

GREEN TRANSITION IN INDUSTRY

Integrated Action Plan
City of Sabadell

IN4GREEN

URBACT



Co-funded by
the European Union
Interreg



Ajuntament de
Sabadell



Promoció
Econòmica de
Sabadell, S.L.

The *Integrated Action Plan on Green Transition in Industry for the city of Sabadell* is the result of Sabadell's participation in the Action Planning Network IN4GREEN (July 2023 - December 2025), under the programme URBACT IV for the period 2021-2027.

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More information about the URBACT IV programme: <https://urbact.eu/>

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Bijelo Polje - Montenegro

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More information about the IN4GREEN Action Planning Network at: <https://urbact.eu/networks/in4green>

EXECUTIVE SUMMARY

Sabadell's participation in the In4Green URBACT network provided a framework for critical reflection on the green transition in the industries and the city industrial areas. It has been an excellent opportunity to debate and contrast ideas with the main territorial stakeholders, exchange knowledge among the In4Green partners, learn from other regions and explore solutions through identified best practices.

In4Green has established the foundations on how the **economic ecosystem** of Sabadell, mainly composed by SMEs, can lead a real green transition process and what are the appropriate tools to make it possible, while taking into consideration European, regional and local policies.

As a result, a collective **vision** has been defined and the present Integrated Action Plan (IAP) produced, culminating in a 23-action roadmap.

“Towards a smart territorial ecosystem based on sustainability where industries could improve their competitiveness while taking advantage of green transition”

Transition towards sustainable industry has to bring the opportunity to create a **more competitive, smart and green territory**, while developing new opportunities based on the efficiency and energy transition, the circular economy implementation and the green investment attraction.

Understanding the **city context** and the **strategic stakeholders** from the quadruple helix (public administration, academy, companies and associations) points of view have been crucial to better identify the challenges and opportunities of the territory.



Overall, the current IAP aims to address the green transition in the industrial areas of the City of Sabadell through a collective proposal of **10 initial key actions**. These actions can serve as a lever to improve sustainability across industries and the industrial territory, while explore Sabadell's opportunity to position itself as a frontrunner in **green industrial innovation** within the Barcelona metropolitan region.



IMPLEMENTATION SUMMARY

NAME OF THE ACTION	HARD INFRAESTRUCTURE	IMPACT-EFFORT	GOVERNANCE COMPLEXITY	ADDED ATTRIBUTES	TIMELINE (SEMESTERS)
A.1.1 Energy community	Yes	Major project	Medium		<div style="width: 50%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
A.1.3 Solar pergolas	Yes	Quick win	Medium		<div style="width: 40%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
B.1.2 Stormwater study	No	Fill-in	High		<div style="width: 40%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
B.1.3 Reclaimed water	Yes	Major project	High		<div style="width: 90%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
B.2.2 Virtual platform	No	Quick win	Medium		<div style="width: 70%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
B.3.2 Professional training	No	Major project	High		<div style="width: 70%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
C.2.1 Vertical garden	Yes	Major project	Medium		<div style="width: 100%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
D.1.1 UAB collaboration	No	Quick win	Low		<div style="width: 20%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
D.2.2 Green awards	No	Quick win	Low		<div style="width: 60%;">1 2 3 4 5 6 7 8 9 10 11 12</div>
D.3.1 ULG meetings	No	Quick win	Low		<div style="width: 10%;">1 2 3 4 5 6 7 8 9 10 11 12</div>

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LIST OF ABBREVIATIONS

ACA - *Agència Catalana de l'aigua* (Catalan Water Agency)

AEPCRO - *Associació d'Empreses i Propietaris de Can Roqueta* (Association of Companies and Owners of Can Roqueta)

AMB - *Àrea Metropolitana de Barcelona* (Barcelona Metropolitan Area)

CASSA - *Companyia d'Aigües de Sabadell* (Sabadell Water Company)

CEAP - Circular Economy Action Plan

CEI - *Centre d'Empreses Industrials de Can Roqueta* (Industrial Companies Centre of Can Roqueta)

CIESC - *Consell Intersectorial d'Empreses* (Intersectoral Business Council)

DIBA - *Diputació de Barcelona* (Barcelona Provincial Council)

EN - Energy Community

EDAR - *Estació Depuradora d'Aigües Residuals* (Wastewater Treatment Plant)

ESCACC30 - *Estratègia Catalana d'Adaptació al Canvi Climàtic 2030* (Catalan Strategy for Adapting to Climate Change horizon 2030)

EU - European Union

GDP - Gross Domestic Product

GCV - Gross Calorific Value

GHG - Greenhouse Gases

IAP - Integrated Action Plan

PAESC - *Pla d'Acció per a l'Energia Sostenible i el Clima de Sabadell* (Action Plan for Sustainable Energy and Climate of Sabadell)

PAM - *Pla d'Acció Municipal* (Municipal Action Plan)

PES - *Promoció Econòmica de Sabadell* (Economic Development Agency of Sabadell)

PIMEC - *Petita i Mitjana Empresa de Catalunya* (Small and medium-sized enterprises of Catalonia)

PNACC - *Plan Nacional de Adaptación al Cambio Climático* (Spanish National Climate Change Adaptation Plan)

PNIEC - *Plan Nacional Integrado de Energía y Clima* (Spanish Integrated National Energy and Climate Plan)

R+D+I - Research + Development + Innovation

SBD - Sabadell

SDG - Sustainable Development Goals

SME - Small and Medium Enterprise

UAB - *Universitat Autònoma de Barcelona* (Autonomous University of Barcelona)

ULG - URBACT Local Group

INTRODUCTION

GREEN TRANSITION IN EUROPEAN INDUSTRIAL CITIES

The URBACT In4Green network aims to empower and build the capacity of local actors in industrial areas to overcome the barriers that prevent the transition to greener economies while remaining competitive and inclusive cities.

The overall challenge that the In4Green network wants to address is the green transition in small and medium-sized European cities with an industrial past.

The green transition in industrial cities is a major challenge. These areas face obstacles to adopting more sustainable practices due to their dependence on traditional industry and lack of resources. However, it is crucial to include these cities in the transformation towards a greener economy. They contribute significantly to the economic development of their territories and represent an important part of EU employment and GDP.

The green transition can be an opportunity to revitalise these areas, improve the quality of life of inhabitants and reduce pollution. To achieve this, public authorities need to be empowered and industrial actors need to be trained.

It is also essential to involve all stakeholders and civil society in the development and implementation of *local green transition policies*.

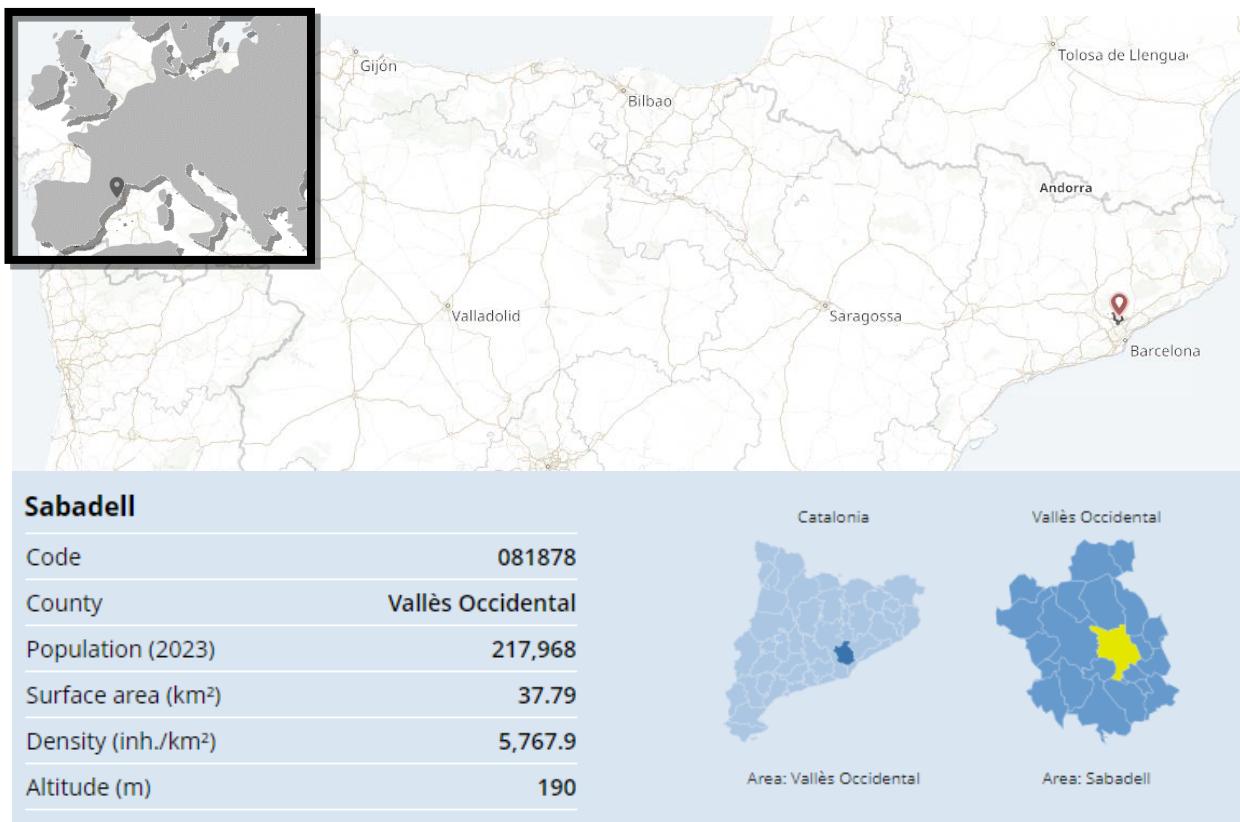
Collaboration and networking are key to overcoming challenges and moving towards a more sustainable future. Modernising industries and improving urban management are key elements in this process. Only through the joint efforts of all actors involved will we be able to lead the transformation towards a more efficient and environmentally friendly economy, improving the quality of life of our communities.

In short, the green transition in industrial cities is essential to achieve sustainable development. Despite the challenges, these areas have much to gain by adopting more sustainable practices and promoting innovation. At the same time, the city of Sabadell will be more prepared to implement new climate measures from EU.

CURRENT SITUATION IN SABADELL

Territorial overview

Figure 1 Sabadell in a snapshot



Source: Idescat.

Sabadell is the 25th most populous city in Spain, and the 5th most populous city in the region of Catalonia, with a total population of 217,968 (2023).

Table 1 & 2 Sabadell total population by age groups and sex (2023).

Total population	217,968
From 0 to 14 years	32,493
From 15 to 64 years	143,817
From 65 to 84 years	34,549
From 85 years and over	7,109

Total population	217,968
Men	105,833
Women	112,135

Source: Idescat. www.idescat.cat

Due to its strategic geographic position in the industrial area of Vallès and its proximity to Barcelona, the city has significant opportunities for the development of a competitive industrial and research structure on a regional, national and European level.

In terms of economic activity, the tertiary sector is highly developed, with commerce generating a high turnover rate among businesses. The secondary sector - that of manufacturing - is also an important aspect of the city's economy, whose turnover is owed to a great extent to the construction sector. Sabadell moreover depends largely on the textile and paper industries' transition and diversification which have been evolving in the city since the Industrial Revolution. Sabadell, together with other nearby towns, is one of the main important points of economic activity in the south of Europe.

Table 3 Gross added value by activity sectors (2011-2021).

	Agriculture	Industry	Construction	Services	Total
2021 (p)	0.5	445.4	247.2	3,863.4	4,556.5
2020 (p)	0.8	421.1	239.3	3,554.7	4,215.9
2019	0.8	429.2	302.5	3,690.7	4,423.3
2018	1.0	467.6	293.6	3,451.0	4,213.2
2017	0.9	440.8	257.4	3,398.1	4,097.1
2016	1.5	434.0	223.9	3,341.7	4,001.0
2015	0.8	367.0	243.4	3,325.5	3,936.8
2014	1.7	371.7	212.4	3,277.7	3,863.5
2013	1.7	379.4	220.6	3,167.1	3,768.7
2012	1.5	376.4	246.0	3,223.7	3,847.5
2011	1.4	403.2	290.2	3,226.2	3,921.1

Units: Millions of euros. (p) Provisional data.

Source: Idescat. www.idescat.cat

It also counts with the presence of several universities and R+D+I institutions which enrich the innovation and technological ecosystem.

Sabadell's current goal is to promote projects encouraging innovation, new technologies, knowledge, and activities associated to the industry. It is committed to the revitalisation of the local economy, based on a strategy focused on four main axes:

- healthcare
- research and technology
- aeronautics
- design and fabrics

Moreover, sustainability represents a cross-cutting vector in these processes.

Industrial sector

10% of the people employed in the city in 2023¹ belonged to the industrial sector, a lower percentage in comparison to the European average of 16% (2022) and the Spanish average of 12%.²

On the other hand, unemployed people in the industrial sector counted for 13% out of the city total percentage (2024)³.

¹ Source: *Infodades, 4t trimestre 2023*, Sabadell City Council.

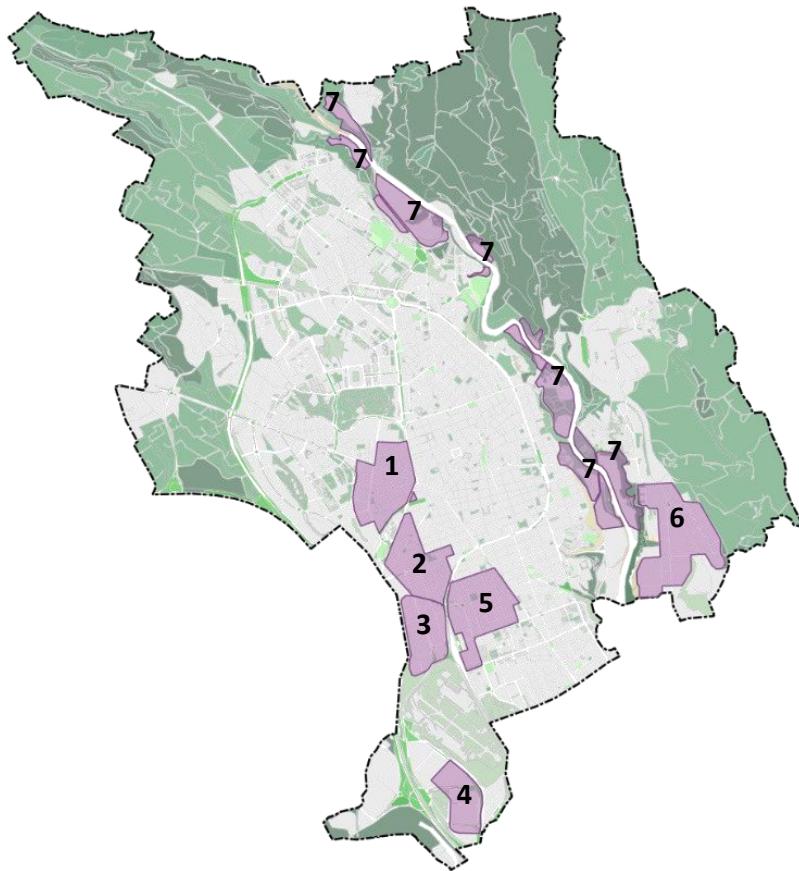
² Source: Eurostat, dataset treatment CEDEFOP.

³ Source: *Infomensual, abril 2024*, Sabadell City Council.

Industrial areas

Sabadell is composed by 7 industrial areas which occupy nearly 500 hectares and host 852 companies. A total of 12,093 people are employed and generate 2,463 million € which represents the 55.3% of the city companies turnover⁴.

Figure 2 Industrial activity areas of Sabadell.



1.CAN FEU

Technological district
42 ha // creation 1970

2.GRÀCIA NORD

Industry, commerce & services
41 ha // creation 1950

3.SUD-OEST

Industry & distribution/wholesale
35 ha // creation 1967 // modernisation project

4.SABADELL PARC EMPRESARIAL

Manufacturing industries & services
154 ha // creation 2007

5.GRÀCIA SUD

Industry, commerce & services
49 ha // creation 1950

6.CAN ROQUETA

Industry & services
72 ha // creation 1988 // modernisation 2020

7.RIU RIPOLL

Different activities
85 ha // creation 1970

Source: Promoció Econòmica de Sabadell

Industrial sector data

Electric energy consumption

The industrial sector consumed, in 2022, 74,002,684 kWh, representing the 12.5% out of the total of the city electricity consumption (589,401,410 kWh) which does not include the transport sector.⁵

Gas energy consumption

The industrial sector consumed, in 2022, 60,990,821 kWh GCV, being the 13% out of the total of the city gas consumption (468,206,172 kWh GCV).⁶

⁴ Source: *Informe Estructura Empresarial de Sabadell 2023*, Sabadell City Council.

⁵ Source: *Portal de dades obertes de la Generalitat*.

⁶ Source: *Portal de dades obertes de la Generalitat*.



Solar energy production

In May 2023, 5% of the companies located in the industrial areas of Sabadell had photovoltaic panels installed⁷.

Water consumption

Water consumption from own sources and for economic activities in Sabadell summed 2,401,924 m³/year in 2022, being the 23.3% out of the total of the city water consumption (10,325,988 m³/year).⁸

Water management

The city of Sabadell has 2 of the biggest Wastewater treatment plants of Catalonia: EDAR-Riu Sec and EDAR Riu Ripoll. Both treatment plants collect and treat water from the two regional water basins. They are both managed by the local company Aigües de Sabadell. Moreover, Sabadell offers reclaimed water for industrial purposes, approved by ACA in 2025.

Industrial waste

A total of 21,425 tons of industrial waste were generated in 2022 in the city of Sabadell, the lowest amount of tons since 2015⁹.

⁷ Source: Sabadell City Council.

⁸ Source: Agència Catalana de l'Aigua.

⁹ Source: Agència de Residus de Catalunya.

EXISTING STRATEGIES AND POLICIES

European level

Arising from the **United Nations Framework Convention on Climate Change** in 1992 different agreements and actions have been adopted. The most prominent one is the **Paris Agreement** (2015), which was adopted to combat climate change by limiting global temperature increase below 2 degrees Celsius, and pursue efforts for limiting the temperature rise below 1.5 degrees Celsius above pre-industrial levels.

As a signatory of the Paris Agreement, the European Union has been developing an important set of rules and policies for making EU's economy sustainable. In 2019, the EU adopted the **European Green Deal** which frames all current and future legal measures to ensure the green transition.

The European Green Deal is the core European Union policy initiative that aims to make Europe (European Union) the first climate-neutral continent by 2050. The Green Deal focuses on a number of areas, including energy, mobility, agriculture and industry. In the field of industry, the Green Deal sets out a number of targets, including:

- Reduce greenhouse gas emissions from industry by 40% by 2030 and 80% by 2050.
- Promote the development of clean and innovative technologies in industry.
- Increase energy efficiency in industry.
- Reduce the EU's dependence on fossil fuels.
- Create new jobs in green industry.

The Green Deal understands industry as a key player in the transition to a greener economy, and offers a number of opportunities for European industry to become a world leader in clean and innovative technologies. In this framework, the European Commission updated the **EU Industrial Strategy** in 2022 to ensure that its industrial ambition takes full account of the new circumstances following the COVID-19 crisis and helps drive the transformation towards a more sustainable, digital, resilient and globally competitive economy.

Moreover, in 2023, the EU adopted the **Green Industrial Plan** “to enhance the competitiveness of Europe's net-zero industry and support the fast transition to climate neutrality. The Plan aims to provide a more supportive environment for the scaling up of the EU's manufacturing capacity for the net-zero technologies and products required to meet Europe's ambitious climate targets.”¹⁰

Circular Economy appears also as one of the main building blocks of the European Green Deal. Thus, in March 2020, the European Commission adopted the **new Circular Economy Action Plan (CEAP)**, a new agenda for sustainable growth. “The EU's transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. (...) The new action plan announces initiatives along the entire life cycle of products. It targets how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented and the resources used are kept in the EU economy for as long as possible.”¹¹

The need to deal with climate change imminently has meant that, within the framework of the European Green Deal, new political instruments have had to be adopted to speed up the process. In this way, the new **EU Strategy on Adaptation to Climate Change** (2021) was endorsed with the aim to strengthen the resilience of the EU and especially of SMEs, where the importance of implementing measures for adaptation as an opportunity for the future is mentioned.

During the last years, a set of legal measures have been deployed to ensure green transition. Among them, it is important to highlight the **European Climate Law** (2021) which enshrines the 2050 objective in EU legislation and “sets a legally binding target of net zero greenhouse gas emissions by 2050. The EU Institutions and the Member States are bound to take the necessary measures at EU and national level to

¹⁰ Source: Press release https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510

¹¹ Source: https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en



meet the target, taking into account the importance of promoting fairness and solidarity among Member States.”¹²

Moreover, it is important to mention other legal measures for the industrial sector such as the update of the **Directive 2010/75/EU on industrial emissions**¹³, which extend the scope of the rules to more industrial sectors (intensive livestock farms, mining sector and plants for the production of batteries), and the proposal approval (2024) of the **Directive on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937**, with the aim of promoting responsible and sustainable business behaviour along the supply chain¹⁴. This directive will complement the package of new measures “Fit for 55” which will establish more ambitious measures in terms of energy and emission rights, as well as in the transformation of production processes so that they achieve their climate neutrality throughout the value chain.

Thus, with the aim to speed up the reduction of greenhouse gas emissions by at least 55% by 2030, the EU presented the package of new rules and legal initiatives “Fit for 55” (July 14th 2021) consisting on “a set of proposals to revise and update EU legislation and to put in place new initiatives with the aim of ensuring that EU policies are into line with the climate goals agreed by the Council and the European Parliament.”¹⁵

This package of legislative initiatives, which will be developed in a transversal manner, aims to make the emission of greenhouse gases more and more expensive. Among the main legislative measures that will be developed, with a direct impact on the industrial sector, it is important to remark the following ones:

- **Directive (EU) 2023/959**¹⁶ amending the emission rights trading regime, where the emission rights of some sectors are reduced.
- The application in 2026 of the **Carbon Border Adjustment Mechanism**, which will “put a fair price on the carbon emitted during the production of carbon intensive goods that are entering the EU, and to encourage cleaner industrial production in non-EU countries”.¹⁷
- **Directive (EU) 2024/1275, related to the energy performance of buildings**, which aims to decarbonize all buildings by 2050, obliging all newly constructed buildings to have 0 emissions by 2030.¹⁸

¹² Source: https://climate.ec.europa.eu/eu-action/european-climate-law_en

¹³ Source: <https://www.consilium.europa.eu/es/policies/industrial-emissions/#change>

¹⁴ Source: <https://eur-lex.europa.eu/legal-content/ES/ALL/?uri=CELEX:52022PC0071>

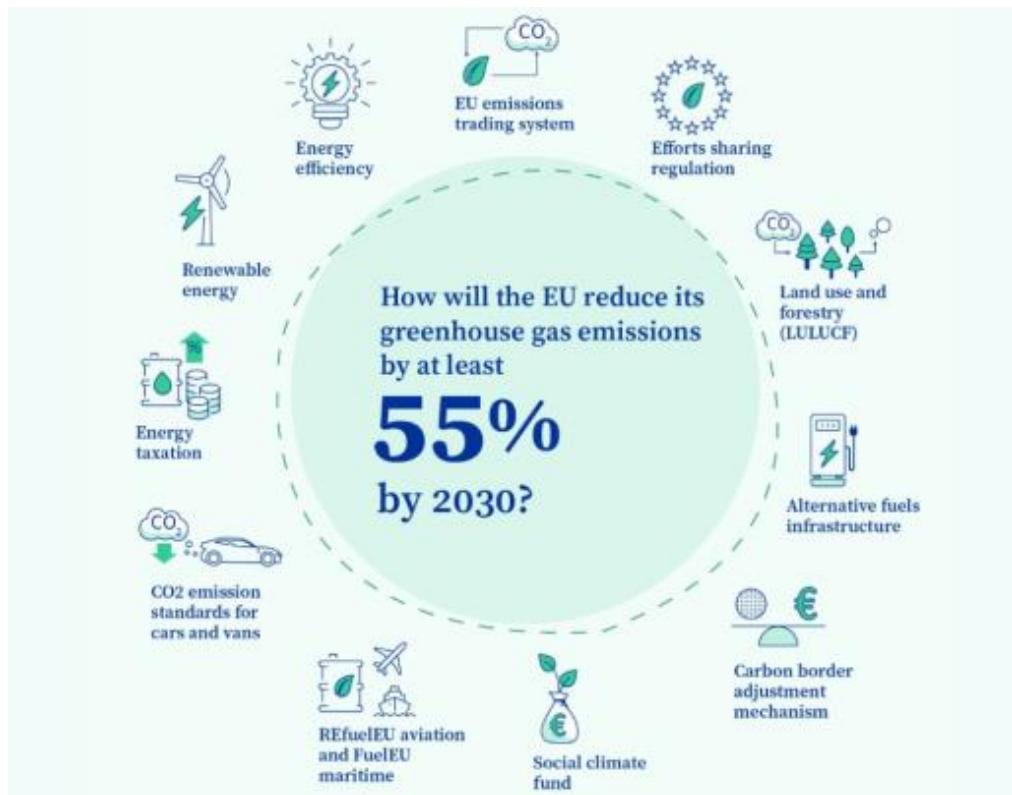
¹⁵ Source: <https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55/>

¹⁶ Source: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023L0959>

¹⁷ Source: https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en

¹⁸ Source: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL_202401275

Figure 3 "Fit for 55" measures.



Source: European Union, 2023.

National and regional level

Since the approval of the European Green Deal, Spain has approved numerous state laws resulting from the application of European regulations and the transposition of European directives into the Spanish legal system.

In 2020, and in line with the European Green Deal, the Council of Ministers approved the agreement on the **Declaration of Climate and Environmental Emergency in Spain**, with the aim of combating climate change through different transversal policies. Among them we find:

- The Integrated National Energy and Climate Plan for 2021-2030 (PNIEC), in accordance with the EU's demand for each Member State to determine the degree of compliance in the matter, identifies the challenges and opportunities to guarantee the energy transition addressing all 5 dimensions of the Energy Union:
 - Decarbonisation (including renewable energies).
 - Energy efficiency
 - Energy security
 - The internal energy market for energy
 - Research, innovation and competitiveness.

“The Plan also issues the necessary signals to provide certainty and direction to all players.”¹⁹

- The **2050 Low Emissions Strategy** of the Spanish Economy, aligned with the PNIEC, is the long-term decarbonisation roadmap for Spain.²⁰

¹⁹ Source: Draft of the Integrated National Energy and Climate Plan 2021-2030 (2020) Government of Spain (https://energy.ec.europa.eu/system/files/2019-06/ec_courtesy_translation_es_necp_0.pdf)

- **The Just Transition Strategy**, “aimed at foreseeing and managing with solidarity criteria the consequences on those regions and people directly linked to technologies that will be gradually displaced as a result of the energy transition promoted by PNIEC”.²¹
- **The Circular Economy Strategy and the Action Plans**, “*España Circular 2030* establishes the bases to promote a new production and consumption model in which the value of products, materials and resources are maintained within the economy for as long as possible, with minimal waste and reusing as much as possible the waste that cannot be avoided.(..) The Strategy establishes the following goals for year 2030:
 - Reducing domestic material consumption by 30% in relation to national GDP, taking 2010 as a reference.
 - Reducing waste by 15% with regard to 2010 waste levels.
 - Reducing food waste throughout the entire food chain: 50% reduction per person in retail and households and 20% in production chains and supplies from 2020, thus advancing towards the Sustainable Development Goal (SDG).
 - Promoting reuse and reuse enabling activities until reaching 10% of municipal waste.
 - Reducing greenhouse gas emissions to under 10 million tonnes of CO2eq.
 - Improving water use efficiency by 10%.”

The Strategy affects different economic sectors such as the industrial sector and focuses on policies and instruments linked to production, consumption, waste management, secondary raw materials and water reuse. It is also linked to awareness and participation, research and competitiveness, and employment and training.²²

- **The Spanish National Climate Change Adaptation Plan 2021-2030 (PNACC)**, is the result of a collective analysis and reflection and public participation that "constitutes the basic planning instrument to promote coordinated action towards the effects of climate change in Spain. Its main objective is to avoid or reduce the present and future damages resulting from climate change and to build a more resilient economy and society.”²³
- Finally, the **Law 7/2021, on Climate Change and Energy Transition** acts as a regulatory activator for the objectives set out in the Declaration of Climate and Environmental Emergency in Spain, and foresees the deployment of different regulatory obligations while the climate crisis progresses. Law 7/2021 foresees several obligations for certain companies.²⁴

At Catalan level it is important to remark the following strategies and policies:

- **The Law 16/2017 on Climate Change in Catalonia**, which adopts the bases derived from European legislation in order to be able to reduce greenhouse gas emissions and promote the transition towards an emissions-neutral economy.

The Law foresees the regulatory development of several articles that will be progressively adopted and will generate new obligations. Among the legal measures generated it is important to highlight the taxes for the greenhouse gases emissions, of which currently only the **tax on carbon dioxide emissions from vehicles** has been deployed. A tax of Generalitat de Catalunya “whose

²⁰ Source: Draft of the Integrated National Energy and Climate Plan 2021-2030 (2020) Government of Spain (https://energy.ec.europa.eu/system/files/2019-06/ec_courtesy_translation_es_necp_0.pdf)

²¹ Source: Draft of the Integrated National Energy and Climate Plan 2021-2030 (2020) Government of Spain (https://energy.ec.europa.eu/system/files/2019-06/ec_courtesy_translation_es_necp_0.pdf)

²² Source: *Subdirección General de Economía Circular. España Circular 2030. Estrategia Española de Economía Circular (2020). Ministerio para la Transición Ecológica y el Reto Demográfico.* (<https://www.miteco.gob.es/en/calidad-y-evaluacion-ambiental/temas/economia-circular/estrategia.html>)

²³ Source: <https://www.miteco.gob.es/es/cambio-climatico/temas/impactos-vulnerabilidad-y-adaptacion/plan-nacional-adaptacion-cambio-climatico.html>

²⁴ Source: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-8447

purpose is to tax the carbon dioxide emissions produced by these vehicles and which affect the increase in greenhouse gas emissions.²⁵

It also foresees, through the art. 145.2 of Law 9/2017, to incorporate the greenhouse emissions on public procurement. Thus, the award of contracts based on the best value for money will need also to include environmental aspects linked to the object of the contract. "Among the characteristics of environmental quality to be assessed by law are, among others, the reduction of the level of GHG emissions, energy saving and efficiency measures or the use of renewable energies during the execution of the contract."²⁶

- The Law 16/2017 on climate change, "establishes the strategic guidelines that sectoral public policies must follow to adapt to impacts of climate change and reduce their vulnerability. These guidelines must be deployed through the approval of a Strategic Framework of Reference for Adaptation to Climate Change. ESCACC30 is this new strategic framework for the 2030 horizon and gives continuity to the ESCACC20 approved in 2012 for the 2020 horizon. (...)On 17th January 2023, the Government of Catalonia approved the new Catalan Strategy for Adapting to Climate Change horizon 2030, with the objective to improve adaptation to climate change in Catalonia and reduce its vulnerability through the establishment of 76 operational objectives that are deployed in 312 adaptation measures for the various natural systems, socio-economic areas and territories of Catalonia."²⁷

Among the operational goals set out by the ESCACC30 the following ones refer to the field of industry, services and trade:

Figure 4 Operational goals of ESCACC30.

INDUSTRY, SERVICES AND TRADE

1. Integrate climate change adaptation into Catalonia's industrial planning.
2. Encourage the industrial, services and trade sectors to identify the impacts of climate change that pose a risk to their raw materials, facilities, production processes and workers' health, and to define adaptation measures.

INDUSTRY, SERVICES AND TRADE

3. Incorporate measures to adapt to climate change in the policy of promotion and public aid for companies implemented by the different administrations.
4. Integrate climate change adaptation into the regulations governing commercial facilities.
5. Boosting the circular economy
6. Disseminate knowledge on climate change, impacts and adaptation measures in the sector.

Source: Generalitat de Catalunya.

<https://canviclimate.gencat.cat/ca/ambits/adaptacio/estrategia-catalana-dadaptacio-al-canvi-climatic-2021-2030/index.html>

²⁵ Source: https://canviclimate.gencat.cat/en/ambits/Llei_canvi_climatic/desplegament-de-la-llei-del-canvi-climatic/index.html

²⁶ Source: https://canviclimate.gencat.cat/en/ambits/Llei_canvi_climatic/desplegament-de-la-llei-del-canvi-climatic/index.html

²⁷ Source: <https://canviclimate.gencat.cat/ca/ambits/adaptacio/estrategia-catalana-dadaptacio-al-canvi-climatic-2021-2030/index.html>

Local level

At local level, the city of Sabadell has developed the **Municipal Action Plan 2023-2027 -Pla d'Actuació Municipal 2023-2027 (PAM)** -. The city's roadmap where the main projects and strategies to be developed are compiled with their most relevant actions. The PAM aims to achieve the objectives of the current political mandate through the deployment of different strategic action lines of municipal competence. PAM is articulated in 4 major axes:

1. Adapt the city to climate change
2. Economic boost and new opportunities
3. Social cohesion, without leaving anyone behind
4. People quality of life, the soul of the city

These 4 axes group together the main strategic plans and actions of the city, among which, due to the alignment with the present Integrated Action Plan, it is important to highlight the following ones:

- Promoting the use of reclaimed and phreatic water and its return to the natural environment, with the drafting of a new Master Plan for Water Unfit for Consumption (reclaimed water). (axis 1)
- Promoting the network of climate shelters and urban green. (axis 1)
- Reducing the carbon footprint of equipment, municipal vehicles and public lighting (action that includes, among others, the promotion of collective self-consumption of photovoltaic energy and the improvement of efficiency and management of public facilities). (axis 1)
- Improvement of the surroundings of the Ripoll River as a space for nature and leisure. (axis 1)
- Activate land resources to drive industrial and commercial economic activity (mobilization of 65,500 m² of industrial land). (axis 2)
- Promoting the Ripoll River as a space for economic activity. (axis 2)
- Urban improvement of the Sud-Oest economic activity area. (axis 2)
- Implementation and new phases of the Southern Portal. (axis 2)

Finally, it is important to highlight the current strategic Plans:

- **Action Plan for Sustainable Energy and Climate of Sabadell 2021-2030 (PAESC) - Pla d'Acció per a l'Energia Sostenible i el Clima de Sabadell 2021-2030 (PAESC)** -.
- **Urban and Sustainable Mobility Plan of Sabadell 2023-2028 - Pla de Mobilitat Urbana i Sostenible de Sabadell 2023-2028-**.
- **Bicycle Master Plan of Sabadell 2019-2025 - Pla Director de la Bicicleta de Sabadell 2019-2025-**.
- **Green Spaces Master Plan of Sabadell 2023-2033 -Pla Director dels Espais Verds de Sabadell 2023-2033.**

Each of these plans deploys a series of actions in the field of green transition that reinforce the content and actions proposed in this Integrated Action Plan.

PROBLEM IDENTIFICATION

Green transition implementation

Climate change appears as an important challenge for all the regions of Europe, especially for those in the south which are more vulnerable to its effects. Thus, green transition needs to be understood as one of the cornerstones in every local policy.

It is known that big enterprises not only have a clear role in climate change mitigation but also in creating new green business opportunities. However, SMEs are crucial players in the value chain being able to innovate and boost green transition.

From now onwards, European and National legislation will enforce new actions to be accomplished by enterprises including SMEs. Thus, local governments can help SMEs by deploying territorial strategies and actions to smooth their adaptation and facilitate green transition.

Sabadell economic ecosystem is mainly composed by SMEs which can lead a real green transition process if they meet the appropriate tools to make it possible. Thus, local government can play an important role in helping companies to adapt and succeed in green transition by identifying the challenges and weaknesses of the territory and transform them into strengths and opportunities.

Prior the participation of Promoció Econòmica de Sabadell (PES) in the In4Green network, three main working topics were identified:

- energy transition
- circular economy
- green industry attraction

The three of them were conceived as local priorities in terms of sustainable industry. Thereby, the participation in the In4Green network seeks to provide the city with an Action Plan in order to help to advance in a more sustainable, digital and resilient economy and globally competitive.

Stakeholders involvement and URBACT Local Group (ULG) establishment

To move forward with the green transition of the industrial sector, the involvement and alignment of all key territorial stakeholders are essential. In this regard, the identification of common objectives by the different City Council departments, regional administrations, local companies, and territorial economic development actors is of particular value, as it helps to identify both the opportunities and challenges of the green transition within the municipality. For this reason, from the very beginning of the In4Green project, the URBACT Local Group (ULG) was established, with the aim of bringing together as many key territorial stakeholders as possible within a shared working space.

However, due to the different necessities and working tempos of the stakeholders, often make their involvement complex and constrained by time. Therefore, a clear participation strategy was established, with a specific approach and timeline that enabled the participation of the largest possible number of participants and, consequently, maximise the outcomes of each meeting.

Aiming to gather as much stakeholders as possible, two sort of groups were designed: the core group (URBACT Local Group) and several thematic groups with variable composition depending on the topic addressed.

Figure 5 Stakeholder participation groups



Composed of key territorial stakeholders who help identify the city's challenges and opportunities related to sustainable industry, and define actions aligned with the territorial reality

Meetings focused on a specific topic. They include presentations by experts, as well as the participation of local stakeholders (including companies and civil society) who help identify challenges and opportunities.

Source: Promoció Econòmica de Sabadell

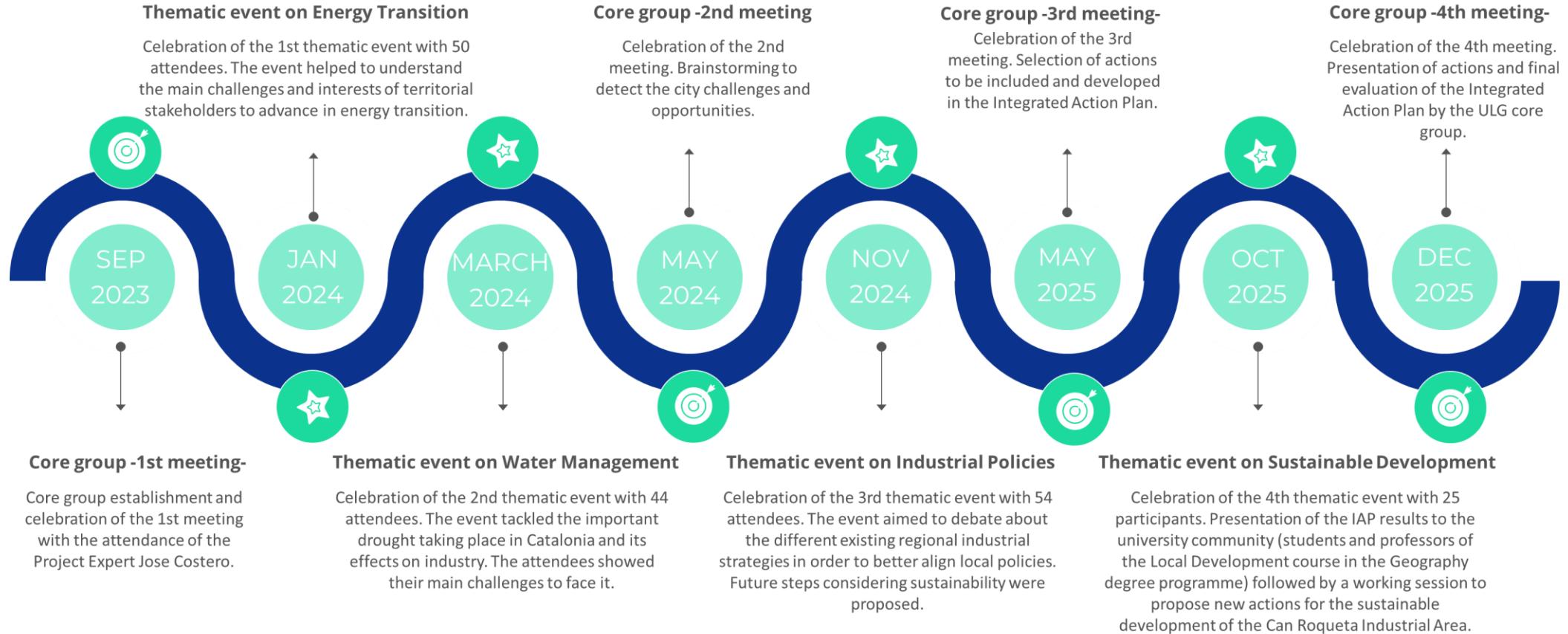
The core group gathers around 15 people from different organisations, clusters and public departments:

- *Ajuntament de Sabadell* (Sabadell City Council). Energy Transition Department.
- *Ajuntament de Sabadell* (Sabadell City Council). Water Office.
- *Ajuntament de Sabadell* (Sabadell City Council). Economic Promotion and City Projection Area coordination office.
- *Promoció Econòmica de Sabadell* (Economic Development Agency).
- AEPCRO - *Associació d'Empreses i Propietaris de Can Roqueta* (Association of Companies and Owners of Can Roqueta).
- *Associació de Polígons Industrials Sud de Sabadell* (Association of South Industrial Areas of Sabadell).
- *Centre Metal·lúrgic de Sabadell* (Metallurgic Centre of Sabadell).
- *Cambra de Comerç de Sabadell* (Chamber of Commerce of Sabadell).
- *Hub B30*.
- *Pla Estratègic Metropolità de Barcelona* (Strategic Metropolitan Plan of Barcelona).
- *Diputació de Barcelona* (Barcelona Provincial Council).
- *Clúster de l'Energia Eficient de Catalunya* (Energy Efficiency Cluster of Catalonia).
- *Agència de Residus de Catalunya* (Waste Agency of Catalonia).

The thematic groups involve a large number of people, mainly from the business sector, around a specific topic of interest. The meetings allow to focus in a specific topic and learn more about it through the participation of one or more experts. Thematic meetings are of great value to compile the territorial stakeholders' necessities and disseminate the transition towards sustainability.

The calendar of the meetings was established as it follows:

Figure 6 ULG meetings calendar



Source: Promoció Econòmica de Sabadell

Local challenges and opportunities

Both, the thematic meetings and core group meetings, had the objective to take the pulse of the stakeholders in terms of challenges and opportunities related to the energy transition, circular economy and green attraction investment topics.

As a result, the following qualitative data was collected during the initial meetings:

Energy transition challenges

No existence of a clear legal regulation on energy transition.

Too much bureaucracy.

Low level of knowledge on energy transition in the companies.

Few energy saving measures implemented.

The main current business model is not adapted to implement a full sustainable development.

Boosting energy sovereignty while exploring new energy consumption formulas.

Old industrial parks.

Improvement of energy efficiency due to the increasing climate change effects.

Circular Economy challenges

Resilience to tackle climate emergency crisis.

Waste valorisation.

Depth understanding of the economic activity of the territory to detect possible synergies.

Professional recognition of circular economy while exploring new jobs.

No existence of a clear legal regulation on circular economy.

Different water necessities among the companies a different solutions required.

Implementation of water efficiency measures at municipal level.

Green Investment Attraction challenges

Attraction of benchmark companies in terms of sustainability.

Infrastructure improvement in the industrial parks.

Talent attraction and retention of talent.

Lack of specific communication focused on green investment.

Boosting the promotion of other business models to attract green investment like cooperatives.

Green start-up promotion.

Energy transition opportunities

Guaranteeing the easy access and diffusion of the current legal regulation.

Compact industrial parks as an asset to be more sustainable.

Companies interest on becoming efficient to ensure they competitiveness.

European funding.

Strong association structure that could lead the energy transition.

Willing to implement an Energy Transition Plan by receiving support from the local administration.

Circular Economy opportunities

Collaboration with research centres and universities to boost R+D+I.

Improve the industrial processes efficiency while applying circular economy measures.

New market opportunities to develop circular products and services.

Boosting the servitization of products.

Replication of successful circular economy experiences.

Water regeneration usage in the industry.

Industries are mainly connected to the municipal water sourcing network. Possibility to think into a general improvement.

Green Investment Attraction opportunities

Existence of virtual and physical spaces to promote green investment attraction.

European funding.

Fostering the territorial placement of the city and their industrial parks as an asset.

Fostering the proximity and connection with the research centres and universities as an asset.

Industrial heritage as a label to promote the investment attraction.

THE VISION

Sabadell's participation in the In4Green URBACT network provided a framework for reflection on the green transition in the industries and the city industrial areas, and thereby contributing to the identification of measures to achieve climate neutrality by 2050. Thus, work has focused on proposals that help to consolidate a **smart territorial ecosystem based on sustainability where industries could improve their competitiveness while taking advantage of green transition**.

During the initial ULG meetings the stakeholders had the opportunity to present their different perspectives. This was of great value for fostering debate and creating a shared vision, which has become an essential part of the project.

By using participative tools in the 1st thematic event and in the 2nd core group meeting, two conceptual visual maps were created. In both conceptual maps the most frequently repeated word was "competitiveness".

It is important to remark how "cooperation", "savings" and "positioning" had a significant weight in the conceptual map created during the 1st thematic meeting, which had a high participation from companies. In contrast, in the 1st Core group meeting, of more heterogeneous nature, concepts related to sustainability and energy (photovoltaics, energy community, renewable energy, hydrogen or efficiency) had an important presence.

Thus, transition towards sustainable industry have to bring the opportunity to create a more competitive territory, while developing new opportunities based on efficiency and energy transition. Green business innovation will be essential to take an advantageous stance and contribute towards the smart specialization of the territory, giving a strong city image. Cooperation among all the stakeholders will play a key role to foster new economic opportunities based on the sustainability paradigm.

Figure 7 Visual map created in the 1st thematic event on energy transition



Source: Promoció Econòmica de Sabadell

Figure 8 Visual map created in the 2nd core group meeting



Source: Promoció Econòmica de Sabadell

TESTING ACTION

Fresh ideas from young talent

The celebration of the different ULG meetings helped to realise that academy did not have voice in them. Moreover, young people were not represented in the meetings.

Since young professionals are much more sensible to integrating sustainability in all their practices, it was conceived as a great opportunity to hear from them. In order to engage academy and young students the Department of Geography of the *Universitat Autònoma de Barcelona* (UAB) was contacted.

After identifying the most suitable course in the Bachelor's Degree in Geography, Environmental Management and Spatial Planning (Local Development, taught in the 4th year of the degree), a win-win proposal was designed:

- Students, guided by their professors and the PES technical team would be able to explore a real case study while developing a diagnosis of the topic and propose real solutions and actions. Moreover, they will learn about the Integrated Action Plan designing process and its importance in the city strategy.
- The IAP will be directly nourished with fresh and innovative action proposals.

Workshop development

On 28th October 2024 a 6 hour workshop was celebrated at the *Centre d'Empreses Industrials* (CEI) of Can Roqueta. The workshop was focused in one of the industrial areas of Sabadell: Can Roqueta. The testing action, designed together with the Department of Geography of the UAB, had a specific agenda to explore in depth the industrial area: territorial framework, challenges, barriers, opportunities, current actions, stakeholders, new solutions, etc.

AGENDA:

8:30 Students reception

8:40 Institutional welcome by the Economic Development Councillor

8:45-9:15 1st conference about the In4Green project and the green transition in the industrial sector.

9:15-10:15 2nd conference about the industrial areas of Sabadell and the case study area (Can Roqueta)

10:15-10:45 Coffee break

10:45-11:45 Fieldwork

11:45-12:30 3rd conference about the CEI and guided visit in the centre

12:30-14:30 Working groups

The workshop was composed by 3 presentations that looked at different study scales (city, neighbourhood, industrial area and CEI), 1 visit at the CEI and 1h fieldwork around the industrial area.

After the talks, the visit and the fieldwork, the students had the opportunity to start working in groups about the problems identified and their possible solutions, as well as solving any doubts with the technical team. Thus, the workshop was the triggering point for the students to start working on future actions on sustainable industry.

As a result, the final deliverable of the Local Development Course consisted in the definition of 2 actions per students group. Each action integrated the following parts: justification of the action, relation with other strategies, action development, stakeholders involved and time frame.

The actions were framed by one of the 16 objectives, previously defined by PES, which belong to 8 strategic working lines (green energy, circular economy, digital & smart, green areas, green business attraction, sustainable mobility, water management and other compatible uses).

Testing action results

On 16th and 18th December 2024, 30 students presented their proposals to the PES team. They worked on 8 of the proposed objectives (bolded in Table 4).

Table 4 Objectives defined by PES

STRATEGIC LINES	OBJECTIVES	
		GREEN ENERGY
		1. Increase photovoltaic installations
		2. Usage of residual industries/companies heat
		3. Creation of local energy communities
		4. Green energy production
		CIRCULAR ECONOMY
		5. Fostering circularity of leftover/waste materials among companies and other stakeholders
		DIGITAL & SMART
		6. Identification of leftover materials and creation of new products
		GREEN SPACES
		7. Smartisation of industrial areas in terms of energy, security, waste, mobility etc.
		GREEN ATTRACTION
		8. Renaturalisation of spaces and creation of climate shelters
		9. Reformulation of green leisure spaces for workers and citizens
		EFFICIENT & SUSTAINABLE MOBILITY
		10. Identification of value activities and strategic sectors
		11. Reurbanising the industrial areas to attract green companies
		12. Sustainable public and private transport network
		13. Applications for the management of sustainable mobility
		WATER
		14. Guaranteeing the efficiency of water to combat the drought
		OTHER COMPATIBLE USES
		15. Establishment of non-potable water (reused) uses in the industrial areas and industries
		16. New mixed uses

Source: Promoció Econòmica de Sabadell

Arising from the students' action proposals, the following ideas were highlighted:

- The city needs a powerful image to foster green industry. The CEI could act as a flagship to foster sustainability and attract green industries to the city.
- Green energy facilities growth. The installation of photovoltaic panels on public roofs and other municipal surfaces should be extended in the industrial areas. Other green energies should also be taken into account.
- Greening the industrial areas. Industrial areas should have quality green public spaces, which could be used for different purposes along the day.

STRATEGIC ACTION FRAMEWORK

INTEGRATED APPROACH

The future accomplishment of the previously defined Vision “**Towards a smart territorial ecosystem based on sustainability where industries could improve their competitiveness while taking advantage of green transition**” calls for an integrated approach.

The importance of understanding the territorial ecosystem, as a life space where multiple stakeholders develop their activity and create a unique space of interrelations and opportunities, becomes crucial. Thus, strategic stakeholders from the quadruple helix (public administration, academy, companies and associations) has been called to contribute in the IAP definition. For this purpose, the IAP is fed by 4 consultation spaces:

- ULG thematic events: where specific topics (energy, water, industrial policies and sustainable development) were tackled together with interested stakeholders (mainly public administration, companies, business associations and academia).
- ULG core group: where green energy transition, circular economy implementation and green investment attraction topics were discussed among the core group members.
- University workshop: developed as a testing activity together with the department of Geography of the *Universitat Autònoma de Barcelona*, where students worked on proposing actions to improve an industrial area in Sabadell.
- Specific meetings about eco-smart industrial areas: where public administration, companies and business associations (grouped in different meetings) where asked to contribute to the current “Study of opportunities to move towards eco-smart industrial areas” commissioned by PES.

Moreover, the success of the IAP depends on its alignment with other existing strategies at local, regional, national and European level, which will directly contribute to foster and scale-up the action plan. The ULG core group meetings have played an important role in guaranteeing its local and regional coherence, while the In4green network meetings, together with the URBACT experts’ contributions, have helped to include the European scope.

At local level, a cross-sectorial integration has been taken into account when considering the IAP actions. In practice, the IAP has been conceived to be led by PES together with the Sabadell City Council, as several actions require the involvement of multiple City Council departments (mobility, public space, ecological transition, among others). Thus, the continuous assessment and adaptation of the planned actions will be required. Furthermore, the ULG core group may contribute to the ongoing assessment of actions and address existing gaps.

The following set of actions therefore presented wants to contribute to achieve a sustainable and resilient city and to better integrate the industry into society, through the creation of shared economic opportunities and benefits, as well as to reinforce the territorial ecosystem. Moreover, it wants to be an inspirational document for coming city strategies and plans such as the future Industrial Areas Master Plan for the city of Sabadell.

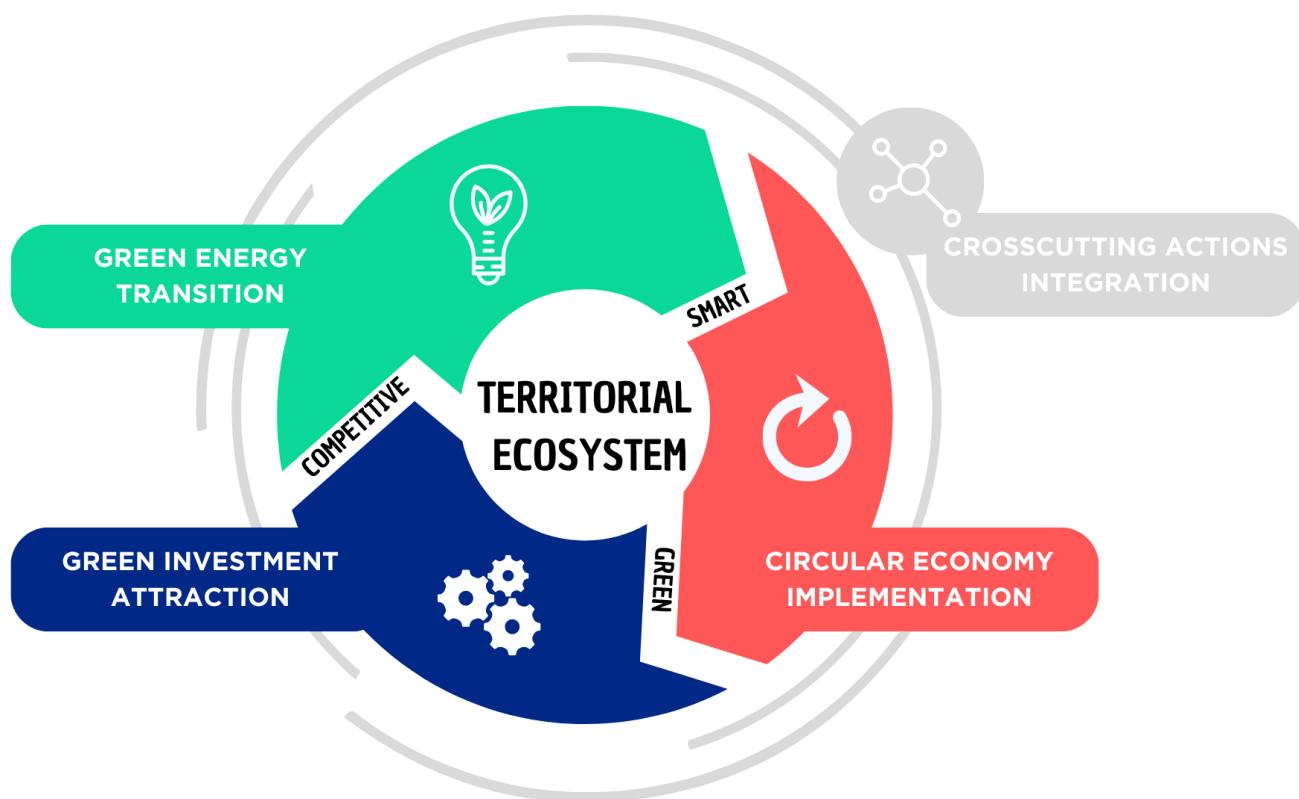
STRATEGIC OBJECTIVES

To achieve a competitive, smart and green territorial ecosystem 4 strategic objectives were defined:

- **Green Energy Transition.** The decarbonisation of the industries' energy system appears as one of the strategic axis of the EU Green Industrial Plan to achieve climate neutrality. Actions to help industries to move towards green energy and improve their efficiency will be planned.
- **Circular Economy Implementation.** Circularity is one of the systemic changes to achieve by the UE in the following decade. Actions aimed to understand and accelerate circularity of industrial processes and materials will be proposed.
- **Green Investment Attraction.** Becoming green not only will be a requirement but an asset for the companies. At the same time, the attraction of green investment will be an asset for the city in its way towards climate neutrality. Thus, actions to upgrade the territory through sustainability need to be designed.
- **Crosscutting actions integration.** Governance and communication will be crucial to succeed on achieving a competitive, green and smart territorial ecosystem. Different actions affecting the above mentioned strategic objectives will be compiled.

These 4 objectives, fed by the different consultations spaces explained before, are the main umbrella under which the operational objectives and their consequent actions will be later presented.

Figure 9 Conceptualisation of the strategic objectives

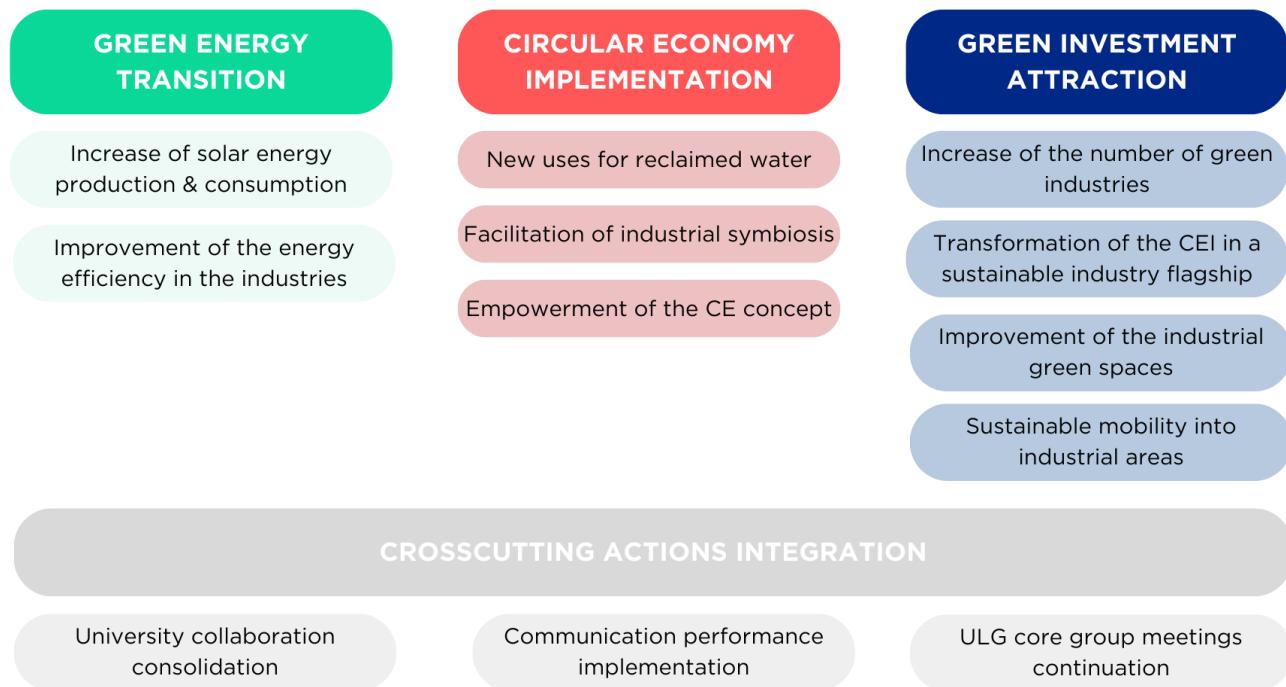


Source: Promoció Econòmica de Sabadell

SPECIFIC / OPERATIONAL OBJECTIVES

Specific objectives help to improve the structure and understanding of the overall plan while defining clear operational goals. A total of 12 operational objectives have been defined in which the actions will be classified.

Figure 10 Conceptualisation of the operational objectives



Source: Promoció Econòmica de Sabadell

ACTIONS

Finally, 23 actions have been compiled, where both new actions and ongoing actions are included. This fact was very relevant to PES since the overall goal of participating in the In4Green project was, not only to define new actions, but to improve and reinforce ongoing actions committed to industrial sustainability. On doing this, the resulting IAP follows an integrated approach which also takes into account the previous work and studies done towards green transition in the industrial sector. Thus, a total of 6 actions are pointed out as being in an ongoing stage. 

Moreover, given the importance on achieving eco-smart industrial areas, the 9 actions directly related to this objective are indicated with the following icon: 

The structure of the following set of actions includes the intended result description, the possible source of financial resources (except for those actions ongoing where the source of financial resources is confirmed), the lead agency in charge of its execution, the stakeholders to be involved in (or already involved in the ongoing actions), and a timescale showing 3 temporary execution stages for the actions implementation:

- Short implementation (less than 2 years) 
- Medium implementation (less than 5 years) 
- Long implementation (less than 10 years) 

Figure 11 Conceptualisation of the actions

GREEN ENERGY TRANSITION

- Increase of solar energy production & consumption
- Evaluate the feasibility of creating an energy community and its implementation.
- Consolidation of a free consultancy service on photovoltaic panels in industries.
- Exploration of the installation of solar pergolas.
- Exploration of the installation of smart lighting.

Improvement of the energy efficiency in the industries

- Consolidation of a free consultancy service on energy efficiency.

CIRCULAR ECONOMY IMPLEMENTATION

New uses for reclaimed water

- Keep informed about the new possible uses of reclaimed water for industries in accordance to the future city agreement.
- Study of stormwater reuse (collection, accumulation, treatment and storage).
- Reclaimed water from the Ripoll's Wastewater Treatment Plant.

Facilitation of industrial symbiosis

- Exploration of the current waste materials data base in order to identify opportunities and reduce discarded waste materials.
- Fostering a local virtual platform with updated information on waste materials.

Empowerment of the CE concept

- Exploration of the transformation of the major discarded waste materials into a possible city product.
- Professional training to cover the new circular economy jobs opportunities (circular jobs).

GREEN INVESTMENT ATTRACTION

Increase of the number of green industries

- Establishment of green criteria in public procurement.
- Detection of key elements to attract green industries to Sabadell.

Transformation of the CEI in a sustainable industry flagship

- Transformation of a wall of the future expansion of the CEI into a vertical garden.
- Study for the installation of photovoltaic panels.
- Considering a dedicated space for green industries in a future CEI extension.

Improvement of the industrial green spaces

- Study of green spaces in industrial areas.

Sustainable mobility into industrial areas

- Public transport optimisation.

CROSSCUTTING ACTIONS INTEGRATION

University collaboration establishment

- Consolidation of an annual collaboration with a relevant department of Universitat Autònoma de Barcelona (UAB).

Communication performance implementation

- Consolidation of the SBD Sustainable Industry Programme.
- Best Green Company Awards.

ULG core group meetings continuation

- Consolidation of the ULG core group.

Source: Promoció Econòmica de Sabadell



GREEN ENERGY TRANSITION

A

Increase of solar energy production & consumption

1

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
A.1.1 Evaluate the feasibility of creating an energy community and its implementation 	Feasibility study, according to data provided by companies, to implement an industrial energy community. This action requires the prior identification of interested companies.	Provincial Council of Barcelona, Sabadell City Council and European funding.	Promoció Econòmica de Sabadell and Sabadell City Council.	Business associations, Ecological Transition department and specialised consultancy service.	
A.1.2 Consolidation of a consultancy service on photovoltaic panels in industries 	PES started this service in September 2024 with the aim to help companies to install photovoltaic panels and thereby contribute to the generation of green energy. The consolidation of this service along the time will help to guarantee energy transition among the industries.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council.	Promoció Econòmica de Sabadell.	Specialised consultancy service, companies and industries. Sabadell Chamber of Commerce, CIESC and PIMEC which offer the service too.	
A.1.3 Exploration of the installation of solar pergolas 	Installation of pergolas with photovoltaic panels with the aim to ensure shadow areas and create green energy. A previous study should be done to evaluate the action feasibility and their installation in different locations, like green areas or parking areas, of the different industrial areas.	Provincial Council of Barcelona, Sabadell City Council and European funding.	Promoció Econòmica de Sabadell and Sabadell City Council.	Companies, specialised consultancy service, Public Works, Parks and Gardens department and Ecological Transition department.	



GREEN ENERGY TRANSITION

A

Increase of solar energy production & consumption

1

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
A.1.4 Exploration of the installation of smart lighting 	Lighting installation with photovoltaic panels to generate autonomous energy and/or automatic adjustment according to natural light and the presence of people. A previous study should be done to evaluate the action feasibility and their installation in different locations.	Provincial Council of Barcelona, Sabadell City Council and European funding.	Promoció Econòmica de Sabadell and Sabadell City Council.	Specialised consultancy service, Ecological Transition department and the Public works, Parks and Gardens department.	



GREEN ENERGY TRANSITION

A

Improvement of the energy efficiency in the industries

2

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
A.2.1 Consolidation of a free consultancy service on energy efficiency 	PES started this service in February 2025 with the aim to help companies to improve their energy efficiency performance. The consolidation of this service along the time will be crucial to ensure energy transition among the industries.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council.	Promoció Econòmica de Sabadell.	Specialised consultancy service, companies and industries. Sabadell Chamber of Commerce, CIESC and PIMEC which offer the service too.	



CIRCULAR ECONOMY IMPLEMENTATION

B

New uses for reclaimed water

1

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
B.1.1 Keep informed about the new possible uses of reclaimed water for industries in accordance to the futur city agreement 	Companies get to know the possible uses of reclaimed water for industries. Enrolment of industries into the agreement and definition of future steps.	Funded by the Sabadell City Council.	Promoció Econòmica de Sabadell and Sabadell City Council.	Local water company (CASSA), Sabadell Chamber of Commerce, CIESC, PIMEC and Sabadell Municipality Water Office.	
B.1.2 Study of stormwater reuse (collection, accumulation, treatment and storage) 	Exploration of the stormwater as a source of water for selected city uses, while looking for solutions to future droughts.	90% funded by the Catalan Water Agency (ACA) and 10% funded by the Sabadell City Council.	Promoció Econòmica de Sabadell and Sabadell City Council.	Companies, Local water company (CASSA), Sabadell Municipality Water Office, Catalan Water Agency (ACA).	
B.1.3 Reclaimed water from the Ripoll's Wastewater Treatment Plant 	Exploring the possibility to convert into reclaimed water the Ripoll's Wastewater Treatment Plant water and pump it to the other industrial areas.	Funded by the Sabadell City Council.	Promoció Econòmica de Sabadell and Sabadell City Council.	Local water company (CASSA), Sabadell Municipality Water Office, Catalan Water Agency (ACA), Public Works, Parks and Gardens department and Urbanism department.	



CIRCULAR ECONOMY IMPLEMENTATION

B

Facilitation of industrial symbiosis

2

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
B.2.1 Exploration of the current waste materials data base in order to identify opportunities and reduce discarded waste materials 	Detection of major waste materials. Action framed by the Industrial Symbiosis Programme.	60% funded by the Provincial Council of Barcelona and 40% funded by Sabadell City Council.	Promoció Econòmica de Sabadell.	Specialised consultancy service, companies, industries and Waste department.	
B.2.2 Fostering a local virtual platform with updated information on waste materials	Being part of the current metropolitan virtual platform to showcase and exchange waste materials among companies.	Sabadell City Council.	Promoció Econòmica de Sabadell.	Metropolitan Area of Barcelona, Provincial Council of Barcelona and Waste Agency of Catalonia.	



CIRCULAR ECONOMY IMPLEMENTATION

B

Empowerment of the circular economy concept

3

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
B.3.1 Exploration of the transformation of the major discarded waste materials into a possible city product	Creation of a city product in order to mainstream what Circular Economy is and how does it benefit the city and its citizens.	European funding through different project calls.	Promoció Econòmica de Sabadell.	Multiple departments of Sabadell City Council, industries, R&I centres and universities.	
B.3.2 Professional training to cover the new circular economy job opportunities (circular jobs)	Aiming to ensure that circular economy could have a positive impact on jobs and workers, the identification of the main skills required in circular jobs (directly or indirectly involved in circular economy processes and strategies) is needed. On doing this, new future specific training programmes could be designed to provide workers with new mindsets and skills and create new professional opportunities.	Provincial Council of Barcelona, Sabadell City Council and European funding.	Promoció Econòmica de Sabadell.	Educational centres, companies, Education department and all PES departments.	



GREEN INVESTMENT ATTRACTION

C

Increase of the number of green industries

1

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
C.1.1 Establishment of green criteria in public procurement	A set of green criteria to be applied in public procurement.	Sabadell City Council.	Promoció Econòmica de Sabadell.	Multiple departments of Sabadell Municipality.	
C.1.2 Detection of key elements to attract green industries to Sabadell	Identification of green companies' key elements when deciding where to set up. The final aim relies on attracting new green companies into the territorial ecosystem. This action will require the previous definition of what a green industry is and its necessities.	Sabadell City Council.	Promoció Econòmica de Sabadell.	Industries, companies and PES Communication Department.	



GREEN INVESTMENT ATTRACTION

C

Transformation of the CEI* in a sustainable industry flagship

2

*Centre d'empreses industrials (CEI). Industrial companies centre.

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
C.2.1 Transformation of a wall of the future expansion of the CEI into a vertical garden 	Aiming to convert the CEI in a green building, the transformation of one of the walls of the future building extension into a vertical garden, and its climate benefits, will be explored.	Sabadell City Council and European funding through different project calls.	Promoció Econòmica de Sabadell and Sabadell City Council.	Specialised consultancy service and Ecological Transition department.	
C.2.2 Study for the installation of photovoltaic panels and the implementation of collective self-consumption 	Aiming to convert the CEI in a green building, the installation of photovoltaic panels on the roof, and its potential energy generation, together with the collective self-consumption model, will be explored. A previous study for this action is needed which is currently ongoing.	60% funded by the Provincial Council of Barcelona and 40% funded by Sabadell City Council.	Promoció Econòmica de Sabadell and Sabadell City Council.	Specialised consultancy service and Ecological Transition department.	
C.2.3 Considering a dedicated space for green industries in a future CEI extension 	Promotion and boost of green industries through their clustering in a new space at CEI.	Sabadell City Council and European funding through different project calls.	Promoció Econòmica de Sabadell and Sabadell City Council.	Multiple services and departments.	



GREEN INVESTMENT ATTRACTION

C

Improvement of the industrial green spaces

3

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
C.3.1 Study of green spaces in industrial areas 	Map of green spaces in industrial areas and study of their main uses, as well as their possible conversion into more vibrant spaces.	60% funded by the Provincial Council of Barcelona and 40% funded by Sabadell City Council.	Promoció Econòmica de Sabadell and Sabadell City Council.	Specialised consultancy service and Public works, Parks and Gardens Department.	



GREEN INVESTMENT ATTRACTION

C

Sustainable mobility into the industrial areas

4

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
C.4.1 Public transport optimisation	Future solutions to improve the public transport mobility in and to the industrial areas of the city, while optimising timetables, routes and other facilities to workers.	Funded by Sabadell City Council.	Promoció Econòmica de Sabadell and Sabadell City Council.	Specialised consultancy service, Mobility department and TUS company (Urban Transports of Sabadell).	



CROSSCUTTING ACTIONS INTEGRATION

D

University collaboration establishment

1

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
D.1.1 Consolidation of an annual collaboration with a relevant department of Universitat Autònoma de Barcelona (UAB)	Creation of a permanent collaboration with the university to work together in the definition of territorial actions and strategies.	Funded by the Sabadell City Council and European funding calls.	Promoció Econòmica de Sabadell.	Universitat Autònoma de Barcelona and competent departments of Sabadell Municipality.	



CROSSCUTTING ACTIONS INTEGRATION

D

Communication performance implementation

2

ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
D.2.1 Consolidation of the SBD Sustainable Industry Programme 	Consolidation of the current programme as a reference for green industrial transition.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council.	Promoció Econòmica de Sabadell.	Territorial stakeholders, Sabadell Chamber of Commerce, CIESC and PIMEC.	
D.2.2 Best Green Company Awards	Selection and recognition of best practices focused in green transition carried out by city companies. This action requires a previous definition of the awards' regulatory bases.	Funded by the Sabadell City Council.	Promoció Econòmica de Sabadell.	Territorial stakeholders and Ecological Transition Department.	



CROSSCUTTING ACTIONS INTEGRATION

D

ULG core group meetings continuation

3

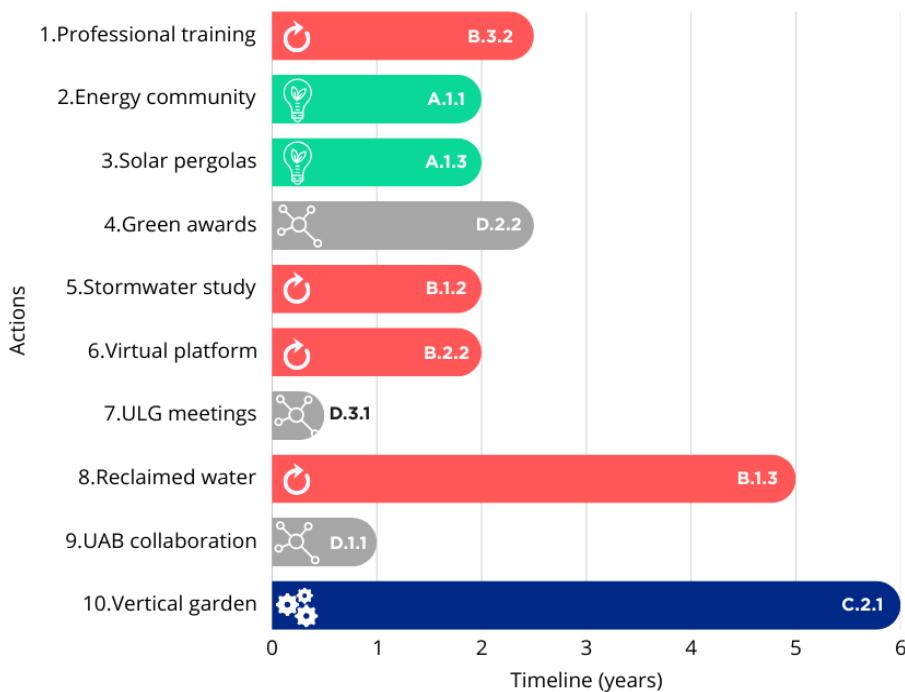
ACTION	INTENDED RESULT	RESOURCES	LEAD AGENCY	KEY PARTNERS	TIMESCALE
D.3.1 Consolidation of the ULG core group	Permanent meetings of the core group to be set annually, considering the core group as a referent for green transition in industry.	Funded by the Sabadell City Council and PES.	Promoció Econòmica de Sabadell.	Territorial stakeholders.	

ACTION PLANNING DETAILS

SELECTION OF ACTIONS

With the aim of taking an important step towards implementation by selecting and planning some of the actions in greater detail, a consultation session was held with the ULG core group. As a result, 10 actions were selected, analysed in depth and prioritised, as shown in the figure below.

Figure 12 Selection of actions represented by importance and timeline



Source: Promoció Econòmica de Sabadell

Each action is presented on a one-page panel with its identification code and framed by its operative and strategic objectives. Their intended result is described and accompanied by two possible attributes: Gender and Digitalisation . These two cross-cutting components, identified during the ULG Core Group meetings, may enhance the actions and ensure an equitable and successful green transition.

Moreover, each action is accompanied by an impact-effort matrix which helps to illustrate the level of effort required in relation to the expected impact. Thus, actions placed in the *high Impact - low effort* quadrant are considered “Quick Wins” and should be tackled first since they offer a high return in relation to the effort. Actions placed in the *high impact - high effort* quadrant correspond to “Major Projects” and although they are strategic they require significant time and resources. Those actions placed in the *low impact - low effort* quadrant, are understood as “Fill-ins” since they are easy to complete but no a big difference is expected. Finally, the *low impact - high effort* quadrant, where none of the 10 actions is placed, should be avoided whenever possible, as it contains “Time-waster” tasks.

Finally, a planning action table is presented. A synthesized road map where each action is detailed in implementation steps, key partners, cost and funding, risk assessment, monitoring indicators and timeline. All the actions are conceived to be triggered by *Promoció Econòmica de Sabadell*, and/or *Ajuntament de Sabadell* when required, although final leadership may be assumed by key partners. The implementation timeline show the time required from the start of each action until its full execution and is estimated based on their level of difficulty.



A.1.1



GREEN ENERGY TRANSITION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

Increase of solar energy production & consumption

ACTION NAME

Evaluate the feasibility of creating an energy community and its implementation

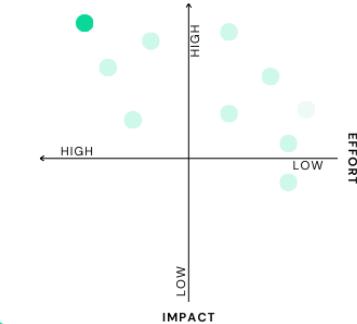


OBJECTIVE & INTENDED RESULT

Arising from the need to improve green energy consumption and production of the industries, the creation of an energy community in a industrial area is proposed. This action not only would contribute to improve the energy autonomy of the productive ecosystem but to move towards a smart territorial ecosystem based on sustainability and digitalisation where industries could improve their competitiveness while taking advantage of green transition. The following good practices were identified: [Industrial area of Bufalvent \(Manresa\)](#) and [Castellbisbal Inspira](#).

In addition, Sabadell will constitute a Local Energy Community (2026) of municipal scope that will allow citizens, companies and public services to play an active role in the use of green energy.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Identification of interested companies and industries to participate in the energy community.	Business associations, Ecological Transition department and specialised consultancy service.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council. Estimated total cost of 3.000€.	No interest by the companies to participate in it. No funding availability.	-Number of companies and industries reached. -Number of companies and industries interested in participating.	<div style="display: flex; align-items: center; justify-content: space-between;"> 1 2 3 4 </div>
Feasibility study, according to data provided by companies, to assess the creation of an industrial energy community.	Business associations. Ecological Transition department and specialised consultancy service.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council. Estimated total cost of 9.000€.	No funding availability.	-Successful delivering of the study.	<div style="display: flex; align-items: center; justify-content: space-between;"> </div>
Implementation of the energy community after a positive result of the feasibility study, with the definition of all the technical, management and execution tasks to be developed.	Business associations. Ecological Transition department and specialised consultancy service.	Provincial Council of Barcelona, Sabadell City Council and European funding. Estimated total cost 300-500€/m ² + 15.000€ of consultancy service.	Negative result of the previous feasibility study, so an energy community could not be created. No funding availability.	-Number of companies and industries involved. -Energy and money saved by the companies and industries (first year).	<div style="display: flex; align-items: center; justify-content: space-between;"> </div>



A.1.3



GREEN ENERGY TRANSITION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

Increase of solar energy production & consumption

ACTION NAME

Exploration of the installation of solar pergolas



OBJECTIVE & INTENDED RESULT

Installation of pergolas with photovoltaic panels with the aim to ensure shadow areas and create green energy. This action not only would help to mitigate city heat islands, specially hard in industrial areas, but to bring the opportunity to produce green energy for multiple purposes. A previous study should be done to evaluate the action feasibility and their installation in different locations, like green areas or parking areas, of the different industrial areas.

This action would highly contribute to advance on the city digitalisation.

The following good practice was identified: Solar pergolas in the Olimpic Port (Barcelona) - <https://portolimpic.barcelona/ca/nautica-sostenible-gestio-ambiental>.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Technical feasibility study about the main locations to install the solar pergolas and the potential generation of kWh, as well as the energy multiple uses.	Specialised consultancy service, Public Works department and Ecological Transition department.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council. Estimated total cost of 9.000€.	No funding availability.	-Successful delivering of the study.	<div style="display: flex; align-items: center; justify-content: space-between;"> 1 2 3 4 </div>
Evaluation of the energy beneficiaries: 100% municipal or shared among the municipality and companies of the selected industrial area. Exploration of the creation or enlargement of an energy community.	Companies and the Ecological Transition department.	No extra cost associated.	No agreement on how to manage the energy produced.	-Number of stakeholders involved. -Potential number of industries or public buildings powered.	<div style="display: flex; align-items: center; justify-content: space-between;"> 1 </div>
Construction study and installation.	Ecological Transition department, Public Works department and installation company.	Provincial Council of Barcelona, Sabadell City Council and European funding. Estimated total cost between 300-500€/m2.	Negative result of the feasibility study. No funding availability.	During the first year: -Kwh of energy produced. -C° decreased under the canopy. -Money saved.	<div style="display: flex; align-items: center; justify-content: space-between;"> 2 </div>

B.1.2

CIRCULAR ECONOMY IMPLEMENTATION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

New uses for reclaimed water

ACTION NAME

Study of stormwater reuse (collection, accumulation, treatment and storage)



OBJECTIVE & INTENDED RESULT

By 2030, global water demand will exceed available resources by 40%. The exploration of the stormwater as a source of water for selected city uses becomes essential, while looking for solutions to future droughts. Rain becomes a valuable resource rather than a waste helping to create more-resilient urban spaces.

This action intends to explore circular water solutions either in public space or in industries and become the first step for a future deployment of stormwater reservoirs in the city.

This action will be included in the future draft of the Integrated Sanitation Management Plan of the City of Sabadell (2026).

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Analysis of the local climatology and pluviometry, the urban structure of the city, its capacity for the water storage, the potential uses for the collected stormwater and the legal framework. Identification of the best locations to collect and accumulate stormwater (parks, roofs, etc), and to evaluate a future development of them (sort of solution proposed, cost and timescale).	Water Office of Sabadell, ACA and CASSA.	90% funded by ACA and 10% funded by the Sabadell City Council. Cost included in the overall budget of the Sanitation Management Plan for the City of Sabadell (total cost 700.000€)	No funding availability. No integration of the action into the future Plan.	-Successful delivering of the Sanitation Management Plan for the city of Sabadell.	1 2 3 4
In the event that potential uses include industrial use, the identification of companies interested in the stormwater reuse will be necessary.	Companies, Water Office of Sabadell, ACA and CASSA.	No extra cost associated.	Work overload of the technical staff of PES No interest by the companies to participate in it.	-Number of companies and industries interested to be involved. -Water consumption during the first year.	1



B.1.3

CIRCULAR ECONOMY IMPLEMENTATION

STRATEGIC OBJECTIVE

OPERATIVE OBJECTIVE

G

D

New uses for reclaimed water

ACTION NAME

Reclaimed water from the Ripoll's Wastewater Treatment Plant



OBJECTIVE & INTENDED RESULT

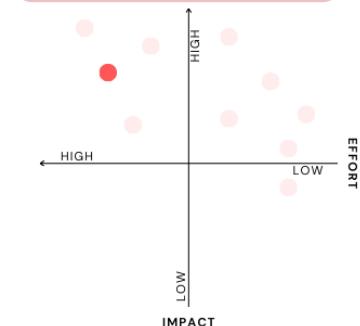
Currently, Sabadell counts with reclaimed water in the industrial area of Sant Pau de Riu-sec, where by 2024 more than 50% of the water consumed was regenerated, saving drinking water for other necessary uses. The city is drawing up a Reclaimed Water Master Plan that aims to double the length of the network in the coming years, from the current 33 km of pipelines to 68 km. The first extension (by the end of 2025 in the Can Gambús neighbourhood) will allow the Sud-Oest industrial area to benefit from regenerated water for industrial uses, while it will be also possible to reach companies in the Gràcia Nord and Can Feu industrial areas.

With the aim to enlarge the reclaimed water network to other industrial areas of the city, the possibility of obtaining reclaimed water directly from the Ripoll Wastewater Treatment Plant can be explored.

ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (YEARS)
Proposal to include the reclaimed water from the Ripoll's Wastewater Treatment Plant project in the ACA Participatory Plan 2027-2032. This process may be accelerated due to the transposition of a new European law approved on reclaimed water, which obliges the Ripoll's Wastewater Treatment Plant to treat the water.	CASSA, Water Office of Sabadell and ACA.	ACA No estimated cost is available.	The proposal is not included in the ACA Participatory Plan 2027-2032.	-Completion of the ACA Participatory Plan 2027-2032.	<div style="display: flex; align-items: center; justify-content: space-between;"> 1 2 3 4 5 6 </div>
If the proposal is included in the ACA Participatory Plan 2027-2032, its implementation could be done. Thus, the reused water from the Ripoll Wastewater Treatment Plant could be available. This process is estimated, at least, in 4 years long.	CASSA, Water Office of Sabadell, ACA, Public Works, Parks and Gardens department and Urbanism department.	ACA, CASSA and Sabadell City Council. No estimated cost is available.	The proposal cannot be implemented due to lack of funding and/or interest.	-Volume of reclaimed water produced. -Extended pipelines length of regenerated water (km). -Number of companies supplied with regenerated water.	<div style="display: flex; align-items: center; justify-content: space-between;"> 1 2 3 4 5 6 </div>

IMPACT-EFFORT





B.2.2

CIRCULAR ECONOMY IMPLEMENTATION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

Facilitation of industrial symbiosis

ACTION NAME

Fostering a local virtual platform with updated information on waste materials

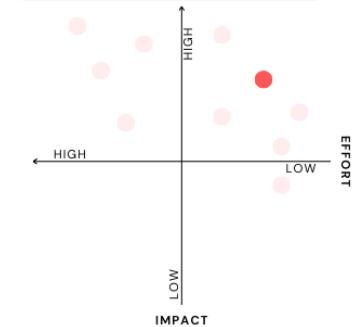


OBJECTIVE & INTENDED RESULT

The Metropolitan Area of Barcelona (AMB) is in charge of a virtual platform with updated information on waste from the municipalities of the AMB. The platform would provide information to Sabadell City Council on the types of waste generated by local companies and would allow to consider options for reusing, to promote circularity and to identify opportunities for collaboration between companies.

This action would complement the service offered by the Industrial Symbiosis platform of the Waste Agency of Catalonia, which acts as a marketplace, bringing together supply and demand needs for materials/waste between companies and entities.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Promote from Sabadell the expansion of the platform and its use by the municipality.	Barcelona Provincial Council. Metropolitan Area of Barcelona. Other municipalities interested in the platform.	No extra cost associated.	No interest shown by the key partners to pursue the objective. Action duration uncertain.	-Number of meetings with the key partners.	1 2 3 4 5
Agreement on the participation of Sabadell in the AMB virtual platform, where the Waste Agency of Catalonia provides the AMB with information about Sabadell in order to integrate and process it in the platform.	Metropolitan Area of Barcelona and Waste Agency of Catalonia.	Sabadell City Council. The cost needs to be agreed with the Metropolitan Area of Barcelona.	No agreement reached.	-Signed agreement.	1 2



B.3.2



CIRCULAR ECONOMY IMPLEMENTATION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

Empowerment of the circular economy concept

ACTION NAME

Professional training to cover the new circular economy jobs opportunities (circular jobs)

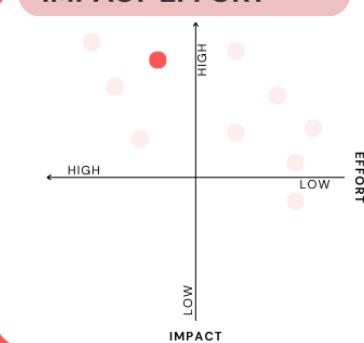


OBJECTIVE & INTENDED RESULT

Circular Economy appears as one of the main building blocks of the European Green Deal (Circular Economy Action Plan), as well as part of the national strategy "España Circular 2030" to promote a new production and consumption model in which the value of products, materials and resources are maintained within the economy as long as possible. In this regard, new professions will be needed to ensure the minimal waste and extend the products lifespan as much as possible, reusing materials and transforming the way we produce and consume.

Demands linked to waste management, repair, maintenance and reconditioning of products, eco-design, Life Cycle Assessment or traceability of materials, among others, will need to be supplied through specialised professionals.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Study of main circular economy jobs and new market demands. Local industries needs should be considered too.	Specialised consultancy service, companies and industries.	60% funded by the Provincial Council of Barcelona and 40% funded by the Sabadell City Council. Estimated cost of 9.000€	No funding availability. Negative result of the study.	-Successful delivering of the study.	1 2 3 4 5
Agreement between PES, Government of Catalonia and different local educational centres to evaluate the creation of new professional training programmes in the city linked to Circular Economy.	Government of Catalonia, educational centres of Sabadell, Education Department of Sabadell and multiple departments of PES.	No extra cost associated.	No agreement reached. Negative result of the evaluation.	-Signed agreement. -Number of meetings. -Number of professional training programmes proposed.	1 2
Curricula creation of the professional training programmes, space reconditioning and material investment (if needed) and start of the professional training programmes.	Government of Catalonia, educational centres of Sabadell, Education Department of Sabadell and multiple departments of PES.	Funded by the Sabadell City Council and the Government of Catalonia. The investment might vary from 30.000 to 100.000€.	No curricula creation done. Lack of resources and materials. Lack of specialised teachers.	-Number of professional training programmes started in the first year. -Number of students enrolled in the first year.	1 2



C.2.1



GREEN INVESTMENT ATTRACTION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

Transformation of the CEI in a sustainable industry flagship

ACTION NAME

Transformation of a wall of the future expansion of the CEI into a vertical garden

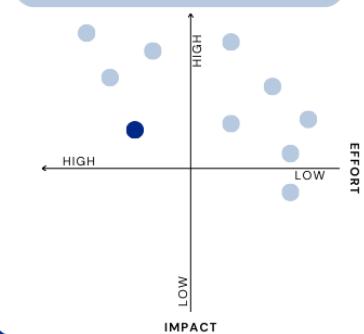


OBJECTIVE & INTENDED RESULT

The transformation of the CEI front wall into a vertical garden would contribute to green the industrial area of Can Roqueta and to foster the image of the CEI as an example of sustainable building. Vertical gardens are an excellent tool for renaturalisation and for climate change mitigation, acting as a thermal insulator for the building and creating urban biodiversity. Moreover, they are a very interesting option in compact cities, where green areas are limited, to complement the network of green areas and climate shelters. As a counterpart, they require a permanent and systemic maintenance which needs to be analysed in depth. The vertical garden would be developed in one of the new walls of the future CEI expansion.

The city of Barcelona compiles an important number of good practices of vertical gardens.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (YEARS)
Inclusion, in the future expansion of the CEI, of a technical study to convert one of the walls into a vertical garden. The study and the executive project should include the evaluation of the walls (solar orientation, construction material of the wall and supported structures, access to water and drainage, etc.), the design of the garden, as well as a maintenance plan for the vertical garden.	Specialised vertical gardens company, Public works, Parks and Garden department and Ecological Transition department.	Sabadell City Council. Study estimated cost between 5.000€ - 9.000€.	No funding availability. Unfavourable study results.	-Successful delivering of the study.	1 2 3 4 5 6
Execution of the vertical garden (once the expansion of the CEI would be done with an uncertain timetable) and creation of a maintenance plan. Considering its integration in the Green Plan Sabadell.	Specialised vertical gardens company, Public works, Parks and Garden department and Ecological Transition department.	European funding, Provincial Council of Barcelona funding and Municipality of Sabadell funding. Estimated cost between 200-500€/m2.	No CEI expansion.	-Amount of energy saved during the first year of implementation.	1 2 3 4 5 6



CROSSCUTTING ACTIONS INTEGRATION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

University collaboration establishment

ACTION NAME

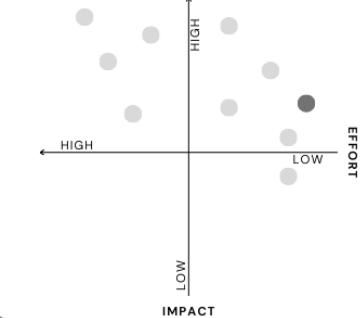
Consolidation of an annual collaboration with a relevant department of Universitat Autònoma de Barcelona (UAB)

OBJECTIVE & INTENDED RESULT

Arising from the excellent results of the testing action celebrated on 28th October 2024 with the Geography Department of the UAB, an annual collaboration wants to be consolidated. The participation of the UAB students in some key projects of PES not only would bring into the projects fresh ideas but also the possibility to include the academia knowledge in them. This action could be extended to other departments of the Sabadell City Council in case of interest.

The action appears as a good opportunity to include gender perspective, from the university students, in the different city projects.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Detection of key projects where UAB could be involved in. This process should be done in an annual basis.	UAB	No extra cost associated.	No projects detected.	-Number of projects detected.	<div style="display: flex; align-items: center; justify-content: space-around;"><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div></div>
Agreement of collaboration between UAB and PES.	UAB	No extra cost associated.	No agreement reached.	-Number of reached agreements. -Number of meetings.	<div style="display: flex; align-items: center; justify-content: space-around;"><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div></div>
Design of a specific programme according to every project needs and collaboration deployment.	UAB	PES and European funding (when working in an European project). Cost 200€-300€ (coffee break)	No programme design and no collaboration deployment.	-Number of collaborations per year. -Number of participating students per year.	<div style="display: flex; align-items: center; justify-content: space-around;"><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div><div style="border: 1px solid #ccc; border-radius: 50%; width: 10px; height: 10px; background-color: #ccc;"></div></div>



D.2.2



CROSSCUTTING ACTIONS INTEGRATION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

Communication performance implementation

ACTION NAME

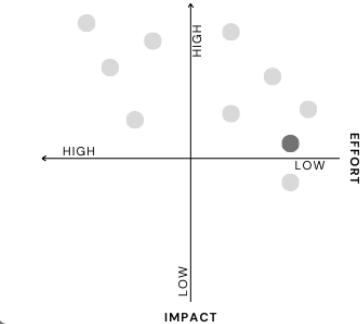
Best Green Company Awards

OBJECTIVE & INTENDED RESULT

The awards want to recognise the commitment of local companies to environmental sustainability, showing the best sustainable practices that have positively impacted on the company in terms of: cost savings, energy reduction, waste reduction and recycling, product life cycle improvement, sustainable creative solutions, among others.

The action wants to communicate and disseminate how green transition can help to improve the companies' and industries' competitiveness, and how important is their role to mitigate climate change at local and global scale. Finally, the action acts as a showcase for the awarded companies and industries and as a powerful image to attract other businesses committed with sustainability to settle down in the city. This action could be tested, in a small format, during the Night of the Companies event.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Definition of what a green company is and what are its needs and priorities (research and field work at the local companies will be needed). This is a shared step with action C.1.2.	Sabadell City Council, companies and industries.	No extra cost associated.	Work overload of the technical staff of PES No interest by the companies to participate in it.	-Successful definition of a green company.	<div style="display: flex; justify-content: space-around; align-items: center;"> 1 2 3 4 5 </div> <div style="display: flex; justify-content: space-around; align-items: center;"> 1 2 </div> <div style="display: flex; justify-content: space-around; align-items: center;"> 1 2 </div> <div style="display: flex; justify-content: space-around; align-items: center;"> 1 2 </div>
Definition of the awards' objective and their scope. Creation of an organising committee for the categories' establishment, selection criteria, awards definition, legal competition rules, etc.	Sabadell City Council.	No extra cost associated.	Work overload of the technical staff of PES.	-Organising committee created. -Awards rules defined.	
Awards ceremony preparation and communication strategy definition. Celebration of the awards ceremony.	Sabadell City Council.	Funded by PES & the Sabadell City Council. Associated cost: -promotion materials (300€) -catering (1.000-1.500€) -awards (to be defined)	No funding available. No participants in the call.	-Number of dissemination emails sent. -Number of candidatures received. -Number of awards.	



D.3.1



CROSSCUTTING ACTIONS INTEGRATION

STRATEGIC OBJECTIVE

IN4GREEN

OPERATIVE OBJECTIVE

G

D

ULG core group meetings continuation

ACTION NAME

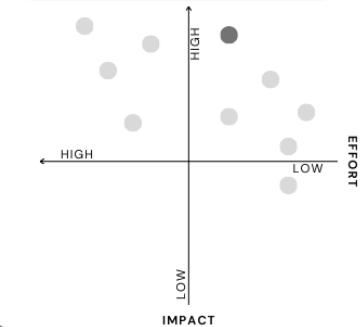
Consolidation of the ULG core group

OBJECTIVE & INTENDED RESULT

The good functioning of the ULG core group, as well as the connections and shared interests among its members, led to considering its continuity as a key element—both for assessing the implementation of the current Integrated Action Plan and for fostering future collaboration opportunities.

Maintaining and consolidating the group is particularly important, given its role as a consultation space with key territorial stakeholders and its cross-cutting perspective, which is highly valuable for multiple projects.

IMPACT-EFFORT



ACTION PLANNING

IMPLEMENTATION STEPS	KEY PARTNERS	COST/FUNDING	RISK ASSESSMENT	MONITORING INDICATORS	TIMELINE (SEMESTERS)
Agreement with the ULG core group to maintain this space for possible consultations linked to different territorial projects.	Multiple territorial stakeholders.	No extra cost.	No agreement reached to continuing and consolidate the ULG meetings.	-Annual meetings. -Number of projects where the ULG has participated in .	<div style="display: flex; align-items: center; justify-content: space-between;"> 1 2 3 4 5 </div> <div style="flex-grow: 1; height: 10px; background-color: #ccc; border-radius: 5px; margin-top: 5px;"></div>

IMPLEMENTATION FRAMEWORK

GOVERNANCE

All the actions here presented are aimed at providing a clear roadmap to enhance sustainability in the industrial sector, either among the companies or in the industrial areas of the city. The leadership and promotion of the actions are intended to rest with Promoció Econòmica de Sabadell, with the exception of those actions which, due to their technical and executive complexity, as well as the lack of full competencies required for their development, will require the leadership and/or collaboration of the Sabadell City Council.

Moreover, it is important to highlight that some actions may require the involvement of multiple territorial stakeholders, which demands a cooperative governance approach, including the creation of appropriate working mechanisms and optimal collaborative spaces where the action leaders and stakeholders could interact effectively.

While Promoció Econòmica de Sabadell is initially responsible for overseeing the governance of the IAP as a whole, once an action has been technically and politically approved and is ready for implementation, it will be necessary to develop a comprehensive governance diagram detailing coordination mechanisms among municipal departments and external stakeholders. Having a governance diagram for each action will be of particular value in ensuring their successful implementation.

STAKEHOLDER ENGAGEMENT

The good functioning of the ULG Core Group, as well as the connections and shared interests among its members, have turned it into a high-value working space. For this reason, it is considered of particular interest to maintain—and expand—it as a space for consultation, evaluation, and collaboration for both the IAP and future projects.

In this regard, the transversal perspective provided by the ULG Core Group is key to the proper development of the actions. For this reason, the present IAP includes a specific action to ensure the continuity of the ULG Core Group: D.3.1 Consolidation of the ULG Core Group.

COSTINGS AND FUNDING STRATEGY

Funding is one of the cornerstones for the actions deployment. Thus, each action is accompanied by a costing and funding strategy which estimates the costs and identifies the possible sources of funding in every implementation step. Costing and funding are particularly significant in those actions where hard infrastructure is required. However, it is important to highlight that estimations may vary along the time as well as funding, which may change depending on the funding period. This is especially relevant when funding comes from public organisations and/or specific funding calls like in this IAP.

Once the actions receive the political and technical approval a detailed costing planning will need to be produced, being adjusted to the final design of the actions. This fact is very relevant in those actions concerning infrastructures, where construction costs need to be accurately calculated. Moreover, a funding framework will need to be produced per action, which also takes into consideration the inclusion of public-private partnerships and private co-financing mechanisms for concrete actions and/or sub-actions.

TIMELINE

Although a timeline has been planned for each action, the starting date for the action deployment remains unknown. This is why a Gantt chart has not been produced to show dependencies, sequencing, or implementation rhythm.

In this regard, every action timeline offers an estimation of its execution length, but lacks to represent a real time planning where bottlenecks or unrealistic workloads could be detected.

The nature of the timeline is to depict an overall picture for the actions implementation, so an impact-effort evaluation could be done before its deployment. This would really help to clarify the action needs and to schedule it in time after its political and technical approval.

All the actions have been planned per sub-actions taking as time reference the semester. 6 out of 10 actions are calculated to have an implementation length of 2 years at the most, while 2 out of 10 are considered long actions which execution might take more than 5 years.

RISK ASSESSMENT

The impact-effort matrix provided a framework for assessing the likely threats to successful implementation, including an estimation of the likelihood and potential impact of each action. The impact-effort matrix, applied to the initial 23 actions, was developed during the 3rd ULG core group meeting, identifying each action as a: quick win (low effort and high impact), major project (high effort and high impact), fill-in (low effort and low impact) or time-waster (high effort and low impact). None of the 10 final actions responds to the “time-waster” category, helping to avoid some risks mainly related to funding and working overload.

As a result, 5 actions were classified as “quick win”, 4 actions as “major projects” and 1 as “fill-in”.

Finally, action risks are identified in every action panel and disaggregated by sub-actions to plan more carefully their mitigation. In future steps, after the political and technical IAP assessment, a unified citywide monitoring system would be of interest to enhance tracking and accountability.

MONITORING AND REPORTING

For each action, relevant indicators have been defined, incorporating both output-oriented and impact-focused metrics to ensure comprehensive monitoring and evaluation.

However, since the IAP is conceived as a road map to enhance sustainability in the industrial sector, each action is subject to technical and political approval. Thus, an overall plan for monitoring implementation and reporting on progress has not been integrated in the IAP, rather than including a set of indicators for each action.



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