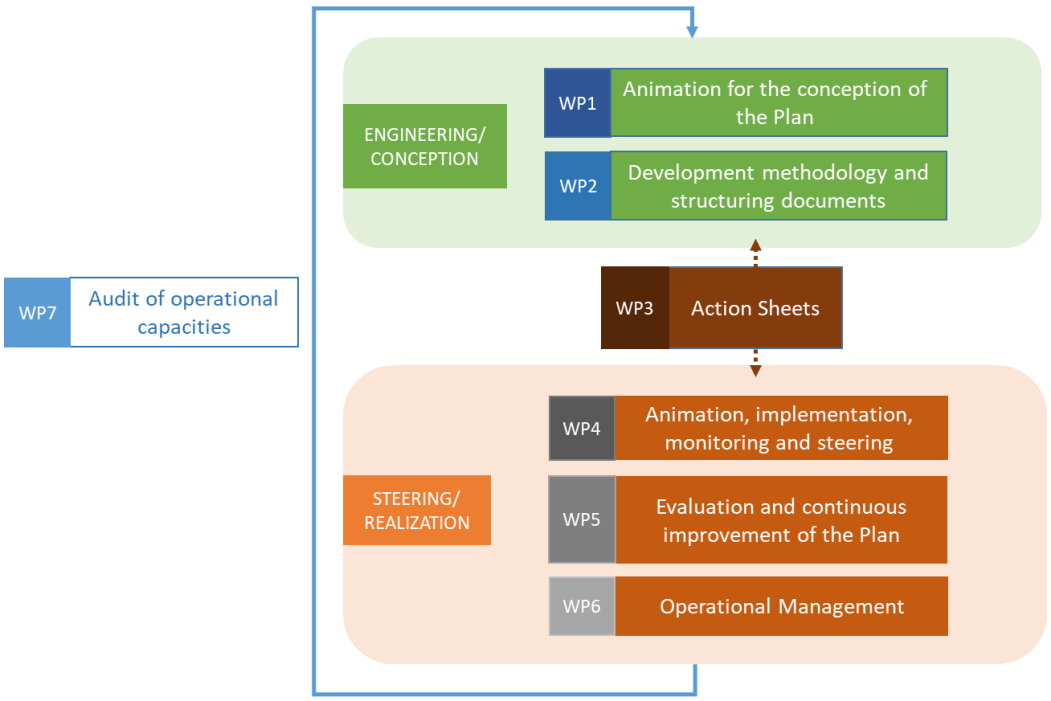
This section should draw any necessary conclusions on the CCC Action Plan above and highlight next steps and plans for refining the CCC Action Plan as part of the Climate City Contract in future iterations.

Plans for next CCC and CCC Action Plan iteration

Dijon metropole's CCC is based on the elements of the 2024-2030 Climate and Biodiversity Plan, a mandatory French regulatory document (PCAET). This initiative was driven by strong political ambition, going beyond national regulatory requirements. Driven by this ambition, the CCC was drawn up by Dijon metropole's Climate Transition Executive Directorate in cooperation with a multitude of players, ranging from the local authority's internal departments to local stakeholders, according to a specific development methodology.
To highlight the added value of the work reflected in the CCC, a detailed methodological guide, the Handbook, has been developed. It makes the considerations, stages and processes involved in designing and managing the CCC and PC&B accessible and intelligible. The PC&B work matrix inspired the structuring of processes and the projection into operational implementation.

This reference document is aimed at all the players involved, and in particular the local authority's internal departments, to ensure effective coordination and collective ownership of the approach.
This innovative methodology structures the Territorial Engineering of Climate Transition through 7 complementary workpackages (WP1 to WP7), guaranteeing a global and operational vision of the territory's climate transition:

- WP1: Animation for the conception of the Plan
- WP2: Development methodology and structuring documents
- WP3: Plan action sheets
- WP4: Animation, implementation, monitoring and steering
- WP5: Evaluation and continuous improvement of the Plan
- WP6: Operational management
- WP7: Audit of operational capacities



The workpackages are structured as follows:

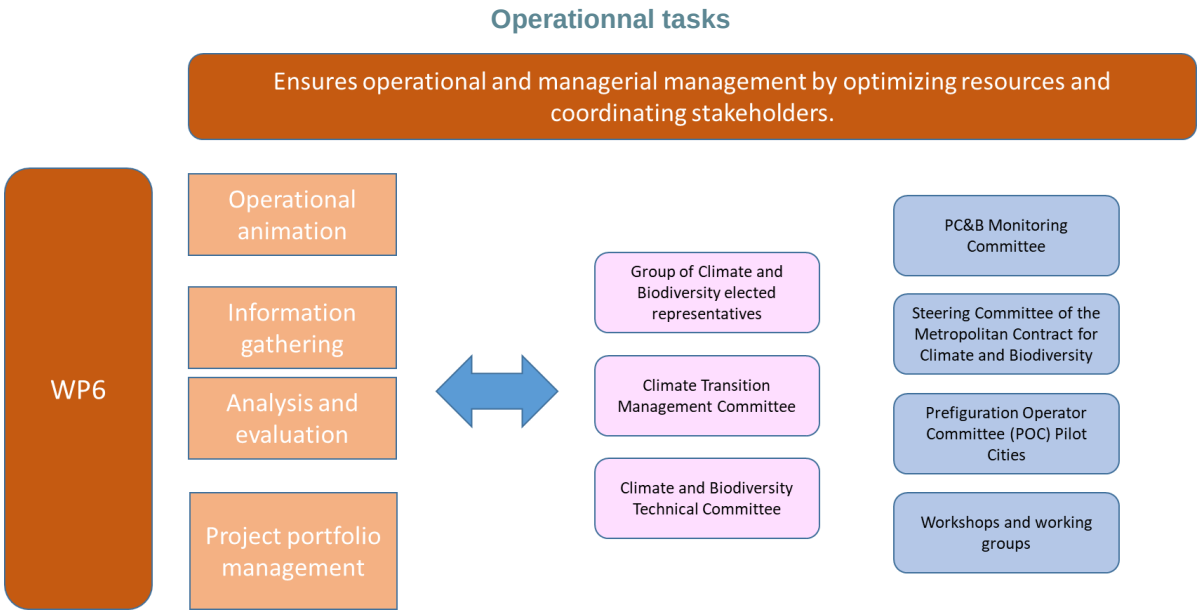
Workpackage	Description	Link with other WPs
WP1 : Animation for the conception of the Plan	Definition of the process for coordinating and involving stakeholders in the development of the Climate and Biodiversity Plan (PC&B).	Feeds WP2 to WP5 with strategic objectives and proposals formulated by stakeholders
WP2 : Development methodology and structuring documents	Definition of the key documents that make up the entire PC&B process, and presentation of the methodology used to draw up the Plan.	Structure, articulated and define the methodology of WP3, WP4 and WP5.
WP3 : Actions Sheets	Definition of Action Sheets, the Plan's operational tool. They translate the strategic objectives into concrete actions, structured by systemic action levers, expected effects or areas of human activity.	Uses the structure key documents from WP2 and forms a basis for WP4 and WP5.
WP4 : Animation, implementation, monitoring and steering	Definition of action implementation, stakeholder coordination, monitoring and steering	Is based on the Action Sheets of WP3 and the structuring documents of WP2. Is monitored and evaluated by WP5.
WP5 : Evaluation and continuous improvement of the Plan	Evaluation of performance, achievement of targets and improvements, plan adjustments.	Feeds the overall structure and therefore WP2, WP3, WP4, WP6. Is fed by WP4 follow-up.
WP6 : Operational management	Ensures operational and managerial management by optimizing resources and coordinating stakeholders.	Structure the operational management of WP3, WP4 et WP5.
WP7 : Audit of operational capacities	Allows us to assess Dijon Métropole's operational capacity to effectively implement the PC&B actions that contribute to achieving our objectives.	Evaluate operational capacities of WP6.

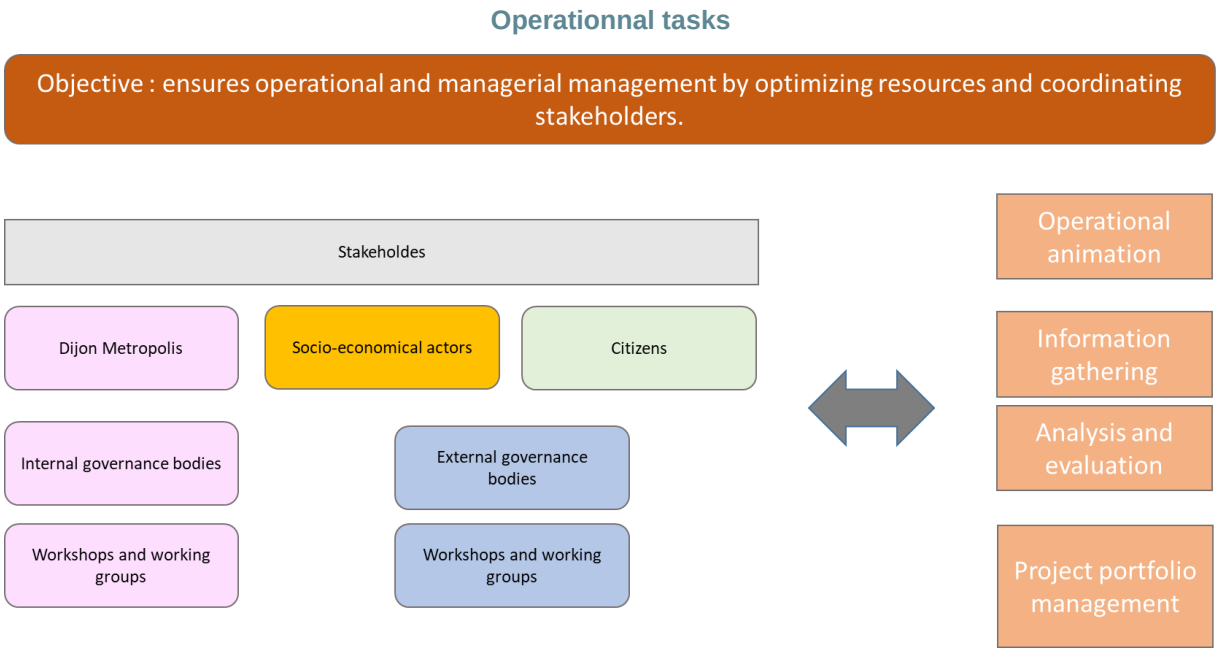
List of the general processes (WP)

WP1	Definition of the process for coordinating and involving stakeholders in the development of the Climate and Biodiversity Plan (PC&B).
WP2	Definition of the key documents that make up the entire PC&B process, and presentation of the methodology used to draw up the Plan.
WP3	Definition of Action Sheets, the Plan's operational tool. They translate the strategic objectives into concrete actions, structured by systemic action levers, expected effects or areas of human activity.
WP4	Definition of action implementation, stakeholder coordination, monitoring and steering
WP5	Evaluation of performance, achievement of targets and improvements, plan adjustments.
WP6	Ensures operational and managerial management by optimizing resources and coordinating stakeholders.
WP7	Allows us to assess Dijon Métropole's operational capacity to effectively implement the PC&B actions that contribute to achieving our objectives.

Dijon Metropole's Governance bodies implicated for transition management

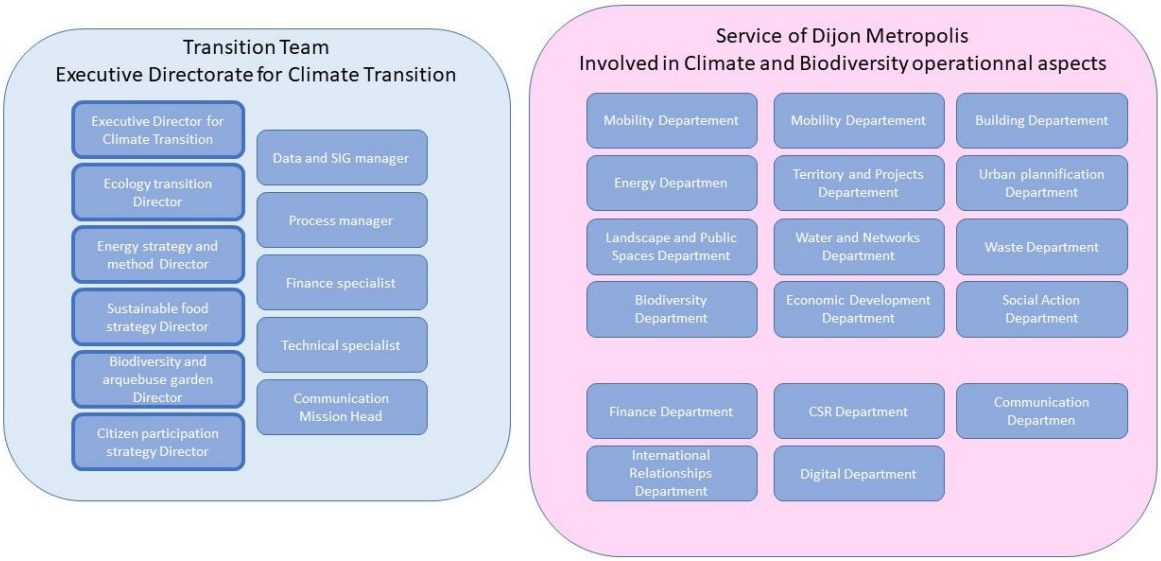
	WP1	WP2	WP3	WP4	WP5	WP6	WP7
Governance bodies	Group of Climate and Biodiversity elected representatives						
	Climate Transition Management Committee						
	Climate and Biodiversity Technical Committee						
	Steering Committee of the Metropolitan Contract for Climate and Biodiversity						
	Climate and Biodiversity Plan Monitoring Committee						
	Prefiguration Operator Committee (POC) Pilot Cities						
	Workshops and working groups						





The financial and climatic costing of the Climate and Biodiversity Plan's actions is exploratory, and aims to provide an initial methodological framework. The parameters and method presented will have to be rediscussed within the framework of the PC&B's management, with local stakeholders. The aim is to make the data and the calculation method more reliable, so as to specify and refine the Climate and Biodiversity trajectory each year. This work will enable us to integrate a vision that is both precise and iterative. At this stage, the estimated financial cost, exclusively in terms of human resources (to monitor and lead the Plan's actions), for Dijon Métropole's services, amounts around 7 million euros over the 6 years of the Plan's implementation.

Dijon métropole's Steering organization chart



The steering and monitoring of the implementation of the actions described in the PC&B will be carried out using the processes described in the handbook, with the following objectives:
- Consolidate, deepen and stabilize methodological processes, in particular by strengthening governance bodies and continuing to develop steering tools.
- Improve monitoring and assessment tools (Energy-Climate platform, etc.).
- Refine and consolidate the financial and climate costing methodology for PC&B actions.
- Strengthen territorial cooperation through forums and the promotion of short-term projects.
- Continue the structuring and development of transition project portfolios and the identification of the actions that make them up, in all areas of activity, in particular by drawing on the citizen participation strategy.

6 Annexes

The annexes contain any textual or **visual material** to the 2030 Climate Neutrality Action Plan as necessary.

Appendix n°	Appendix Name	Comment
CCC – Concil decision – Climate and Biodiversity plan	CCC – Concil decision - Commitments	CCC – Concil decision – Investment plan

Accusé de réception - Ministère de l'Intérieur
021-242100410-20240927-DM20240926_5-DE
Accusé certifié exécutoire
Réception par le préfet : 27/09/2024
Publication : 27/09/2024

EXTRAIT DU REGISTRE DES DÉLIBÉRATIONS

du Conseil métropolitain de Dijon métropole

Séance du jeudi 26 septembre 2024

Président : Monsieur REBSAMEN

Secrétaire de séance : Monsieur HOAREAU

Convocation envoyée le 18 septembre 2024

Nombre de membres du Conseil métropolitain : 86
Nombre de membres en exercice : 86

Nombre de présents participant au vote : 65
Nombre de procurations : 13

Membres présents :

Monsieur François REBSAMEN	Monsieur Laurent GOBET	Monsieur Patrice CHATEAU
Madame Nathalie KOENDERS	Madame Dominique MARTIN-GENDRE	Monsieur David HAEGY
Monsieur Rémi DETANG	Madame Karine HUON-SAVINA	Madame Bénédicte PERSON-PICARD
Madame Sladana ZIVKOVIC	Monsieur Nicolas SCHOUTITH	Madame Catherine VICTOR
Monsieur Jean-François DODET	Madame Ludmila MONTEIRO	Monsieur Gérard HERRMANN
Madame Françoise TENENBAUM	Monsieur Jean-Michel VERPILLOT	Madame Dominique BEGIN-CLAUDET
Monsieur Jean-Patrick MASSON	Monsieur Jean-Philippe MOREL	Monsieur Jean DUBUET
Monsieur Dominique GRIMPRET	Madame Kildine BATAILLE	Monsieur Patrick CHAPUIS
Madame Danielle JUBAN	Monsieur Marien LOVICHI	Madame Anne PERRIN-LOUVRIER
Monsieur Jean-Claude GIRARD	Monsieur Christophe BERTHIER	Monsieur Gaston FOUCHERES
Madame Claire TOMASELLI	Monsieur Georges MEZUI	Monsieur Jacques CARRELET DE LOISY
Monsieur Philippe LEMANCEAU	Monsieur Massar N'DIAYE	Monsieur Jean-Marc RETY
Madame Marie-Hélène JUILLARD-RANDRIAN	Monsieur Jean-François COURGEY	Monsieur Jean-marc GONÇALVES
	Monsieur Emmanuel BICHOT	Monsieur Didier RELOT
Madame Christine MARTIN	Monsieur Stéphane CHEVALIER	Monsieur Patrick BAUDEMENT
Monsieur Antoine HOAREAU	Madame Céline RENAUD	Madame Catherine GOZZI
Monsieur Nicolas BOURNY	Monsieur Laurent BOURGUIGNAT	Monsieur Philippe SCHMITT
Madame Céline TONOT	Monsieur Bruno DAVID	Madame Isabelle PASTEUR
Madame Nadjoua BELHADEF	Madame Laurence GERBET	Monsieur Philippe BELLEVILLE
Monsieur Hamid EL HASSOUNI	Madame Claire VUILLEMIN	Madame Noëlle CAMBILLARD
Monsieur Denis HAMEAU	Madame Stéphanie MODDE	Monsieur Pierre PRIBETICH
Madame Nuray AKPINAR-ISTIQUAM	Monsieur Olivier MULLER	Madame Delphine BLAYA

Membres absents :

Monsieur Thierry FALCONNET	Monsieur François DESEILLE pouvoir à Madame Marie-Hélène JUILLARD-RANDRIAN
Madame Brigitte POPARD	Monsieur Christophe AVENA pouvoir à Monsieur Christophe BERTHIER
Monsieur Guillaume RUET	Madame Stéphanie VACHEROT pouvoir à Madame Nathalie KOENDERS
Monsieur Patrick AUDARD	Madame Lydie PFANDER-MENY pouvoir à Monsieur Denis HAMEAU
Monsieur Léo LACHAMBRE	Madame Caroline JACQUEMARD pouvoir à Monsieur Stéphane CHEVALIER
Madame Hana WALIDI-ALAOUI	Monsieur Lionel SANCHEZ pouvoir à Monsieur Dominique GRIMPRET
Madame Céline RABUT	Monsieur Samuel LONCHAMPT pouvoir à Madame Bénédicte PERSON-PICARD
Madame Stéphanie GRAYOT-DIRX	Madame Catherine PAGEAUX pouvoir à Monsieur Jean-Michel VERPILLOT
	Madame Monique BAYARD pouvoir à Monsieur Nicolas SCHOUTITH
	Monsieur Frédéric GOULIER pouvoir à Monsieur Jean-François DODET
	Monsieur Adrien GUENE pouvoir à Madame Noëlle CAMBILLARD
	Monsieur Cyril GAUCHER pouvoir à Monsieur Emmanuel BICHOT
	Monsieur Stéphane WOYNAROSKI pouvoir à Monsieur Jean-Marc RETY

OBJET : PREAMBULE
Plan climat et biodiversité

Nous sommes collectivement confrontés à deux crises majeures causées par les pressions exercées par les activités humaines : le changement climatique et l'effondrement de la biodiversité.

De dimension planétaire, ces phénomènes sont la conséquence de nos modes de vie, de consommation et de production, et viennent les perturber en retour, de façon plus ou moins brutale.

En partie sous l'influence des travaux du GIEC (Groupe d'experts intergouvernemental sur l'évolution du climat créé en 1988), la prise de conscience progresse et l'engagement des Etats s'est affirmé dans le cadre de la convention-cadre des Nations unies sur le changement climatique de 1992 et au fil des conférences des Parties (COP) qui l'animent depuis 1995.

La diplomatie climatique s'est rapidement dotée d'outils permettant de dépasser les nombreux blocages rencontrés aussi bien dans la définition d'objectifs partagés que dans leur mise en œuvre entre des pays aux réalités très diverses et pourtant dans une relation d'interdépendance forte et croissante.

Le protocole de Kyoto, adopté dans le cadre de la troisième conférence des Parties de 1997 (COP3), a en particulier installé le mécanisme des permis d'émissions. Même si l'on commence à en voir certaines limites aujourd'hui, ce mécanisme a permis des avancées et des coopérations entre Etats significatives. Le mécanisme dit « de développement propre » a également ouvert la possibilité aux pays occidentaux de réaliser leurs objectifs en investissant dans les projets des pays en voie de développement.

Chaque COP a permis des progrès sensibles mais l'Accord de Paris de 2015 (COP21) a indéniablement constitué une étape importante dans la progression des négociations en fixant le premier cadre global et universel (195 signataires) en matière de coopération et de solidarité climatique autour d'un objectif : « contenir l'élévation de la température moyenne de la planète nettement en dessous de 2°C par rapport aux niveaux préindustriels et en poursuivant l'action menée pour limiter cette élévation à 1,5°C ».

Ces discussions internationales, dont l'Europe est partie prenante en tant que telle, constituent le cadre à partir duquel chaque Etat est censé définir sa propre politique de transition. Ce que fait la France au travers, notamment, de la production d'un certain nombre de lois structurantes. On peut évoquer en particulier la loi sur l'air et l'énergie de 1996, la loi d'orientation de la politique énergétique de 2005, les lois de 2009 et 2010 de mise en œuvre du Grenelle de l'environnement, la loi de transition énergétique pour la croissance verte de 2015, et plus récemment les lois Energie-Climat de 2019 et climat et résilience de 2021.

Les collectivités, à leur échelle, agissent dans cet environnement, avec plus ou moins d'engagement. Dijon métropole compte parmi les territoires pilotes au niveau national et européen au regard des actions structurantes et innovantes qu'elle porte depuis 20 ans.

Comme tous les établissements publics intercommunaux de plus de 20 000 habitants, la métropole a l'obligation réglementaire de réaliser un « Plan Climat Air Energie Territorial (PCAET) ». Le conseil métropolitain du 23 mars 2023 a fixé le cadre d'élaboration du PCAET 2024-2030, en référence naturellement aux orientations du projet métropolitain 2022-2030 adopté en mars 2023.
Le document proposé à l'assemblée métropolitaine sera en réalité un « Plan Climat et Biodiversité ».

Les importants travaux mis en œuvre à la suite de la délibération de mars 2023 ont rapidement conforté la collectivité dans sa volonté de considérer sur le même plan, et de façon conjuguée, la question du réchauffement climatique et celle de l'effondrement de la biodiversité. Ces crises sont toutes deux causées par les pressions humaines, elles interagissent fortement ensemble et auront des conséquences croissantes sur notre environnement et nos modes de vie.

Bien que portée de façon différente au niveau international, sensiblement moins présente dans le débat public que l'enjeu du réchauffement ou plus complexe à aborder du point de vue des données chiffrées, la question de la biodiversité occupera donc une place centrale dans la stratégie de transition métropolitaine. La métropole contribuera sans doute de ce point de vue à une prise de conscience que l'on sent également croissante aussi bien au niveau institutionnel que dans l'opinion publique. Presque 30 ans après le "Sommet de la Terre" de Rio, en 1992, le GIEC et l'IPBES (Plateforme intergouvernementale scientifique et politique sur la biodiversité et les services écosystémiques) ont produit en 2021 un rapport conjoint qui souligne, concernant la lutte contre le changement climatique et la préservation de la biodiversité, "qu'aucun de ces enjeux ne sera résolu avec succès s'ils ne sont pas abordés ensemble ; le renforcement mutuel du changement climatique et de la biodiversité signifie que pour résoudre l'une de ces questions, il faut tenir compte de l'autre".

Ce document stratégique se caractérise également par la place importante occupée par l'alimentation. L'alimentation est au cœur de notre quotidien, de nos vies, de notre patrimoine et elle sera, elle est déjà, fortement percutée par ces deux crises. La transition alimentaire, au travers de ProDij, est aujourd'hui une des grandes politiques portées par la métropole. Il est apparu en conséquence tout à fait naturel d'inscrire la stratégie alimentaire métropolitaine au sein du plan climat et biodiversité pour mieux les articuler.

Au final Dijon métropole, forte d'un engagement précurseur en matière de climat et de biodiversité, a fait le choix d'aller très au-delà des exigences réglementaires pour porter une stratégie globale à la hauteur de ces enjeux planétaires qui lui permette non seulement de prendre sa part, mais de rester parmi les territoires pilotes en la matière.

A ce titre, le plan climat et biodiversité constitue l'une des pièces du "Climate City Contract", document qui sera remis à la commission européenne en vue d'une labellisation de la métropole dans le cadre de la mission « 100 villes climatiquement neutres et intelligentes ». Il est complété d'une part par le « contrat métropolitain pour le climat et la biodiversité », objet d'un rapport séparé, ainsi que du plan d'investissement, travail prospectif de modélisation de la trajectoire financière de décarbonation du territoire métropolitain.

Le plan Climat et Biodiversité, annexé au présent rapport, est construit autour de trois axes stratégiques : Atténuer, s'adapter, coopérer. Cette matrice, qui se veut aussi lisible qu'efficace, se décline en objectifs, stratégiques et chiffrés, puis en plan d'actions. Son élaboration a fait l'objet d'une démarche de concertation particulièrement importante et a bénéficié d'une contribution très qualitative du conseil de développement.

Le document est d'abord un document stratégique. Aussi, le plan d'actions ne saurait en rien apparaître comme exhaustif, et aura vocation à s'enrichir de façon continue dans le cadre du pilotage du Plan Climat et Biodiversité. Sa structure permettra de surcroît de suivre et d'évaluer de façon globale la masse d'actions à venir dans ce cadre, et en particulier celles issues des coopérations qui seront impulsées et constitueront un facteur clef d'atteinte des objectifs. A ce titre, les actions menées par les acteurs socio-économiques engagés dans le Contrat Métropolitain viendront typiquement enrichir le plan d'actions global.

Certaines actions, stratégiques ou emblématiques, susciteront sans doute un intérêt particulier : au titre de l'atténuation, la création d'une SEM énergie pour accélérer la transition énergétique du territoire, la création d'un Fonds Social pour le Climat au chapitre adaptation ou encore le projet de création d'une Université Populaire du Climat et de la Biodiversité au titre des coopérations. Mais c'est bien un dispositif d'action systémique qui est proposé et vise à soutenir une implication très large des acteurs du territoire.
Une attention particulière a été portée au confort de lecture du document, ce qui ne semble pas anecdotique pour un sujet dont la densité et la complexité limitent parfois l'accessibilité au plus grand nombre. Naturellement des versions abrégées et vulgarisées seront produites à destination du grand public mais ce souci pédagogique, déjà très présent dans la phase de concertation au travers de la création par la métropole de nombreux supports, a été également pris en compte pour le document principal qui fera lui aussi l'objet d'une large diffusion.

Comme précisé dans la délibération de mars 2023, le document proposé ce jour à l'assemblée métropolitaine devra faire l'objet, après son adoption, d'un certain nombre de consultations réglementaires. Son adoption définitive interviendra de ce fait en mars ou juin 2025. Cette période intermédiaire pourra permettre de prendre en compte les conclusions de la COP Régionale qui devraient intervenir fin 2024, et le cas échéant toute autre évolution législative susceptible d'être décidée par le nouveau gouvernement en place.

Le Conseil,
après en avoir délibéré, décide :

- **d'approuver** le plan Climat et Biodiversité 2024-2030 et ses annexes ;
- **de soumettre** conformément à la réglementation le plan Climat et Biodiversité pour avis :
    - au public, par voie électronique ;
    - au Préfet de Région ;
    - à l'autorité environnementale régionale ;
    - à la présidente du Conseil Régional.
- **d'autoriser** le président à signer tout document relatif à l'exécution de la présente délibération.

Scrutin	Pour : 75	Abstention : 3
	Contre : 0	Ne se prononce pas : 0
	Dont 13 procuration(s)	