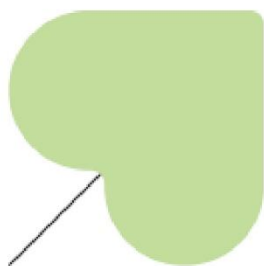




Viladecans Climate City Contract





Viladecans



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Presentation

At a critical juncture for the global response to climate-related emergencies, the European Union has pledged to lead climate action and has established the objectives and legislation to achieve this. As a result, the European Union must reduce its emissions by **at least 55% by 2030** and achieve climate neutrality by mid-century. In this context, cities are called upon to play a pivotal role, both in accelerating the decarbonisation process and in ensuring a fair and equitable transformation that contributes to the well-being of society as a whole.

It is noteworthy that cities, despite occupying only around 3% of the Earth's surface, generate over 70% of greenhouse gas emissions and consume more than 65% of global energy. It is imperative that they act as hubs of experimentation and innovation in the transition towards climate neutrality.

The EU Mission "**100 Climate Neutral and Smart Cities by 2030**" aims to support the transformation of cities to expedite compliance with the Paris Agreement, and to serve as both a catalyst and a driver for the implementation of the European Green Deal, as well as a demonstration that climate neutrality is achievable before 2050.

Continuing along this path, and in a geopolitical and economic climate that has underscored the need for strategic autonomy and resilience, the European Commission has also taken a decisive step to ensure that the climate transition not only consolidates but also reinvigorates the continent's industrial competitiveness. Within this framework, on 26 February 2025, the Clean Industrial Deal was unveiled, a comprehensive strategy designed to accelerate the decarbonisation of the European economy and, simultaneously, foster reindustrialisation based on clean technologies and resilient value chains. This pact acknowledges the urgency of creating a favourable environment for European industry in the face of global competition and high energy costs, proposing a set of actions focused on affordable energy, boosting demand for clean products, circularity, access to critical raw materials, and the development of necessary capabilities.

Thus, cities, as epicentres of the EU Mission, are now in an even more strategic position: they must not only accelerate their decarbonisation but also become attractive hubs for new green industries. In this regard, the Clean Industrial Deal and the various European financing instruments—including funds provided in the Green Deal, recovery mechanisms, and programmes to support innovation and reindustrialisation—offer opportunities to mobilise investments, foster local innovation, and promote the creation of skilled jobs in key sectors of the circular economy and clean technologies. In this way,



Climate City Contracts acquire a new dimension, needing to integrate this perspective of sustainable industrial competitiveness and actively help explore European funding opportunities so that the ecological transition is also a driver of prosperity and technological leadership for the Union in the current global scenario.

In Spain, on 8 September 2021, **the Government of Spain and the City Councils of Barcelona, Madrid, Seville, and Valencia signed the "Climate Neutral Cities by 2030" Declaration (annexed to this Contract)**, as a boost to the commitments and initiatives of the signatory cities and government support for the transformation of these cities to achieve climate neutrality and improve their resilience. Following this pioneering approach, on 13 December, the City Councils of Soria, Valladolid, Vitoria-Gasteiz, and Zaragoza acceded to the Declaration.

Furthermore, on 15 September 2021, the Senate Plenary approved a motion urging the Government to promote the climate neutrality of cities within the framework of the EU Cities Mission. The motion recognises the fundamental role of cities in responding to the climate emergency and highlights the opportunity to accelerate the necessary and cross-cutting changes for cities to be climate-neutral by 2030. It also values that the different territorial Administrations promote and facilitate the climate neutrality of Spanish cities through their incorporation into the Cities Mission and through the development of transformation projects.

In this respect, on 25 November 2021, the Cities Mission launched a call for expressions of interest addressed to European cities with over 50,000 inhabitants interested in participating. **Of the 377 that applied, 100 from the EU-27 were selected**, including the Spanish cities of Barcelona, Madrid, Seville, Valencia, Valladolid, Vitoria-Gasteiz, and Zaragoza.

The Mission Implementation Plan envisages that **each of the 100 selected cities will draw up a Climate City Contract tailored to its specific context**, through a co-creation process and in close collaboration with civil society and citizens as a whole, detailing the strategy for deploying and monitoring innovative and digital solutions to achieve climate neutrality, and allowing other cities to follow their example before 2050. Thus, this document constitutes a clear political commitment, not only to the European Commission and national, regional, and local authorities but also to citizens, and includes a general climate action plan across different sectors, such as energy, buildings, waste management, and transport, along with corresponding investment plans.

After the selection of the seven Spanish cities, the seven Spanish cities focused on preparing their Climate City Contracts. The co-creation work they championed



culminated in the submission of these documents to the European Commission during 2023: the first five cities (Madrid, Valencia, Valladolid, Vitoria-Gasteiz, and Zaragoza) submitted their Contracts in April 2023, while Barcelona and Seville did so in September 2023. As a result of this endeavour and after the corresponding evaluation, in October 2023, the European Commission announced that five of the first ten European cities to obtain the Mission Label, certifying the submission of a robust and viable Climate City Contract to achieve climate neutrality by 2030, were precisely Madrid, Valencia, Valladolid, Vitoria-Gasteiz, and Zaragoza. Spanish leadership in the Mission was consolidated in March 2024, when the European Commission awarded the Mission Label to Seville and Barcelona, **marking Spain as the first EU country where all designated cities in the Mission received this recognition**. Having obtained the Mission Label, these cities are now working on the implementation of their Climate City Contracts, deploying concrete actions and innovative projects on their path towards climate neutrality.

In 2024, Spanish cities, together with Swedish cities and with the support of their respective national platforms, citiES 2030 and Viable Cities, promoted the "**Carta Verde de València**" (Green Charter of València) **Development Declaration**. Presented at the 2024 Cities Mission Conference in Valencia, this declaration articulates a strategic alliance between the Mission cities to demand more support and funding from the European Commission to accelerate urban climate transition. Its primary objective is to promote scalability as the new normal, ensuring that successful climate solutions are replicated and expanded rapidly, fostering cooperation between cities and national platforms, and demonstrating collective leadership in urban climate action. Since its launch, the declaration has garnered the support of over 60 Mission cities, city networks, and national platforms in 15 Member States, thus consolidating the leadership of Spanish cities in promoting collective collaboration for climate action.

In 2025, and in accordance with the commitment established in the initial agreements, the Spanish Mission cities, with the support of the citiES 2030 platform, have initiated the iteration process of their Climate City Contracts. This review and adjustment exercise, fundamental for incorporating the learnings from the first years of implementation and for adapting roadmaps to the European context, has been collaboratively opened to the rest of the cities on the platform. With this, and in parallel to this iteration process, those cities that, without having been initially selected for the EU Mission, aspire to climate neutrality, have been able to advance in the preparation of their own Climate City Contracts, benefiting from the experience and knowledge generated by the Mission cities. **The cities of Bilbao and Viladecans have positioned themselves at the forefront of this group, submitting their Climate City Contracts**



coinciding with the iteration of the seven Spanish Mission cities. This fosters a pulling effect and a transfer of knowledge that is vital for scaling climate ambition at the national level.

This document responds to the requirements of the EU Cities Mission. It has been prepared by the city, with the participation of other public and private actors, and establishes plans to achieve city climate neutrality. In particular, it recognises that the Mission cannot succeed without being solidly anchored in the local community and garnering broad support. Therefore, it involves civil society, youth groups, cultural institutions and creative sectors, foundations, local media, small and medium-sized enterprises, private industry, trade unions, academia and research, and the public sector, among others, in their respective roles as decision-makers, users, consumers, producers, and owners.

Furthermore, it integrates the city's own qualities and heritage, which guarantee the local dimension of the transition towards climate neutrality, but also its inclusive nature, in accordance with the values of the New European Bauhaus (art/culture, sustainability, society). It fosters a sense of belonging and ownership among the city's inhabitants and professional actors, highlighting that their unique contribution is relevant and that the fulfilment of this Agreement will result in a better quality of life and a better environment for all.

Moreover, **it is configured within the framework of an iterative process, as a document that will be subject to monitoring and updating**, both through the signing of supplementary documents and other adherence documents, thus bringing together other actors necessary for the city to achieve the established climate neutrality objective. In particular, the commitments included may be expanded or updated to effectively contribute to the achievement of climate neutrality in the city. The document is divided into several parts: one relating to **the commitment of cities to achieve city climate neutrality**; another relating to **institutional support and coordination** between the different public administrations; another part referring to its **monitoring and updating**; and a final one comprising the annexes corresponding to the **Climate Action Plan**, the **Climate Investment Plan**, and the **City Stakeholders and Commitments**, which follow the models developed by NetZeroCities¹.

¹ The NetZeroCities project is part of the Horizon 2020 Research and Innovation Programme and provides the necessary technical, regulatory and financial assistance to cities participating in the European Mission Cities (<https://netzerocities.eu/the-nzc-project/>).



Viladecans' Commitment to Achieving Climate Neutrality by 2030

Viladecans is a city with a long history of active policies for sustainability and the fight against climate change.

Viladecans, an intermediate city in the Barcelona metropolitan area, is recognized for its long-standing commitment to environmental sustainability and the fight against climate change with a socially inclusive vision.

Thus, Viladecans' main objectives for joining the European Union's Mission for Climate-Neutral Cities by 2030 are closely tied to building a city that improves the lives of its citizens. We want to forge a pact between present and future generations to ensure a more pleasant, healthier, environmentally sustainable, and socially cohesive city.

The Viladecans Climate Mission represents an evolutionary step within the city's strategic planning framework, especially in the context of the Viladecans 2030-2040 Strategy. This strategy, approved in 2021 and revised in 2023, identified five major urban missions that guide municipal action towards a deep and systemic transformation of the city: economic revitalization, ecological transition, educational innovation, urban resilience to crises and catastrophes, and the urban regeneration model. These missions have served as a framework to reorder priorities, connect sectoral public policies, and activate alliances with other actors in the local ecosystem.

In parallel to this process, the European Commission launched the EU Missions program in 2021, conceived as a new challenge-oriented innovation instrument, with five major initial missions, including the Mission "100 climate-neutral cities by 2030 by and for citizens." Although Viladecans was not one of the cities selected in the first European call, the City Council decided to align with this mission logic, inspired by its fundamental principles: governance by objectives, collaborative work with multiple actors, impact orientation, and transparency in accountability.

Based on this strategic alignment, the city fully incorporated the climate mission approach as a structuring axis of its Urban Agenda and as a coordination tool for public policies linked to the ecological transition. This decision has strengthened the shared vision among territorial actors, activated voluntary commitments, and advanced in the construction of a common framework for local climate action, with the horizon set on emission neutrality before 2030.



This commitment document is part of the process of institutionalizing Viladecans' Climate Mission, with the aim of strengthening the city's leadership in climate action, channeling transformative investments, and formalizing a City Climate Contract that articulates public, private, citizen, and scientific efforts around a common goal: to achieve a climate-neutral, fairer, healthier, and more resilient city.

Viladecans also has extensive experience in developing sustainability strategies, plans, and actions, all of them built with broad-reaching citizen participation processes.

Thanks to these commitments and the path taken towards a green and fair transition in the face of the climate emergency, **Viladecans** has been **recognized by the European Commission as a European Green Leaf City** for 2025, in the category of cities with fewer than 100,000 inhabitants.²



Viladecans City Council. (2024). *Viladecans Green Leaf. Award for the greenest city in Europe.*
<https://www.viladecans.cat/es/premigreenleaf>

² European Commission. (2024). *Viladecans – European Green Leaf winner 2025.*
https://environment.ec.europa.eu/topics/urban-environment/european-green-capital-award/winning-cities/viladecans-2025_en



Here is a brief overview of some of the most important milestones in Viladecans' journey towards climate neutrality:

These efforts began with the approval of **Agenda 21**, followed by the city's accession to the **Covenant of Mayors for Sustainable Local Energy (October 2008)**³.

2008. The pioneering dual sewerage network comes into operation, with a separate drainage system to recover rainwater from the city. This project was financed by EU Cohesion Funds (80%) and the city council (20%).

2009. The Sustainable Energy Action Plan for the municipality of Viladecans is drafted and approved.

2014. The Viladecans City Council signed the Vilanova i la Geltrú Declaration and joined the Network of Towns and Cities for Sustainability to take a step forward from the Covenant of Mayors for Local Action on Climate Change.

2015. Joined the European initiative 'Mayors Adapt'.

2015. Integrated Sustainable Urban Development Strategy (DUSI Strategy (2016-2020)).

2016. The Local Climate Change Adaptation Plan (PLACC) for 2020 was drawn up, integrating the municipality's strategic lines and actions to reduce its vulnerability to the effects of the climate crisis.

The **Vilawatt Project (2016-2021)**⁴ : Viladecans, together with Paris and Gothenburg, was selected in the first call for proposals of the *Urban Innovation Action* (UIA) 2016, in the Energy Transition category, to develop a global and pioneering project to address the renewable energy transition in the city, with a prominent role for citizen participation.

⁵2018. The new Municipal Action Plan for Sustainable Energy and Climate (PAESC) was approved, with the aim of **reducing GHG emissions by at least 40% by 2030 compared to 2005**, in line with EU commitments. It also included **mitigation and adaptation objectives and action plans**.

³ Covenant of Mayors. (2008). *Commitment to Local Sustainable Energy*. EU Covenant of Mayors. Retrieved on 28 May 2025, from <https://eu-mayors.ec.europa.eu/en/signatory/12204>

⁴ Vilawatt. (n.d.). *Why and how Vilawatt was created*. Retrieved on 28 May 2025, from <https://vilawatt.cat/es/que-som/por-que-y-como-nace-vilawatt/>

⁵ Covenant of Mayors – Europe. (n.d.). *Integrated Sustainable Energy and Climate Action Plan (ISECAP)* [PDF]. Retrieved on 28 May 2025, from https://mycovenant.eumayors.eu/storage/web/mc_covenant/documents/8/l43BiqMmlbpq3F01LumQQClMLg92mlWB.pdf



⁶September 2019. The Municipal Council approves the declaration of a Climate Emergency in the city of Viladecans to combat the climate crisis in a participatory manner, continue implementing the PAESC and other aspects of adaptation to climate change scenarios. The Viladecans Climate Pact is promoted.

2019, the Municipal Plenary approves the declaration of **Viladecans as a single-use plastic-free city**.

June 2019. The Ecological Transition and Public Space Steering Committees are created within the MIA public innovation ecosystem.

2020-2023. The mayor of Viladecans chairs the Local Governments + Biodiversity Network of the Spanish Federation of Municipalities and Provinces (FEMP).

2021. The Municipal Council **ratified its accession to the Covenant of Mayors**, committing to the **new GHG emission reduction targets of at least 55% by 2030 compared to 2005 levels**.

October 2021. Viladecans has joined the EuroVelo European cycle route network, a project that aims to develop 17 routes across Europe. By 2025, the city will have 23 km of cycle paths and 32.5 km of cycle lanes.

February 2022. The Plenary approves the Viladecans Climate Pact⁷, a programme to coordinate actions against climate change with citizens and commits to reducing **GHG emissions by 55% compared to 2005**, in line with the EU's objectives and the 2023-2030 National Energy and Climate Plan (PINIEC). It includes six areas of action on energy, waste reduction, sustainable mobility, promotion of biodiversity and urban greenery, adaptation to climate change and participation with the creation of the Viladecans Citizens' Climate Emergency Committee.

The **Citizens' Committee (Local Climate Emergency Committee)⁸**, is the governing body and driving force behind the Viladecans Climate Pact, where issues and strategies for action are discussed and the actions to be taken are decided, along with the agents to be involved. In 2024, this participatory body had 309 members (272 citizens, 7

⁶ Viladecans City Council. (2019, 28 May). *Motion for the declaration of a climate emergency* [PDF]. Retrieved on 28 May 2025, from https://www.viladecans.cat/sites/default/files/mocio_declaracio_demergencia_climatica_transaccionada.pdf

⁷ Viladecans City Council. (n.d.). *Viladecans Climate Pact: Summary presentation of the Viladecans Climate Pact*. https://www.viladecans.cat/sites/default/files/pacte_pel_clima_viladecans.pdf (accessed 28 May 2025)

⁸ Viladecans City Council. (2024). *Viladecans Climate Pact*. <https://www.viladecans.cat/es/pactoporelclima> (accessed on 28 May 2025)



companies and 30 associations). The Citizens' Committee has a **Youth Committee**, which aims to involve young people from the city's secondary schools.

October 2022. At the 11th assembly of the Local Governments + Biodiversity Network, **we signed the 'Viladecans 3-30-300 Declaration'** to renaturalise the city, with trees planted in all neighbourhoods, ensuring social and territorial equity. This initiative is being implemented as **part of the *Viu Verd* renaturalisation project.**⁹

¹⁰**October 2023.** Viladecans was awarded the title of **European Green Leaf 2025 by the European Commission**, among 14 European cities, accrediting it as the most sustainable European city, an award it will share with Treviso (Italy). In **January 2025, Viladecans joined the European Green Leaf Network.**

2024-25. The **most recent version of the PAESC** (Sustainable Energy and Climate Action Plan) **is currently under review**, and will provide an enhanced framework to guide the city's climate actions.

May 2024. Approval by the Municipal Council of Viladecans' incorporation into the **Network of Cities and Territories for Cycling.** The city had already been part of the RedBici network since 2015, and in 2016 the Bicycle Master Plan was approved, defining the city's cycling strategy.

2025. Viladecans celebrates its **European Green Leaf year**,¹¹, with a wide range of activities aimed at involving a significant proportion of the population and organisations,¹².

February 2025. The **Low Emission Zone (LEZ)** is implemented in Viladecans.

⁹ Viladecans City Council. (n.d.). *Viladecans renaturalisation project: Viu Verd*. <https://www.viladecans.cat/ca/viuverd> (accessed on 28 May 2025)

¹⁰ European Commission. (2023, 5 October). *Winners of the European Green City Awards 2025*. https://environment.ec.europa.eu/news/winners-european-green-city-awards-2025-2023-10-05_en (accessed on 28 May 2025)

¹¹ Viladecans City Council. (2025). *Video of the inauguration of the Green Leaf year in Viladecans*. Retrieved from <https://www.bing.com/videos/riverview/relatedvideo?q=green+leaf+viladecans&mid=41E451CDD939245BE1BF41E451CDD939245BE1BF&FORM=VAMGZC> (accessed on 28 May 2025)

¹² Viladecans City Council. (n.d.). *Fans Green Leaf: citizen participation for sustainability*. <https://www.viladecans.cat/ca/fansgreenleaf> (accessed on 28 May 2025)



Strategic framework for the sustainable city of Viladecans and



Viladecans City Council, Viladecans Strategy 2030-2040. Retrieved from <https://www.viladecans.cat/ca/estrategia2030/> (accessed on 28 May 2025)

The Viladecans Strategy 2030-2040 (September 2021)¹³ is a living document that defines the strategic framework for the city's present and future, up to 2050, and adopts the UN *Sustainable Development Goals*. This strategy is intended to guide and support the city to face global challenges in a proactive and committed manner, generate opportunities for sustainable urban development, and promote a municipality capable of creating strategic alliances with other administrations.

Within the six strategic areas, we highlight four due to their involvement in the fight against climate change and active measures for decarbonisation, adaptation and mitigation in Viladecans: ecological transition, city resilience, healthy lifestyles and urban regeneration. These areas fall within three cross-cutting areas: digital and green transformation, gender equality and social inclusion. In addition, the city has 25 City Challenges, which also have a strong sustainability focus, such as the implementation

¹³ Viladecans City Council. (n.d.). *Viladecans 2030 Strategy*. <https://viladecans2030.cat/visio-2030/estrategia-2030/> (accessed on 28 May 2025)



of the Energy Transition in the municipality, which we will expand on when explaining the European project (Urban Vilawatt).

The **Viladecans Urban Agenda (2022)**¹⁴ is the strategic instrument that champions a vision of sustainable urban planning in environmental, economic and social terms. As an action plan for the 2030-2040 Strategy, it is aligned with the strategic and cross-cutting axes and is the tool and guide for the city's urban planning, containing the objectives to be pursued, as well as the strategies and specific actions to be implemented to achieve them, all with a global and participatory vision. Due to Viladecans' commitment to urban paradigm change, in 2020 it was chosen as one of the **pilot cities for the State Urban Agenda**. Therefore, the Viladecans Urban Agenda has adopted the Strategic Objectives of the Spanish Urban Agenda (February 2019), in accordance with the criteria established by *Agenda 2030, the new United Nations Urban Agenda, the Urban Agenda for the European Union and the Agenda for the Towns and Cities of Catalonia*, which pursue sustainability in urban development policies.

The actions of the Urban Agenda reflect the main contributions made by citizens and local stakeholders during the participation process that took place in the winter of 2020 and 2021, which were refined to ensure technical feasibility. The actions of the Urban Agenda are organised into the following categories:

1. **87 Cross-cutting actions:** led by the City Council's management, these actions require a multidisciplinary approach and technical expertise. They are carried out within the three driving forces of the Local Urban Agenda.
2. **25 MIA actions:** assigned to project leaders in the Viladecans City Council's steering committees, these actions stand out for incorporating a high component of public innovation.
3. **Demonstration projects for the two Viladecans 2030 Missions:** assigned to the Viladecans Missions pilots, these projects integrate the collaboration and commitment of the different sectors of the quadruple helix.

In addition, measures from more than **30 sectoral plans**¹⁵ involving the city, whether from the City Council itself or other metropolitan administrations, have been analysed and incorporated to ensure the coherence of the Urban Agenda's proposals.

These two documents **are the city's strategic frameworks for 2030-2040, establishing the green and digital transition as cross-cutting components** while

¹⁴ Viladecans City Council. (n.d.). *Viladecans Urban Agenda*. <https://viladecans2030.cat/visio-2030/agenda-urbana/> (accessed on 28 May 2025)

¹⁵ Viladecans City Council. (2015–2026). *Municipal plans: Emergency Plan for Drought Situations (2023); Forest Protection Plan; Local Municipal Waste Prevention Plan 2021–2025 (under review); Urban Mobility Plan (2016); Action Plan for Air Quality Improvement. Horizon 2020. Clean Air (2015); Local Housing Plan 2030 (2025–2030); Viladecans Gender Equality Plan (2023–2026); Adaptive Forest Management Programme; Biodiversity Promotion Programme; Single-Use Plastics Prevention Programme*.



considering multi-level governance as a key element in their implementation. The **Viladecans 2030-2040 Strategy** identifies and contextualises the challenges facing the city on the horizon for 2030, and the **Urban Agenda** is responsible for addressing these challenges by defining specific actions.

Both documents are updated every two years to adapt to the evolution of national and international commitments and legislation, multilevel financial frameworks (especially EU aid), as well as local changes and lessons learned during their implementation and management. The 2030 Strategy was revised in 2023 and the Urban Agenda in March 2025.

The need to achieve the objectives of the 2030 - 2040 Strategy and the Viladecans Urban Agenda with the collaboration of different sectors of the quadruple helix (private sector, academia, citizens and local council) gave rise to the two City Missions for 2030: **the Climate Neutrality Mission for 2030** and the Zero School Dropout Mission.

With the **Climate Mission**, the city is committed to reducing greenhouse gas (GHG) emissions to become a **CO₂-neutral city by 2030 and CO₂-negative by 2050**. This commitment requires a profound transformation of our current urban and economic model, our energy system, mobility and citizens' habits. We are aware that this change will not be possible without the active involvement of society as a whole, which is why we are building a broad and solid system of alliances to achieve it (partner organisations).

The renewable energy transition in Viladecans

Viladecans is transitioning towards a fossil-fuel-free, decarbonised energy model, is a key focus of the fight against climate change and the process of climate neutrality with the Climate Mission.

The following actions are particularly noteworthy:

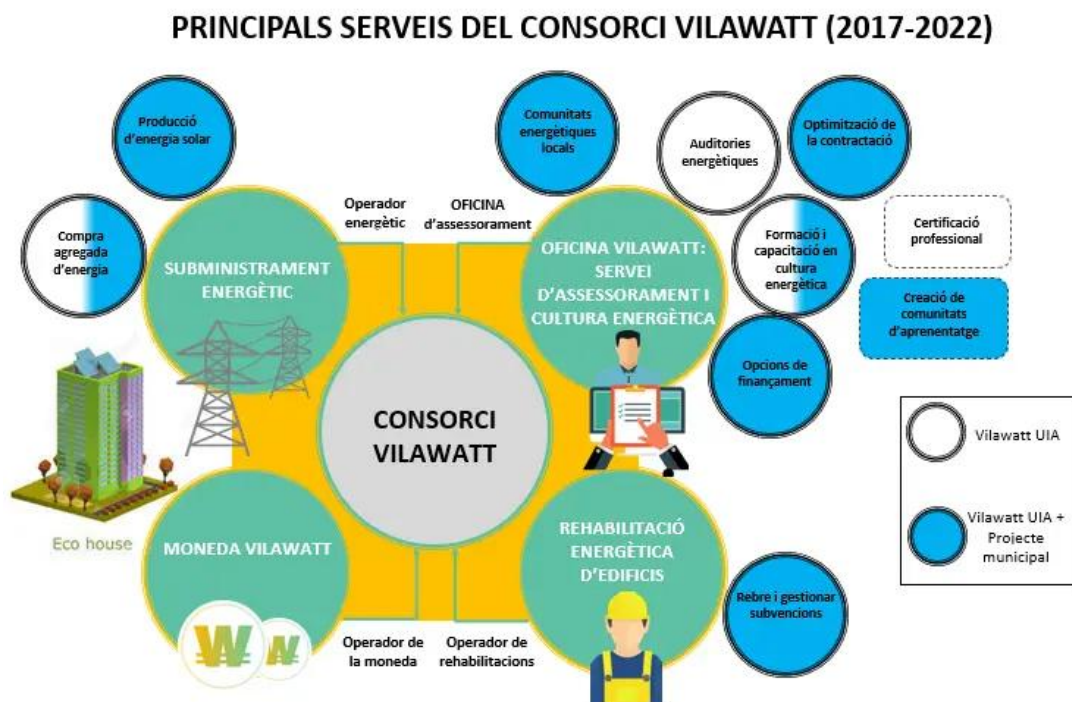
The **Municipal Action Plan for Sustainable Energy and Climate (PAESC)**, originally approved in 2018, is currently under review and enhancement. The updated version will provide a more robust framework for climate change mitigation and adaptation, including measures for energy efficiency and the energy transition. However, this plan does not cover the industrial and agricultural sectors, both of which are significant within the city's economic structure. To address this gap, the Vilawatt Project and the energy transition measures included in the Urban Agenda extend the scope of the city's energy transformation to all sectors in Viladecans.



The **Vilawatt Project (2016-2021)**,¹⁶, was conceived as a holistic project to address the renewable energy transition in the city in a participatory manner, within the framework of a European urban innovation project (UIA). Viladecans, together with Paris and Gothenburg, was selected in the first call for proposals for the Urban Innovation Action (UIA) 2016, in the Energy Transition category.

The main objectives and areas of action of the Vilawatt project were to create a public-private-citizen structure that manages four services to improve governance and energy sovereignty:

- Renewable energy supply.
- Comprehensive energy renovation of homes.
- Creation of a local currency linked to local consumption, energy saving and reducing the carbon footprint.
- Creation of training programmes in new energy sectors for workers.
- Empowering citizens on energy issues by creating learning spaces to improve energy culture (citizens, businesses and schools).



Viladecans City Council, *Main services of the Vilawatt consortium (2017–2022)*. <https://vilawatt.cat/es/> (accessed on 28 May 2025).

¹⁶ Viladecans City Council. (n.d.). *Why and how was Vilawatt created?* Vilawatt. Retrieved 18 June 2025, from <https://vilawatt.cat/es/que-som/por-que-y-como-nace-vilawatt/>



After 2021, the Vilawatt project has continued to evolve as a **municipal and citizen collaboration project, encompassing all the actions to implement the Viladecans Energy Transition**, which are defined in the various energy actions of the Urban Agenda and the PAESC.

The history of the Vilawatt project and its current status can be found on its website¹⁷, where there is detailed information on the various energy plans and services aimed mainly at citizens.

The **Vilawatt project has become a national and international benchmark for medium-sized cities** that want to tackle the global energy transition through collaboration between citizens and local government. As a result, Spanish local government awarded the Vilawatt project (September 2022) the prize for the best national energy transition project. The ninth edition of the **Good Climate Practice Awards**, promoted by the Spanish Federation of Municipalities (FEMP), recognised the City Council's commitment to promoting the transition to a new energy model and adaptation to climate change.

The Vilawatt renewable energy transition in the Urban Agenda:

- 45% of actions aimed primarily at climate neutrality.
- 18 actions aimed at energy transition.
- Main objective of the Vilawatt Energy Transition:
 - Promotion of local renewable energy production for individual and collective consumption.
 - Promoting energy culture among citizens and local stakeholders (learning communities, etc.)
 - Promoting energy efficiency in buildings (public, private, businesses, etc.)
 - Promoting sustainable mobility.
 - Promotion of smart and sustainable urban management (sensorisation – monitoring)
 - Promoting citizen involvement in the creation, design and governance of the new renewable energy model, with the promotion of community energy projects.
 - Reducing energy poverty.

¹⁷ Viladecans City Council. (n.d.). *Main services of the Vilawatt consortium (2017–2022)*. Retrieved from <https://vilawatt.cat/es/> (accessed on 28 May 2025).



Innovative projects in Viladecans for sustainability and the Smart City, integrated and financed through the action plans of other public administrations

In the context of climate challenges and the need to create regenerative urban planning, Viladecans has made significant commitments to seek innovative and disruptive solutions, with the leadership of the local administration and the help and cooperation of other administrations, scientific entities, associations, companies and citizens. Some of these are highlighted below:

- In March **2008, a dual sewerage network was implemented, with a separate drainage system to recover rainwater from the city**. This project was financed by EU Cohesion Funds (80%) and the local council (20%). This pioneering project in Spain created a network of reclaimed water supply in groundwater wells, which is used to irrigate green areas and clean the streets. The City Council invested more than three million euros in the construction of 7.5 kilometres of pipes, two reservoirs and new connections to wells to separate the irrigation and human consumption networks in different parks in the city. The network currently has 26.7 km of pipes covering nearly 70% of the irrigation of public parks and gardens and 100% of street cleaning. It is expected that another 8.1 kilometres will soon be added in the Levante neighbourhood and another well will be connected. In 2022, around 150,000 m³ of groundwater was extracted.¹⁸
- **W!Cable Network.**¹⁹ The city has promoted public policies to **promote the smart city model** at the service of citizens and sustainability. The creation of the pioneering municipal Open Fibre Optic Network promoted by Viladecans City Council (Red W!Cable) is well known. Its initial aim (2010) was to guarantee universal access to digital services at a time when private companies were not rolling out their services to citizens and neighbourhoods in medium-sized and small towns. In 2018, the project was expanded to guarantee universal access to broadband infrastructure.
- **Viladecans Smart City Project.** The development of the project has taken shape in the City Council's Smart City Platform (Minerva),²⁰ , which continues the

¹⁸ El Llobregat. (2023). *Regenerated water supply network from groundwater wells for irrigation and cleaning in a Spanish municipality*. Retrieved on 28 May 2025, from <https://www.viladecans.cat/es/20150715-la-red-de-fibra-optica-wcable-estara-extendida-por-toda-la-ciudad-en-2018>

¹⁹ Viladecans City Council. (2015). *The WCable fibre optic network will be extended throughout the city in 2018*. Retrieved on 28 May 2025, from <https://www.viladecans.cat/es/20150715-la-red-de-fibra-optica-wcable-estara-extendida-por-toda-la-ciudad-en-2018>

²⁰ Viladecans City Council. (n.d.). *Minerva Viladecans: Educational innovation platform*. Retrieved on 28 May 2025, from <https://minerva.viladecans.cat/es/inicio/>



public commitment to better connectivity, more innovation, greater transparency and open data, and broader digital inclusion. The Smart City Platform was financed by EU ERDF funds²¹.

- **IND+I Meetings.**²² The city continues to be committed to innovation and has now held nine editions of the pioneering IND+I meetings,²³, which showcase the Industry and Innovation programme, promoting economic development based on environmental, social and economic sustainability.
- **Innpulso Network.** The Viladecans City Council plays an active role in the Network of Cities of Science and Innovation (Innpulso Network)²⁴, which aims to develop local innovation policies and is chaired by the Mayor of Viladecans.
- **Vilawatt Project.**²⁵ **Promoting energy transition in the city by widely involving citizens and local stakeholders (2016-2020).** 1st *Urban Innovation Action* (UIA) Call for Proposals 2016, in the Energy Transition category. Project explained in more detail in the previous section on energy transition in Viladecans.
- **Proyecto Vilawatt UTM.** Programme to transfer the Proyecto Vilawatt to three European cities (2021-2022). *Urbact. Driving change for better cities*.
- **Viu Verd.**²⁶ **Project for the renaturalisation of the urban centre of Viladecans, through the fulfilment of the 3-30-300 objectives, to improve the connectivity and biodiversity of green infrastructure and urban health (2023-2025).** (PLAN VILADECANS 3-30-300) from the call for projects Recovery, Transformation and Resilience Projects (PRTR): Urban environments.
- **AgroDeltaLab Project**²⁷. This is an innovation project that aims to transform 500 hectares of farmland in Viladecans into an experimental space for developing, testing and deploying solutions that will help achieve a more sustainable, healthy, fair and accessible food system for the Barcelona metropolitan area. **AgroDeltaLab promotes innovation in agricultural production to improve its productivity and environmental, social and economic sustainability.** It is a *living lab* that brings together the innovation ecosystem: research and innovation agents (such as AgroTech-UPC and Agròpolis), innovative companies and *start-ups*, together with local producers to

²¹ Viladecans City Council. (n.d.). *Smart City Project – Recitty*. Retrieved on 28 May 2025, from <https://viladecans.int.recitty.com/es/proyecto-smart-city/>

²² INDICAT. (n.d.). *Home*. Retrieved 28 May 2025, from <https://indi.cat/>

²³ INDICAT. (n.d.). *Home*. Retrieved 28 May 2025, from <https://indi.cat/>

²⁴ Red Innpulso. (n.d.). *Home – Red Innpulso*. Retrieved 28 May 2025, from <https://redinnpulso.es/>

²⁵ Consorci Vilawatt. (n.d.). *Facts about the Vilawatt consortium (2017–2022)*. Retrieved on 28 May 2025, from <https://vilawatt.cat/es/que-som/hechos-vilawatt/>

²⁶ Viladecans City Council. (n.d.). *Viu Verd – Viladecans renaturalisation project*. Retrieved on 28 May 2025, from <https://viladecansviuverd.cat/el-proyecto/>

²⁷ Viladecans City Council. (n.d.). *AgroDeltaLab Conference*. Retrieved on 28 May 2025, from <https://www.viladecans.cat/ca/jornadagrodeltalab>



design, test and implement solutions to overcome the challenges mentioned above. At the beginning of June this year, a **European preparatory action** was presented **for the development of a regulatory experimentation space for the agricultural sector in the municipality**, involving the City Council, the Regional Government and the European Commission within the framework of RIS3CAT (Strategy for the Smart Specialisation of Catalonia 2030). The priority areas of work are: Offering technological solutions for precision horticulture, intensive with sustainability criteria to maximise efficiency in the use of resources and reduce the impact on soil and water; Regenerative agriculture solutions that contribute to the recovery of soil quality and biodiversity and act as a carbon sink, such as the embornal system in Viladecans; developing nature-based projects to stabilise and improve biodiversity and the resilience of the territory to the effects of the climate emergency.

- **Viladecans is participating in the GreenMob project (2024)**²⁸ – Multimodal travel planner for sustainable travel within the framework of the EIT Urban Mobility initiative. The project aims to address the challenges of urban mobility by promoting sustainable transport options, reducing pollution and providing a certified CO₂emissions calculator.

The project will develop a travel planner that will integrate various modes of transport, providing users with detailed information on routes, timetables, fares and real-time updates, recognising the mode of transport used and calculating its emissions.

The solution will be tested in three cities: Cesena (Italy), Debrecen (Hungary) and Viladecans.

- **The EU's PUMA (Plans for Urban Mobility Actions) project, 2023-2025**²⁹ , aims to achieve climate-neutral and sustainable mobility in small and medium-sized cities. Nine European cities are participating in the project. The PUMA network wants to involve citizens and change their attitude towards sustainable mobility in a positive way, motivating everyone to get involved in improving the environment.
- The **Integrated Action Plan (IAP)** will be aligned with the actions set out in the Local Urban Agenda of Viladecans and with the Climate Mission in **terms of sustainable mobility** (roll-out of LEZs, improvement of bus services, creation and improvement of cycle lanes and car parks, etc.) and will contribute to their implementation.

²⁸ Viladecans City Council. (n.d.). *GreenMob*. Retrieved on 28 May 2025, from <https://www.viladecans.cat/es/greenmob>

²⁹ Viladecans City Council. (n.d.). *PUMA*. Retrieved on 28 May 2025, from <https://www.viladecans.cat/es/puma>



- **Co-Carbon Measurement Tree Project**³⁰, which works on three of the four propellers and is recognised as a European best practice by URBACT 2024. It highlights the role of urban trees in carbon capture and climate neutrality. This citizen science project aims to obtain the most realistic estimate possible of the CO₂ captured by urban trees, in order to understand their capture capacity throughout the urban environment.

Driven by Viladecans City Council and the *Polytechnic University of Catalonia-Barcelona Tech (UPC)*, the project encourages primary and secondary school students to actively participate in tree measurement. This helps to reinforce social commitment and the values of sustainability, shared responsibility and the common good. The resulting data is essential for measuring progress towards achieving the EU's climate neutrality targets by 2050. It also provides valuable information for the development of urban strategies aimed at combating climate change and reducing CO₂ emissions.

In this context, we see **Viladecans' incorporation into the European Mission for Smart and Climate-Neutral Cities by 2030** as a tool that will enable us to continue promoting the implementation of innovative and sustainable public policies in the city, in order to continue and even increase the level of commitment and the number of actions that will enable us to make progress in the battle against the climate crisis. Furthermore, as a medium-sized metropolitan city, we can be an ally to other large cities, such as Barcelona, helping to increase the impact of their sustainability and decarbonisation policies in the metropolitan area, as well as becoming an example of good practices to be replicated in other cities and territories of similar size.

Climate neutrality target for 2030

The goal of achieving climate neutrality in Viladecans does not arise solely as a response to the opportunity to join the European Mission for Climate-Neutral Cities, but is part of a prior process of strategic transformation promoted by the City Council itself.

³⁰ URBACT. (n.d.). *CO₂ Carbon Tree Measurement*. Retrieved 28 May 2025, from <https://urbact.eu/good-practices/co-carbon-tree-measurement>



Climate neutrality is defined as one of the core objectives of the Ecological Transition Mission, formulated within the framework of the Viladecans 2030-2040 Strategy and consolidated in the local Urban Agenda. This mission, together with the other four (economic revitalisation, educational innovation, urban resilience and urban regeneration), reflects an integrated vision of the future for the city.

Thus, the aspiration to achieve net zero emissions by 2030 is the result of a solid track record in sustainability, a clear political commitment and a collective commitment that goes far beyond adherence to European initiatives. This document gives continuity to that commitment, formalises it and translates it into goals, governance mechanisms and transformative investment lines, with the horizon set on a climate-neutral, healthy, cohesive and resilient Viladecans.

This local ambition, built on experience and strategic planning, will be reinforced from 2022-2023, when Viladecans begins the process of joining the European Union's Mission for 100 Climate-Neutral Smart Cities by 2030, a goal set out in Viladecans' own Urban Agenda. Therefore, despite not being able to participate in the first EU calls for proposals, as we are a city with less than 100,000 inhabitants, we have continued on the path to achieving climate neutrality as part of our own Urban Agenda. For this reason, we began to adjust our mitigation targets upwards, with the planning and implementation of policies that accelerate the pace of the energy and ecological transition and help to decarbonise the city.

To build the Viladecans Climate Mission, we have adopted the EU Mission methodology, with a vision of public-private collaboration based on the quadruple helix model. Currently, 30 entities from the quadruple helix form the mission's ecosystem, having signed the commitment to join and working under the Mission methodology. To this end, we have the technical support of the national platform *citiES 2030* and the European platform *Net Zero Cities*. We have already begun building a learning community of entities allied to the Mission, companies, the academic and research world, and allied administrations that will help us promote Viladecans' climate neutrality mission.

Accordingly, the Viladecans city council, through this Climate City Contract, commits to continuing to work with all stakeholders and citizens of the city, using all the means at its disposal to achieve Scope 1 and 2 GHG emissions neutrality by 2030. The intention is to achieve an 80% reduction in GHG emissions compared to what we can expect from a *business-as-usual* scenario (*BAU*) in 2030. This translates into an emissions gap of approximately 184 ktCO_{2e} that the Viladecans Climate Action Plan is committed to closing through its portfolio of transformative actions and its strategy for residual emissions, with the aim of making decisive progress towards climate neutrality by 2030.

Viladecans, as we have explained, has already defined its sustainability and decarbonisation route through its 2030 - 2040 Strategy and its 2030 Urban Agenda, but



in order to accelerate actions, it is finalising or adapting various key sectoral plans to drive the decarbonisation process that will enable us to achieve the climate neutrality targets set out in the Climate Mission. Most of these, such as the new Climate Action Plan (which is largely defined in Annex 1), will be fully defined by the end of 2025.

The municipal strategy of building partnerships with citizens and other administrations will be essential, which is why Viladecans is involved in a large number of thematic networks³¹ linked to the promotion of disruptive changes and connections with sectors and administrations, which also work to achieve citizen involvement in all the processes of change necessary to promote the ecological transition.

We are aware that for emission reduction targets to be economically and environmentally viable and socially inclusive, we need the support of citizens, and the first thing we need to do is make the necessary changes understandable in all key sectors. Due to the economic effort and the paradigm shift in processes, regulations, competences and planning, we will also need the collaboration and support of the European, Spanish and Catalan governments. For the local world to be a crucial arena in the fight against climate change, this allocation of roles must be translated into real transfers of powers and resources.

Viladecans' commitments focus on emissions generated in the sectors that underpin the functioning of the city and are the main emitters of GHGs, and on which we can have an impact at the local level:

- Mobility and transport
- Renewable energy transition.
- Urban regeneration: Housing and buildings, infrastructure and public space
- Circular economy, waste and hybrid cycle.
- Biodiversity regeneration: restoration of natural ecosystems and new green infrastructure.
- Economic transformation and growth: Industry, commerce and agriculture.

³¹ Spanish platform CitiES; Mayors' Pact; Green Leaf Cities Network; Innpulso Network; Cities + Biodiversity Network; Towns and Cities for Sustainability Network; Urban Development Network ...

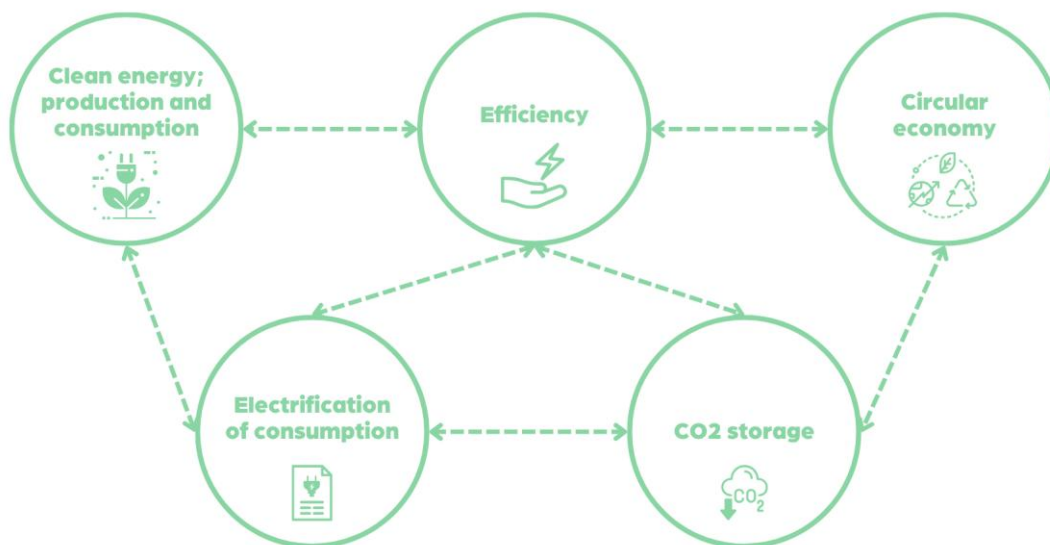


To achieve a drastic reduction in emissions in these sectors, **the 5 levers methodology** will be used,³² , in order to focus the work of all sectors into 5 thematic groups that must promote **innovative lever projects with the potential to accelerate the city's decarbonisation**:

Renewable energy; energy efficiency and savings; the circular economy; electrification; carbon sinks.



**5-E conceptual model for achieving carbon neutrality in cities
Climate Mission – Viladecans 2030**



5-E conceptual model for achieving carbon neutrality in cities, proposed by Jordi Mazón (2024). Source: Mazón, J. (2024). *5-E: A New Conceptual Model for Achieving Carbon Neutrality in Cities*. Sustainability, 16(4), 1678. <https://doi.org/10.3390/su16041678>

³² Mazón, J. (2024). *5-E: A New Conceptual Model for Achieving Carbon Neutrality in Cities*. Sustainability, 16(4), 1678. <https://doi.org/10.3390/su16041678>



For the Viladecans Climate Neutrality Mission, as a city in the Barcelona metropolitan area, **emissions generated by supra-municipal infrastructure and facilities, over which we have no administrative or planning authority, are excluded from the emissions calculation.** These areas, which are significant sources of emissions, are managed at a supra-local level and are subject to specific regulations on emissions reduction (European, national or regional). We refer specifically to Josep Tarradellas Airport and certain road infrastructure that forms the backbone of metropolitan and/or national traffic, such as the C-32 motorway and the C-31 dual carriageway.

With regard to emissions generated by electricity production, we assume the electricity mix set out in the National Integrated Energy and Climate Plan (PNIEC-24), which envisages 81% of electricity from renewable sources and 48% of final energy consumption from renewable sources. In addition, Viladecans City Council has contracted 100% of its electricity consumption from certified renewable sources and has made a significant commitment to photovoltaic self-production in its public facilities and infrastructure. In public buildings, the installed capacity was 4.7 MWp. And throughout the municipality, a total maximum capacity of 88.9 MWp could be installed in photovoltaic energy, corresponding to 225,131 panels (considering 400 W panels)³³.

The **residual emissions (20%)** forecast for 2030 will be offset in various **sinks: by increasing green infrastructure (3-30-300 Pla Viu verd - Viladecans renaturalisation project) including urban tree planting and forest restoration in mountainous areas; the restoration of wetlands in the Llobregat Delta and the regeneration of dunes in the municipality's coastal area; CO2 capture through the conversion of agricultural areas to regenerative agriculture systems; significant reduction of Scope 3 emissions, especially in the waste, food and sustainable construction sectors.**

³³ ImpactE. *Global Report of the Viladecans City Council*.



To this end, municipal and metropolitan policies are being developed, most of which are included in the local Urban Agenda³⁴ in areas and sectors that we have indicated and in others such as: the food sector and the reduction of food waste (Action Plan against Food Waste)³⁵; waste prevention and reduction (Waste Prevention Plan 2021-2025, which is currently being revised for a new plan until 2030; candidate city for Zero Waste Certification from the Mission Zero Academy (MiZA) in 2024); in promoting zero-emission sustainable construction (promotion of a sustainable construction hub³⁶ in the city with public-private participation, other related projects³⁷ and holding an annual conference on the subject -VERTEX-); and the promotion of circular economy projects.

Benefits of the Mission for the municipality and its residents

The main benefits associated with the Viladecans 2030 Climate Mission, which extends to include adaptation and mitigation measures addressing the climate emergency through 2050 and is reflected in this City Climate Contract, are aimed at improving the quality of life of citizens and building a more resilient and balanced urban space in environmental, economic and social terms.

As part of its commitment to a fair and comprehensive climate transition, the city of Viladecans is committed to incorporating climate change adaptation aspects across all its actions. In particular, it commits to carrying out, or updating where necessary, a climate risk assessment at the municipal level, in coordination with regional and/or metropolitan administrations, in order to ensure a coherent, effective response that is aligned with broader territorial frameworks.

The commitment to climate neutrality, in addition to responding to an environmental obligation, also responds to an urgent need to improve public health. Climate change mitigation policies represent an unprecedented opportunity to reduce the burden of disease associated with air pollution, environmental noise, extreme heat and sedentary lifestyles. Acting now means preventing respiratory, cardiovascular, neurodegenerative

³⁴ Barcelona Provincial Council. (2023, 22 June). *Building exciting futures in Viladecans!* Knowledge communities. Retrieved on 28 May 2025, from <https://comunitats.diba.cat/comunitat/comunitat-dagendes-urbanes-locales/apunts/viladecans-construim-futurs-emocionants>

³⁵ Viladecans City Council. (2023, 31 January). *The Climate Pact promotes eight actions to combat food waste*. Viladecans.cat. Retrieved on 28 May 2025, from <https://www.viladecans.cat/es/el-pacto-por-el-clima-impulsa-8-acciones-frente-al-desperdicio-alimentario>

³⁶ Viladecans News. (n.d.). *Roca Group and the city councils of Viladecans and Gavà propose the creation of a sustainable construction hub*. Retrieved on 28 May 2025, from <https://viladecans.news/roca-group-y-los-ayuntamientos-de-viladecans-y-gava-proponen-la-creacion-de-un-hub-de-construccion-sostenible/>

³⁷ Vilapress. (2024, 8 May). *Viladecans promotes entrepreneurship through BIP TECH: Building Innovation Program*. Vilapress.cat. Retrieved on 28 May 2025, from <https://www.vilapress.cat/articulo/viladecans/2024-05-08/4825156-viladecans-impulsa-emprendimiento-traves-bip-tech-building-innovation-program>



and metabolic diseases, reducing premature mortality, improving mental health and increasing the general well-being of citizens. Accelerating the energy transition, promoting active mobility, expanding green infrastructure and reducing exposure to air pollutants are measures that save lives, especially among the most vulnerable groups. In this context, climate action is also a health policy based on scientific evidence and social justice criteria, as emphasised by organisations such as WHO Europe and its Pan-European Commission on Climate and Health.

We highlight some of the benefits we aim to achieve:

- + Better health for people.
- + Better health for ecosystems and greater biodiversity.
- + Greater equality between men and women in the process of implementing and rolling out the municipality's ecological transition in all its aspects (work, economy, education, governance, etc.).
- + A more socially cohesive city. We promote a socially just ecological transition that avoids social exclusion from the processes of change and guarantees the reduction of inequalities between people and neighbourhoods.
- + Greater citizen participation in the management and production of renewable energy and primary products.
- + Increased sense of belonging and pride in the city.
- + Cleaner air and reduced pollution, including noise pollution, especially that caused by traffic jams and combustion engine vehicles.
- + More green spaces close to home for playing, socialising, playing sports and improving mental health.
- + More public space for pedestrians rather than cars. In addition, greater road safety.
- + Greater sustainable and healthy mobility with the promotion of pedestrian routes, cycle lanes and better public transport.
- + Reduction in anti-social behaviour, aggressive behaviour and mental illness (stress, depression) through improved comfort and lower pollutant exposure.
- + Healthier, locally sourced food with less waste.
- + Better water quality and reduced consumption of drinking water for domestic and agricultural use.
- + Reduction in energy consumption and energy bills across all sectors of the city.
- + Rapid transition from a fossil fuel-based energy model to a 100% renewable model that is less dependent on external sources and guarantees universal and more economical supply.



- + More efficient housing that improves the quality of life for citizens in all neighbourhoods of the city.
- + Reduction of energy poverty.
- + Promotion of economic regeneration towards a circular economy that reuses more and reduces waste and consumption of raw materials.
- + Sustainable economic development linked to the green and circular economy, driven by social consensus, knowledge and innovation.
- + Creation of high-quality green jobs linked to new sustainable activities and incorporating workers from other sectors undergoing transformation or decline and young people.

Priorities and strategic interventions

In order to achieve the objectives of the Viladecans Climate Mission, a genuine **systemic change** is required, **combining a significant structural reduction in energy consumption, a shift towards a renewable energy system, and other innovative and disruptive decarbonisation measures in different sectors.**

The Viladecans Mission strategy is mainly structured around six areas that we have identified as key to the functioning of a decarbonised Viladecans, on which most of the lines of action to be implemented by 2030 will focus and which are set out in the Climate Action Plan (Annex 1).

1. Mobility and urban and metropolitan transport.
2. Renewable energy transition.
3. Urban regeneration: Housing and buildings, infrastructure and public space.
4. Circular economy, waste and hybrid cycle.
5. Biodiversity regeneration: restoration of natural ecosystems and new green infrastructure.
6. Economic transformation and development: industry, commerce, and agriculture.

We will not provide a systematic list of all the actions that will lead us to climate neutrality here, as these are **set out in detail in the Climate Action Plan in Annex I.** However, we do want to highlight the **main lines of action included in the Viladecans 2030 strategic framework, the Viladecans Climate Pact Plan and the 5E lever projects,** which are already underway and have a greater systemic change content.



Viladecans 2030-2040 Strategic Framework

The Viladecans 2030-2040 strategic framework³⁸ guides Viladecans' public policies that affect the six main emitting sectors. Therefore, we have already identified and defined most of the projects that will have an impact on the decarbonisation of the city in order to achieve the objectives of the Viladecans Climate Mission.

The **Viladecans 2030-2040 Strategy** – the first component of the Viladecans 2030 strategic framework – considers climate emergency and decarbonisation to be major challenges for the city, and therefore includes ecological transition [Strategic Axis 2] as one of its nine strategic axes for the city. Other aspects related to the decarbonisation of the economy are also included in Axis 1, Economic Revitalisation, with the aim of making the city a benchmark for sustainable and inclusive economic dynamism. Axis 4, Healthy Lifestyle aims to encourage a shift in consumption habits towards local and healthier products. Finally, axis 6 is committed to urban regeneration, based on urban rehabilitation, prioritising energy efficiency and sustainable urban mobility, in order to reduce EGI and other pollutants.

In addition, the **Viladecans 2030-2040 Strategy also defines 25 city challenges, eleven of which address the challenge of climate emergency and neutrality** and are integrated into some or several of the six areas identified to achieve the decarbonisation of the city by 2030:

³⁸ Viladecans City Council. (2025). *Viladecans Urban Agenda*. Viladecans2030. Retrieved on 28 May 2025, from <https://viladecans2030.cat/visio-2030/agenda-urbana/>



Areas PAC	Challenge description	Strategic axis
3 and 6	Position Viladecans as a hub for innovation in activities related to sustainable construction/building in Catalonia, both for new construction and for the renovation of existing buildings, promoting an ecosystem of collaboration between companies, administrations and knowledge centres, to become a benchmark in the development and deployment of solutions.	Axis 1. Economic revitalisation
6	Enhance the value of the city's agricultural capital by promoting the transformation of our Agricultural Park into an economic activity zone dedicated to the production of local food in such a way as to increase metropolitan food sovereignty while reducing its environmental impact. To this end, the introduction of technology, training, talent and entrepreneurship, as well as the attraction of new investment, are considered essential.	Axis 1. Economic revitalisation
2	Disseminate and raise awareness of the concept of Ecological Transition among citizens, the economic fabric and the administration itself. Position Viladecans as a pioneering city in the co-governance of strategies and actions that enable sustainable and responsible progress in this global challenge.	Axis 2. Energy Transition
1, 3 and 5	Improve air quality by implementing a Low Emission Zone, electrifying mobility and energy consumption, incentivising sustainable mobility (bicycles, personal mobility vehicles, public transport, car sharing, etc.), as well as ' ' (a city for people) promoting the naturalisation of public spaces and the conservation of biodiversity in the city.	Axis 2. Energy Transition



Areas PAC	Description of the challenge	Strategic axis
2 and 4	Transform production and consumption models by reducing CO2 emissions, promoting circularity, improving energy efficiency and increasing renewable energies in order to become an energy self-sufficient and carbon neutral city that prioritises the use of green energy.	Axis 2. Energy transition
2 and 4	Advance towards "zero waste" by reducing municipal waste generation and promoting selective collection to achieve the European targets for 2030 (i.e. achieving a minimum of 60% selective collection and a maximum of 10% to landfill by 2030), the recovery and reuse of resources and raw materials, thereby advancing the circular economy, which innovates to extend the life cycle of materials and promotes new production systems and a new culture of consumption with low-waste habits.	Axis 2. Energy Transition
1 and 2	Promote carbon-free mobility, encouraging the creation of infrastructure that increases walking and cycling, increasing the frequency and number of urban bus routes, micro-mobility and transport hubs.	Axis 2. Energy Transition
3 and 5	Incorporate the concept of green infrastructure into urban design and planning, promoting nature as an element that fosters a healthy lifestyle, both physically and mentally, involving organisations and citizens in its management and conservation.	Axis 4. Healthy Lifestyle



Areas PAC	Challenge description	Strategic axis
3 and 5	Protect, conserve and improve the natural, cultural and landscape heritage, promoting the adaptation of the city to nature and bringing it closer to citizens.	Axis 6. Urban regeneration
3	Promote a city of proximity, where activities, services, facilities, jobs and leisure are close to everyone.	Axis 6. Urban regeneration
1	Promote sustainable means of transport that are an attractive, comfortable and affordable alternative to private vehicles.	Axis 6. Urban regeneration



Similarly, the second component of the strategic framework - Viladecans 2030, the **Viladecans Urban Agenda** - also addresses the challenge of climate emergency and neutrality, **particularly in Strategic Objective 3, 'Prevent and reduce the impacts of climate change and improve resilience'**, specifically in **Specific Objective 3.2. which aims to reduce greenhouse gas emissions** and is implemented through two lines of action: the implementation of a low-carbon urban model and the planning of land use and building in accordance with bioclimatic criteria (scope 3).

The Urban Agenda also includes **other strategic objectives that are closely related to climate neutrality and decarbonisation**, which are indicated in the following table:

Areas PAC	Strategic objectives	Specific objectives
3, 5 and 6	1 – Land use planning and rational land use, conservation and protection	1.2 – Conserve and improve natural heritage and protect the landscape
		1.3 – Improve green and blue infrastructure and link it to the current context
3	2 – Prevent urban sprawl and revitalise the existing city	2.4 – Improve the urban environment and reduce pollution
		2.6 – Improve the quality and sustainability of buildings
2 and 4	4 – Manage resources sustainably and promote the circular economy	4.1 – Be more energy efficient and save energy
		4.2 – Optimise and reduce water consumption
		4.3 – Promote the cycle of materials
1, 2 and 3	5- Promote proximity and sustainable mobility	5.1 – Promote a city of proximity
		5.2 – Promote sustainable forms of transport



Action plan for the Viladecans Climate Pact

The **Viladecans Climate Pact Action Plan** developed jointly by the Citizens' Committee for Climate Emergency and the City Council, includes six lines of action and 82 measures (59 for mitigation and 30 for adaptation). These also align with the six areas of work set out in this Climate Contract and are also integrated into the Climate Action Plan in Annex 1.

PAC areas	Areas of action
2	1. VILADECANS, PLUG INTO THE SUN. For an efficient and renewable Viladecans.
1 and 5	2. VILADECANS, GET MOVING For a walkable and healthy Viladecans
4	3. VILADECANS, REDUCE WASTE FOR A BETTER FUTURE. For a zero-waste, circular Viladecans.
5	4. VILADECANS, BREATHE NATURE. For a biodiverse, green and blue Viladecans.
3	5. TIC TAC, VILADECANS ADAPTS. For a Viladecans prepared for climate change
Cross-cutting theme	6. VILADECANS, UNITED FOR THE CLIMATE. For an organised and coordinated Viladecans.



Connection between the Viladecans Urban Agenda and the Climate Mission.

To **assess the impact of the Local Urban Agenda (LUA) actions on the Climate Mission**, a **classification exercise** was carried out in which each Action was scored on a scale of 1 to 10, with 10 indicating the maximum impact on decarbonisation and energy transition. This **analysis makes it possible to identify which actions contribute most effectively to reducing emissions and environmental sustainability, thus helping to prioritise policies and resources towards those initiatives with the greatest potential for transformation.** The results obtained serve as a strategic planning tool to optimise the implementation of the actions and reinforce those with the greatest impact to ensure a more efficient climate transition in line with the city's sustainability objectives.

The analysis of the impact scores in the Climate Mission shows a wide distribution, with values ranging from 1 to 10. The average impact is 4.3 points, indicating that most of the Actions have a moderately low impact on decarbonisation. However, a **significant group of actions with high scores (7-10)** have been identified, **which have a high potential to contribute to the city's climate objectives.** Among these actions, **those related to sustainable mobility and urban infrastructure stand out.**

Specifically, these are the following **29 actions**:

- 1.1. 1. Creation of a working group with neighbouring municipalities, involving supra-municipal administrations, to coordinate issues related to urban and strategic planning within the framework of the drafting of the Barcelona Metropolitan Area Urban Master Plan.
- 2.1.2. Programme for the urban transformation of public spaces: Avenida del Molino, Plaza de Salvador Allende, Eixample Centro, Plaza de las Trece Roses, and the adaptation of school environments for educational purposes.
- 2.3.9. Monitoring of noise, air pollution and/or thermal conditions using smart sensors in public spaces.
- 2.3.10. Improvement of school environments with a 360° educational perspective.
- 2.4.12. Implementation of a Low Emission Zone to reduce pollution from private vehicles.
- 2.4.13. Fleet of clean municipal vehicles: acquisition of electric, gas, hydrogen and/or hybrid vehicles for the municipal fleet, once the current fleet has reached the end of its useful life.



- 2.6.18. Support for improving the energy efficiency of Viladecans' building stock as part of the Vilawatt project (housing, shops and small and medium-sized enterprises): energy audit programme, administrative simplification.
- 3.1.1. Implementation of urban planning adapted to climate change, in accordance with the guidelines of the municipal PACES (PAESC): incorporating bioclimatic criteria into the development of new construction or renovation projects.
- 3.1.2. Increasing the resilience of public spaces, in accordance with the municipal PACES (PAESC). Sustainability and adaptation criteria in urban renovations or new developments (Eixample, Alba-rosa, old town, Poniente, Polígono Centro, Roca): creation of shaded areas, continuity of urban green infrastructure, improvement of public space comfort (water points, shaded areas), use of materials that reduce GHGs (greenhouse gases). Incorporation of new sustainable urban drainage systems (SUDS) in pending and future urban reforms to prevent flooding.
- 3.1.4. Environmental education in schools with the incorporation of specific learning pathways in the school curriculum on climate change mitigation and adaptation.
- 3.2.5. Implement energy efficiency and renewable energy generation measures in municipal buildings to achieve climate neutrality by 2030 and negative emissions by 2050.
- 3.2.6. Support for the renewal of the city's vehicle fleet through the purchase of 100% electric vehicles, the creation of a network of electric charging points, and subsidies for the purchase of electric vehicles by citizens. 100% electric vehicles.
- 3.3.7. Approval and implementation of the City Naturalisation Plan: revegetation of public spaces on three levels: herbaceous, shrub and tree.
- 3.3.12. Creation of different types of urban forests to create CO2 sinks and climatically comfortable spaces.
- 4.1.1. Support for the creation of shared self-consumption projects in neighbourhood communities, industrial estates and public facilities, in their various forms (shared self-consumption, energy communities, microgrids, etc.).
- 4.3.8. Develop and validate processes and good practices for the successful implementation of sustainability and innovation clauses in municipal public procurement.
- 5.1.1. Creation and consolidation of a network of continuous cycling and walking routes: promote walking and cycling in the city through the creation and adaptation of continuous and safe routes for pedestrians and cycle lanes connecting residential areas, shopping areas, municipal facilities and buildings, and public transport services.



- 5.1.3. Deployment of parking spaces and secure parking facilities for bicycles and scooters in public spaces and facilities to encourage the use of bicycles for citizens' daily journeys
- 5.1.4. Expansion of urban space for pedestrian use by eliminating on-street parking spaces, prioritising safe and accessible space for pedestrians.
- 5.1.5. Promotion of urban intermodality through the promotion of bicycle use and the metropolitan bike-sharing network promoted by the AMB, and the creation of secure bicycle parking facilities at the Renfe station.
- 5.1.6. Improvement of metropolitan communications with the completion of the C-245 road transformation project, which will convert this road into a connection with the rest of the metropolitan municipalities through a cycle lane and an exclusive lane for divers, and which will facilitate the frequency of public transport and the interconnectivity of modes of transport.
- 5.2.7. Preparation of a study to analyse the possibilities of creating deterrent parking spaces on the surface in areas adjacent to the centre.
- 5.2.8. Redefinition of the existing bus network, analysis and improvement of the routes of the current network, improvement of the frequency of the beach bus line and creation of a new line to cover new areas.
- 5.2.9. Preparation of a study on the deployment of electric charging points in the municipality.
- 5.2.10. Promotion of the development of remote management systems in relation to mobility in the city.
- 7.1.1. Configuration of Viladecans as a Laboratory City for healthy living: one based on experimentation and deployment of innovative projects, technologies and practices aimed at the economic, social and environmental development of the city, set out in strategies and missions, in collaboration with all relevant actors in the quadruple helix.
- 9.1.1. Implementation of a Smart urban management model: development and implementation of the Smart Viladecans model, developing the different smart city verticals in mobility, energy efficiency, Smart living and competitiveness; implementation of the Smart management platform; deployment of sensors in public spaces (e.g. sensors to measure air quality, noise, vehicle traffic, pedestrian flow, etc.), data collection, monitoring and adaptation of the management of public services, buildings and facilities in accordance with the data obtained.
- 10.1.3. Promotion of demonstration projects in public spaces to implement the objectives of the Viladecans 2030 missions.
- 10.3.15. Relationship and coordination between the City Council's annual budget lines and the objectives of the Urban Agenda to ensure the allocation of funds for the implementation of the Action Plan.



Projects driving the 5E levers of the Viladecans Climate Mission

With the aim of building a strategic tool to facilitate the effective implementation of the Viladecans Climate Mission 2030, a portfolio of projects and initiatives has been created through a process of co-creation and participation involving the quadruple helix stakeholders. This portfolio seeks to guide future decisions on investment, fundraising and the evaluation of transformative impact, integrating strategic criteria for urban transformation.

The portfolio of demonstration projects is the result of a collaborative process of diagnosis, strategic alignment and shared design around the Viladecans 2030 Missions. It is a key element for governance, planning and collective action, based on the prior identification of the levers of transformation that structure and direct the projects towards the established change objectives.

Within the framework of the Viladecans 2030 Vision, governance has been articulated through a model based on the **quadruple helix** (public, private, academic and civil society sectors), promoting collective action aimed at complex urban challenges. This model is based on the Viladecans 2030 Vision, which integrates the 2030 Agenda, the Spanish Urban Agenda and municipal sectoral plans in a cross-cutting manner.

Collaborative governance promotes spaces for participation, shared responsibility and co-creation, such as those generated in the Viladecans 2030 Missions —Climate Mission and School Dropout 0 Mission— which enable the channelling of knowledge and joint action between diverse actors. Initiatives such as the ***Alia't* community** (*Alia't*, meaning 'Join forces' in Catalan), cross-cutting working groups and plans for linking different types of organisations reinforce this participatory structure.

As a first methodological step, the "**levers of transformation**" for each mission were defined and validated, following **Mariana Mazzucato's** mission-oriented innovation model, adapted to the local context. These levers make it possible to translate major challenges, such as the climate emergency, into specific, prioritised and measurable areas of intervention. They act as structuring axes on which the portfolio of demonstration projects has been built, making it possible to assess their transformative impact and their contribution to the city's strategic objectives.

With the aim of building a strategic tool to facilitate the effective implementation of the Viladecans Climate Mission 2030, a portfolio of projects and initiatives has been created through a process of co-creation and active participation by the quadruple helix actors. This portfolio seeks to guide future decisions on investment, fundraising and assessment of transformative impact, integrating strategic criteria for urban transformation.



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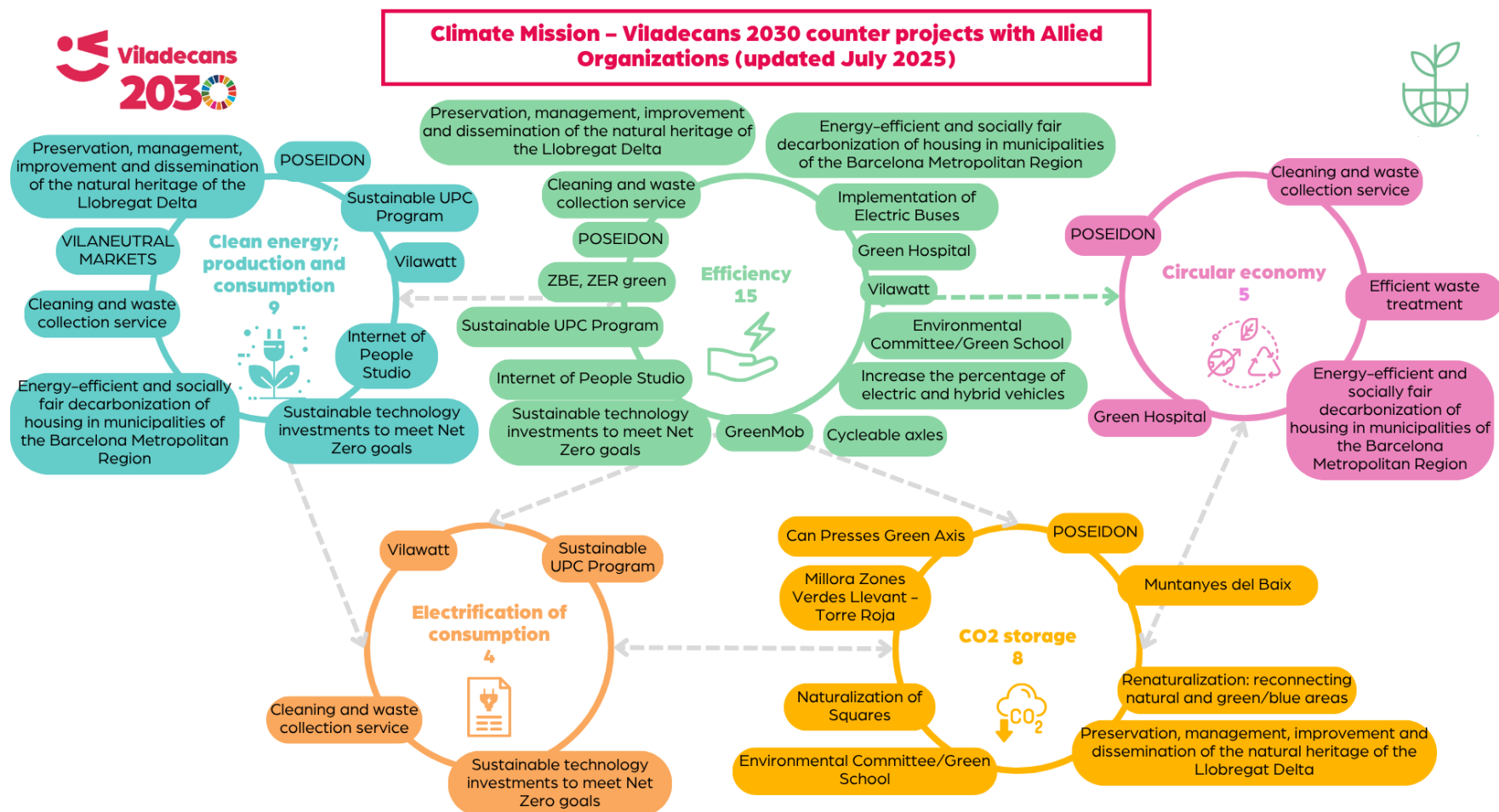
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Levers are key axes that help break down major challenges into priority and transformative areas of action. They also form the structure on which each mission's portfolio of demonstration projects is built, making it possible to measure their impact and capacity for transformation.

Project portfolio: these are demonstration projects to be developed and whose impact will be measured within the timeframe set by the Mission. These projects may be driven from the outset by the quadruple helix (4H) agents or may originate as public policy (SP) and subsequently integrate the quadruple helix agents.

The conceptual framework for these levers is based on the scientific and multidisciplinary approach led by the Climate Mission pilot, Jordi Mazón, which has been included in the 2024 article: "*Towards a climate-neutral city: integrated strategies for urban transformation*". Urban Science Journal, 28³⁹.

³⁹ Mazón, J. (2024). 5-E: A new conceptual model for achieving carbon neutrality in cities. *Sustainability*, 16(4), 1678. <https://doi.org/10.3390/su16041678>



Climate Mission demonstration projects – Viladecans 2030 aligned with the 5-E model (Education, Engagement, Empowerment, Emulation, Evaluation) proposed by Mazón (2024).



The five levers of the Climate Mission are:

1. **Energy efficiency**

Objective: Optimisation of resource use, public space, energy consumption and power.

Key issues: Energy renovation of buildings, efficient lighting, optimisation through data and digitalisation.

Key projects:

- **Demonstration project 1.1. Naturalisation of public space (PS)**

The Viladecans City Naturalisation Plan seeks to transform the city towards sustainability and environmental resilience through the integration of green infrastructure and governance, improving biodiversity and the quality of life of its inhabitants. Naturalisation will make public spaces more efficient in terms of the energy they release in summer, reducing the heat island effect and promoting a reduction in air conditioning in buildings surrounding squares, and highly paved areas. The shade it generates in summer will provide climate shelters and healthy places.

This project is included in the Viladecans Urban Agenda.

- **Demonstration project 1.2. New construction of public and private buildings (4H)**

Development of a **Local Urban Sustainability Hub** based on the creation of a pilot project that will create a logistics space outside the ZBE (Zero Emission Zone) to enable the distribution of goods from the agri-food sector while minimising the associated impacts (air quality, noise and use of public space).

- **Demonstration project 1.3 Renovation of public and private buildings (4H)**

The Vilawatt project is promoting the energy refurbishment of three residential buildings in Viladecans, improving the comfort of the people living there while reducing their energy consumption and costs and obtaining an A energy rating.

This project is included in the Viladecans Urban Agenda.

- **Demonstration project 1.4. Efficient mobility: Public transport (SP), Urban logistics (4H), bicycles (SP) and ZBE (SP)**

Various pilot projects aimed at reducing emissions associated with mobility through the implementation of LEZs and NEZs, and the promotion of sustainable mobility systems through the shared use of bicycles (AMBICI) and electric vehicles (CARSHARING) for all citizens and Viladecans City Council staff, and the MitMa Safe Bicycle Parking Plan.



This project is included in the Viladecans Urban Agenda.

2. **Clean energy: production and consumption**

Objective: Production and shared self-consumption of local renewable energy (mainly photovoltaic), and consumption of external renewable energy in the municipality.

Key issues: Urban photovoltaics, agrovoltaics, energy communities, collective self-consumption.

Key projects:

- **Demonstration project 2.1. Installation of photovoltaic panels in urban areas: public and private spaces (4H)**

Reactivation of three disused municipal photovoltaic installations, improvement of other installations to increase photovoltaic energy production, and creation of a strategy to install new panels in public spaces and encourage installation in private spaces.

This project is included in the Viladecans Urban Agenda.

- **Demonstration project 2.2. Community energy: Energy communities and shared self-consumption (4H)**

The Vilawatt project advises and promotes the creation of community energy projects (shared self-consumption and energy communities, both public and private) to drive the renewable and decarbonised energy transition in the city with citizen participation.

- **Demonstration project 2.3. Clean energy production in the Agricultural Park (4H)**

The Viladecans agropolis (UPC) is developing a European agrovoltaic project that will generate photovoltaic energy while allowing certain varieties of vegetables to be grown in the shade of the panels, which would otherwise not be viable due to the effects of rising temperatures and insolation caused by climate change.

- **Demonstration project 2.4. CO2 capture (4H)**

The City Council is carrying out a pilot project to promote CO2 capture in agricultural soil through the pruning of urban trees in collaboration with farmers in the city.



It is also participating in the Co-Carbon Measurement Tree project⁴⁰, which works on 3 of the 4H, and is recognised as a European good practice by URBACT 2024.

3. **Electrification of consumption**

Objective: Electrify all energy consumption systems in the city, replacing fossil fuel sources with electricity.

Key issues: Electric mobility, efficient air conditioning, charging infrastructure.

Key projects:

- **Demonstration project 3.1. Progressive replacement of natural gas boilers with electric boilers (4H)**

The building renovation programme prioritises the replacement of gas boilers. Beyond residential buildings, municipal sports facilities will be the first buildings to be transformed. A new subsidy line (Vilawatt-2025 awards) will be created for citizens who promote this transformation, which will be added to the existing subsidy line for energy efficiency and the installation of renewable energy in buildings.

- **Demonstration project 3.2. Electric mobility: installation of electric vehicle charging points (4H) and electrification of bus lines (SP)**

A first public photovoltaic charging station has been installed, in collaboration with the AMB — a photovoltaic-roofed station with capacity for six electric vehicles — to promote the interchange between sustainable private and public transport. Installation of fast charging points in public spaces. Deployment of a pilot project to create electric charging points through the street lighting network in an area of the city.

This project is included in the Viladecans Urban Agenda.

- **Demonstration project 3.3. Electrification of industrial production (4H)**

In collaboration with companies in the sector and within the framework of programmes such as Eco-Industry, work is being done to identify a demonstration pilot for productive electrification, particularly in the agri-food sector.

⁴⁰ URBACT. (2023). *CO₂ Carbon Tree Measurement*. Retrieved on 28 May 2025, from <https://urbact.eu/good-practices/co-carbon-tree-measurement>



4. CO₂ storage

Objective: To promote, increase and improve carbon reservoirs in the municipal area of Vil .

Key issues: Green infrastructure, urban renaturalisation, forest management, agricultural sinks.

Key projects:

- **Demonstration project 4.1. Cities 3-30-300 (4H)**

Viladecans has joined the Local Governments + Biodiversity Network's challenge to become a 3-30-300 city by 2030, becoming a city where citizens have 3 trees visible from their homes, the municipality has a minimum of 30% tree cover, and citizens have a quality, accessible green within 300 m of their homes.

- **Demonstration project 4.2. City with 30,000 urban trees by 2030 (4H)**

Increase in green space per inhabitant and creation of green spaces in the form of meadows or forests to encourage contact with nature, promote water cycle regulation, CO₂ capture, improve air quality, regulate temperature, protect against erosion and conserve biodiversity.

This project is included in the Viladecans Urban Agenda.

- **Demonstration project 4.3. Agricultural land as a CO₂ sink (4H)**

Project that aims to use plant matter produced in the city, which no longer has any productive use, for composting and thus fix the maximum amount of carbon in the agricultural soil around Viladecans.

5. Circular economy

Objective: Circularity in resource management.

Key issues: Industrial symbiosis, new waste management, eco-innovation, use of organic materials.



Key projects:

- **Demonstration project 5. 1. Economy of wood and plant material (4H)**

Project aimed at identifying active management of the city's existing forest mass and promoting long-term use of its wood, such as for the construction of street furniture or other building materials. Similarly, plant waste from agricultural production could be managed to create these materials with long life cycles.

- **Demonstration project 5.2. Industrial symbiosis (4H)**

The Ecoindustria project works to establish a circular economy in the industrial and business parks of the Llobregat Delta by promoting the efficiency of production systems through the reuse and regeneration of products, materials and resources, minimising the final waste generated.

- **Demonstration project 5.3. Maximisation of waste separation and recycling (4H)**

Design of a new waste management model to achieve the targets of 55% selective collection, establish pay-as-you-throw systems and increase reuse and waste prevention by 2025.

This project is included in the Viladecans Urban Agenda.

It should be noted that, in order to apply the methodology explained and promote the demonstration projects, Viladecans City Council also has an innovation model (MIA)⁴¹. The project is an operational tool that enables the Viladecans 2030-2040 Strategy (which includes the climate neutrality mission) to be translated into concrete realities.

The MIA promotes and generates public innovation through its own project promotion methodology. It is organised through four Steering Committees, which were created with a mission, values and methodology and have so far resulted in 24 city projects. These projects share a strong innovative component, a high degree of cross-cutting nature and are aligned with the SDGs and the fight against climate change.

The Viladecans City Council's Innovation Model won the CNIS (National Congress on Innovation and Public Services) award for the best consolidated public innovation

⁴¹ Viladecans City Council. (n.d.). City Council innovation model. Viladecans.cat. Retrieved on 28 May 2025, from <https://www.viladecans.cat/es/modelo-de-innovacion-del-ayuntamiento>



project in Spain in 2021. It is also included in the Bank of Good Practices of Local Governments of the Federation of Municipalities of Catalonia, the Carles Pi i Sunyer Foundation for regional and local studies, in its catalogue of innovative municipal experiences⁴².

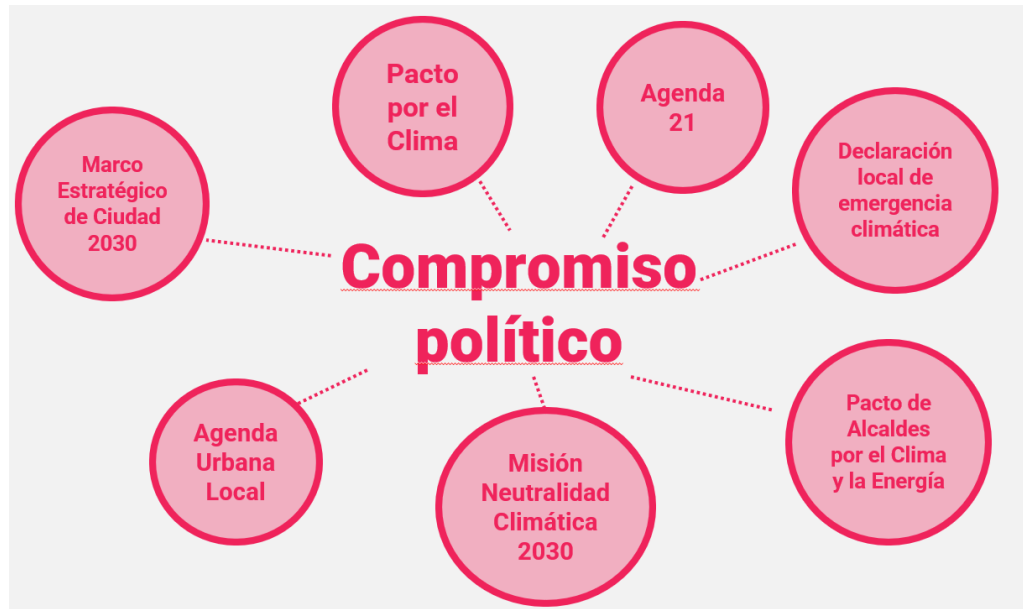
Given the degree of innovation of many of the projects and actions to be implemented for the Climate Mission, with the aim of decarbonising and promoting the ecological and energy transition, we believe it is necessary to incorporate the MIA model into the climate action plan.

⁴² Barcelona Balear Partners. (n.d.). *Details of practices [File 1869]*. BBP.cat. Retrieved on 23 June 2025, from https://www.bbp.cat/practicas_detalle.php?id_ficha=1869



Principles and process of collective leadership

Principles:



Viladecans City Council demonstrates its political commitment through frameworks such as the 2030 Strategic City Plan, the Local Urban Agenda, the Climate Neutrality Mission 2030, the Covenant of Mayors, the Local Climate Emergency Declaration, Agenda 21, and the Climate Pact.

Viladecans is tackling the process of building and developing its Climate Neutrality Mission, as set out in this Climate Contract, based on the following guiding principles, **which prioritise the central role of citizens. For this reason, we prioritise achieving social and political consensus and practising active listening, social responsibility, transparency and accountability in our plans and actions:**

- **Substantive principles:**
 - **Citizens are at the heart** of the objectives, design, implementation, and monitoring of the Viladecans Climate Mission.
 - **Proactive involvement of the municipal administration as the main democratic driving force behind the Viladecans Climate Mission**, both in the co-creation and implementation processes.
 - **Holistic vision and structure:** a comprehensive concept of sustainable and inclusive development.



- **Comprehensive and disruptive approach to the fight against the climate emergency and the necessary decarbonisation of the economy:** We promote global regenerative processes, such as a just ecological and energy transition and the circular economy to focus on mitigation, adaptation and reduction of GHG emissions.
 - **Gender equality perspective** in climate transition and regeneration processes.
 - **A perspective of climate justice—both local (between neighbourhoods and social groups) and global climate justice.**
 - **Participatory governance:** we prioritise education, information, and participation of individuals and organisations in all phases of Viladecans' Climate Mission (planning, implementation and feedback).
 - **Ensuring the economic viability of transformation processes** and new sectors and actions. Analysis and economic plan for actions and lines of action (analysis of new needs and the market, initial financial needs and subsequent economic viability, transformation and reorientation of the labour market, training needs, etc.).
- **Cross-cutting principles:**
 - **Cross-cutting design and management.** The city council has a specific team to direct the work of the different phases of the Mission, integrated into the city's planning and strategy structures: Viladecans Foundation; Office of the Future; MIA Project; City Strategy 2030; green budgets.
 - **Integration of knowledge and innovation** into projects. Whether from the city council, in the implementation of new public policies, or from the scientific and technological ecosystem of entities, universities and research centres allied with the Mission.
 - **Municipal implementation of new administrative and technological tools** to implement sustainable, innovative and disruptive projects (, innovative purchasing, administrative simplification, etc.).
 - **Promotion of solutions that can be implemented in the territory and, if possible, with and for local agents.**
 - **Training and communication of the new decarbonisation culture:** Communication of the need for change, possible solutions, the need to change habits and consumption, professional training, etc.
 - **Metropolitan approach and municipal and multilevel cooperation.** Integration of lines of action with a view to decarbonising the metropolitan area, in cooperation with supra-local entities and neighbouring municipalities (Barcelona, AMB, Baix Llobregat Regional Council, border municipalities with

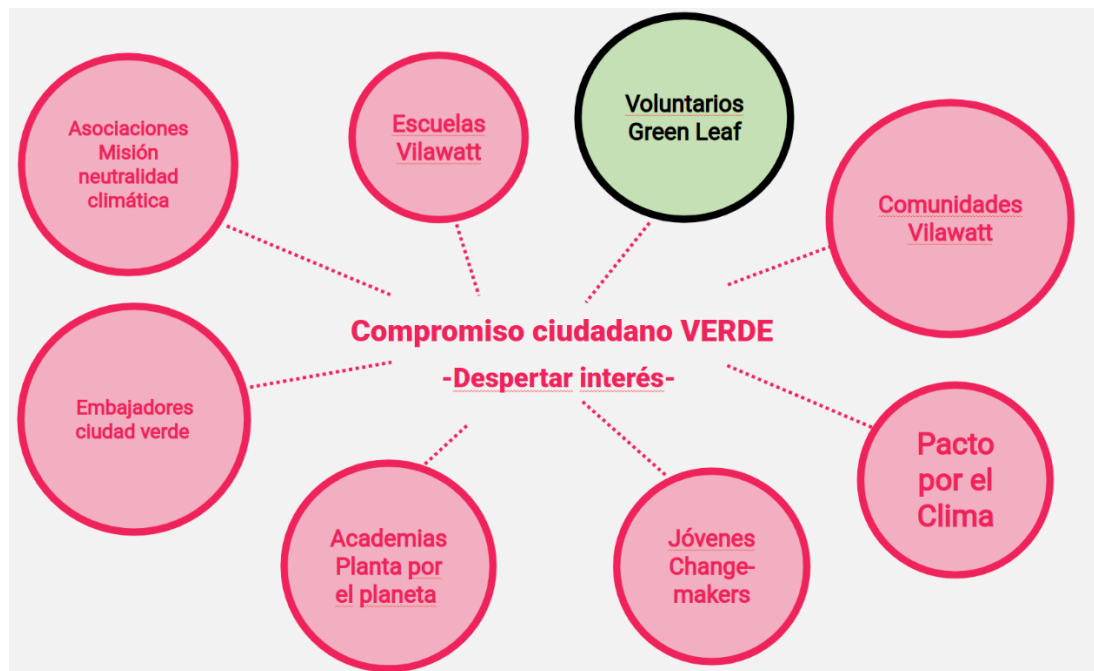


which we share territory or service management, etc.). As well as integration into the Spanish CitiES Platform; other European or national networks (Pacto de Alcaldías; Green Leaf Cities Network; Innpulso Network; Cities + Biodiversity Network; Towns and Cities for Sustainability Network, Urban Development Network, etc.). Or cooperation with other levels of government, such as the Generalitat de Catalunya, the Spanish Government or the European Commission.

- **Cooperation between the public and private sectors.** Forging alliances with the private sector to carry out projects with significant investment or technological needs that benefit both the community and businesses.
- **Integration into the municipal system of indicators and statistics, collection of data from the Climate Mission to assess implementation, impacts and accountability.** We will integrate the methodology and indicators of the system proposed by NetZeroCities, in addition to other municipal planning and measurement systems, such as: the implementation of municipal budget construction and evaluation (a municipal green budget manual is currently being developed) and the Urban Agenda monitoring and evaluation system, which incorporates data on emissions reduction, SDG involvement and the climate agenda, among other things. as well as other sectoral plans (PACES, etc.).



Network of alliances and citizen involvement to build shared leadership in Viladecans' Climate Mission



Citizen commitment to climate action: Plant-for-the-Planet academies, young changemakers, Climate Pact, Vilawatt communities and schools, Climate Mission associations, Green City ambassadors, and Green Leaf volunteers. Various citizen and social groups involved in the shared construction of a more sustainable, fair and resilient Viladecans.

In June 2022, the official launch of the Viladecans 2030 Missions took place. From that moment on, the Climate Mission's driving force promoted a process of identifying and analysing local and community actors with the capacity to influence the city's climate transition.

A comprehensive map of organisations linked to the territory was drawn up, classified according to the quadruple helix (public sector, private sector, academia and organised citizens) and grouped by key sectors such as mobility, energy, waste management, business and organised citizens. This initial map made it possible to organise the strategy for recruiting relevant agents for the Climate Mission.

Each organisation was assigned a priority level based on the potential impact of its activities on the mission's objectives. Those with the greatest capacity for action were considered high priority and were contacted directly. As the process progressed, new actors identified as having transformative capacity were incorporated into the process.



Each priority agent was assigned a contact person from the mission team (pilot or co-pilot), who was responsible for making initial contact, either in person or online, to present the objectives of the Climate Mission and how they fit into the Viladecans 2030 Vision. After this initial meeting, a proposal to join the mission was sent in the form of a **letter of commitment** detailing the commitments made by both the organisation and Viladecans City Council.

This process has helped build an active community of people committed to climate neutrality and shared governance to speed up the sustainable transformation of the area.

To strengthen this community of committed agents, a virtual learning community called **Alia't**⁴³ has been created. This community is a key pillar within the collaborative governance model promoted by the Viladecans 2030 Missions. It is not just a group of participating entities, but a **stable, active and committed ecosystem** that collaborates across the board to transform the city. The *Alia't* Community model is explained in detail in Annex 3 of the Commitments to the Viladecans Mission.



Alia't logo.

This community is made up of **partner organisations** representing the **quadruple helix**:

1. Public administrations
2. Business network
3. Universities and knowledge centres
4. Social and cultural entities, and organised citizens

The organisations that form part of *Alia't* share **common values and an active commitment** to the city's strategic challenges, such as **climate neutrality** and **zero school dropout rates**. Their participation is structured through **demonstration**

⁴³ Viladecans City Council. (2025). *Alia't Community*. Retrieved on 28 May 2025, from <https://viladecans2030.cat/missions-xarxes/comunitat-aliat/>



projects, spaces for shared reflection and actions aligned with the levers of the missions.

This system enables **collective monitoring**, informed decision-making and continuous updating of ongoing projects, reinforcing the legitimacy and impact capacity of the Viladecans 2030-2040 strategy and the Climate Mission.

Functions and purposes of the *Alia't* Community

The ***Alia't* Community** aims to activate and consolidate a network of diverse agents who contribute, from their own fields, to the city's transformative challenges. Its main functions are:

- **Co-creation of transformative projects**
Alia't organisations can promote, lead or participate in projects aligned with the levers of each mission. These initiatives may arise from the organisations themselves or in collaboration with the City Council and other members of the community.
- **Generation of synergies**
Alia't encourages knowledge sharing, connections between sectors that do not usually collaborate, and the creation of new joint opportunities.
- **Meeting spaces and shared learning**
Conferences, workshops and working sessions are organised where organisations share best practices, monitor projects and identify new avenues for collaboration.
- **Commitment to common values**
Alia't partner organisations promote a culture based on **collaboration, active listening, empathy, generosity** and **shared growth**, both on a personal and organisational level.

Values that shape the *Alia't* community

- **Trust:** we foster strong bonds between members to collaborate with transparency and mutual respect.
- **Purpose:** we share a common vision that gives meaning to collective action and inspires active participation.
- **Inclusion:** we create a safe, diverse and welcoming space where all voices are heard and valued.
- **Recognition:** we value the contributions of each person and organisation to strengthen our collective commitment.



Together, the *Alia't* Community represents a **living structure of participatory governance**, aimed at generating real impact in the city through collective action.

With interactive training sessions, regular meetings such as *Vermuts* (meaning Aperitif Meetups in Catalan) and *Tardeos* (meaning Early Evening Socials in Catalan), shared resources and permanent channels of interaction, *Alia't* is the space where Viladecans learns to transform itself collectively and anticipate the future from the present. More than sixty Allied Organisations are already part of it, demonstrating that only by combining knowledge, creativity and commitment can we build exciting futures.

Partner organisations have access to a series of training courses that are published periodically in the Community. Some are designed to be followed independently, while others are aimed at promoting joint work with other organisations. The content addresses general issues related to the challenges of the Missions and is based on dynamics that engage all organisations in the quadruple helix.

Face-to-face meetings with organisations

In addition, face-to-face meetings have been promoted in the form of climate vermuths, where participating entities share their demonstration projects aligned with the five levers of the Climate Mission, highlighting specific actions that contribute to reducing emissions in the territory. Participation in *Alia't* and the *Vermuts* (meetings) strengthens the close relationship between the mission team and the participating organisations, establishing ongoing communication and technical support to ensure joint action that is consistent and aligned with the objectives of the Viladecans 2030 Vision.

The Climate Mission Engagement Plan

The Viladecans Engagement Plans are a tool designed to facilitate the progressive and flexible engagement of Partner Organisations in the Viladecans 2030 Climate Mission, depending on their resources, capabilities and level of commitment.

The engagement plans are structured into different levels (S, M, L and XL), allowing each organisation to join progressively and realistically, without losing sight of its climate ambition. Each level includes a combination of actions, evaluation criteria and associated benefits, ranging from communication of the commitment to the implementation of specific carbon emission reduction measures.



These plans are designed to foster a strong and diverse collaboration network, while encouraging shared responsibility and recognising the efforts of all stakeholders. In this sense, the plans promote an educational, transparent and flexible approach that can integrate both large institutions and small local entities, contributing collectively to the ecological transformation of the municipality.

In addition, the Engagement Plan is complemented by specific training to present its contents, a self-assessment test to help identify the most appropriate level according to the reality of each organisation, and technical support to facilitate the understanding and implementation of the proposed actions. This initiative, aimed at strengthening the ecosystem of Partner Organisations, has been developed by the internal steering group of the Climate Mission.

A seal of recognition



All Partner Organisations have access to a seal of recognition for Partner Organisations to reinforce the credibility, transparency and collective impact of the project. This graphic element seeks to give public recognition to the entities, reinforce the feeling of belonging and convey shared values. It is, therefore, a symbol of unity and an accelerator of change.



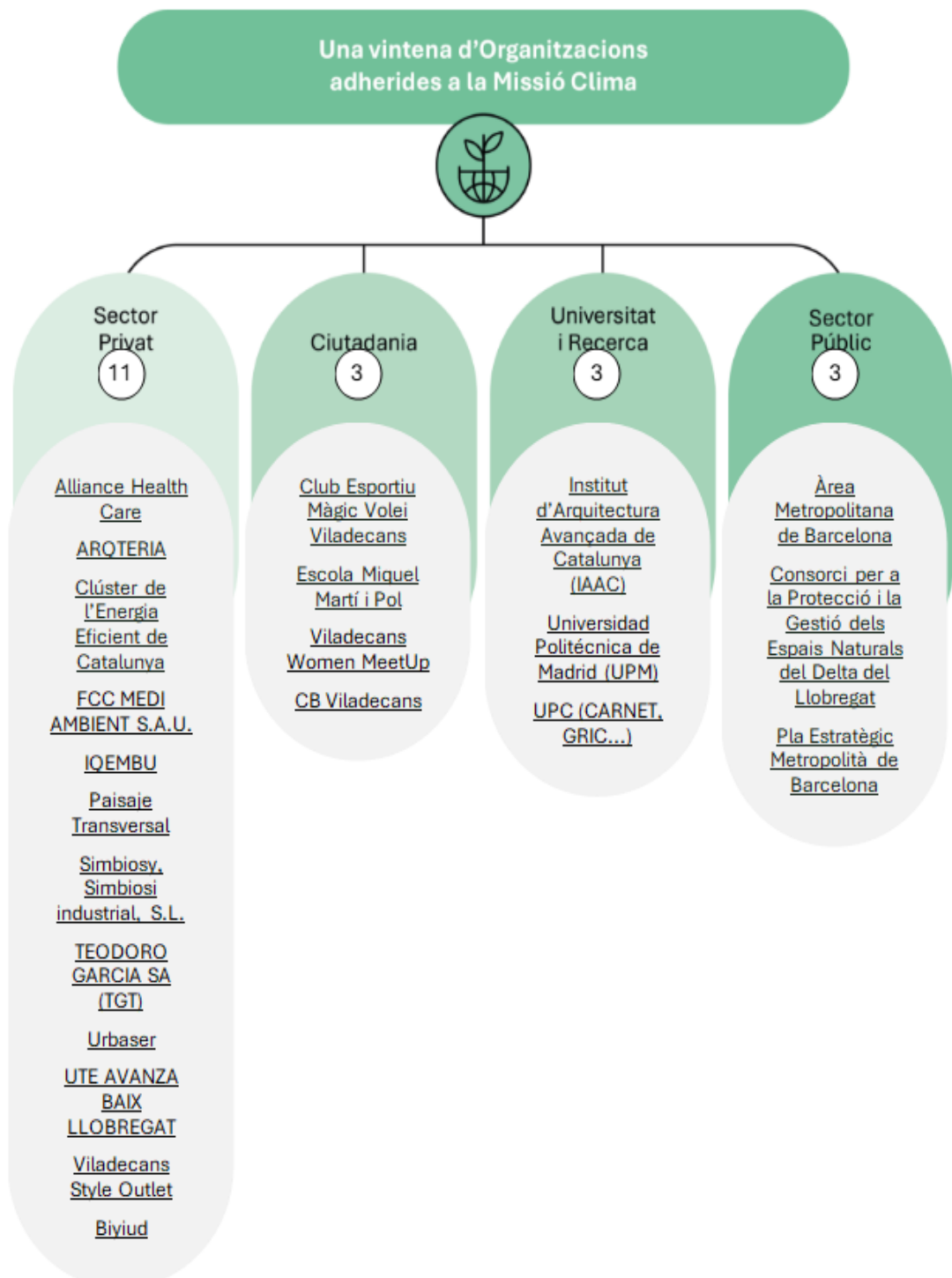
Partner organisations



Viladecans City Council. (2024). *First signing of the Commitment of Allied Organisations with the Viladecans 2030 Missions in november 2024*. Retrieved on 28 May 2025, from <https://viladecans2030.cat/primer-acte-signatura/>



Viladecans City Council. (2025). *Second signing of the Commitment of Allied Organisations with the Viladecans 2030 Missions in march 2025*. Retrieved on 28 May 2025, from <https://viladecans2030.cat/segon-acte-signatura/>



Second signing of the Commitment of Partner Organisations to the Viladecans 2030 Missions, held as part of the promotion of the municipality's multi-stakeholder collaboration network [Viladecans City Council, 2025]. Available at: <https://viladecans2030.cat/segon-acte-signatura/>



Sectors and areas of involvement in the Viladecans Climate Mission

The city of Viladecans has **a wide network of local stakeholders and community actors from the quadruple helix**, belonging to different sectors and areas of activity.

The following sectors and areas are involved in the Mission for Carbon Neutrality:

- Citizens
- Citizen organisations
- Industry
- Financial sector
- Agri-food sector
- Trade and catering
- Construction and real estate
- Mobility and transport
- Distribution and logistics
- Energy and renewable sector
- Waste management
- Natural space management
- Public administrations



Monitoring, updating and reviewing the Climate Contract and its annexes.

This Viladecans Climate Contract document and its Annexes, which form an integral part of it, are framed as part of an iterative process as a dynamic and flexible document that will be subject to regular monitoring, updates and revisions in order to review and adjust the commitments, actions and/or investments necessary to achieve the City's climate neutrality objectives.

The signatories undertake to monitor, at least every two years, the progress of the commitments made in this Contract and its Annexes and to update them as necessary. This monitoring and updating is without prejudice to including specific monitoring, review and updating methodologies in the various Annexes.

The biannual reviews will take into account the climate policy guidelines of the Spanish Government and the European Commission, which we trust will reaffirm and expand their support for the Mission. The biannual review schedule will also need to be adapted to the municipal mandate cycles, and therefore the first review is scheduled for the end of 2027 and a second review for the end of 2029.

When necessary for the better achievement of its objective, provided that it does not affect its essential purpose, and provided that it involves a clarification, improvement or upward revision of the objectives and commitments undertaken, the signatories of the Declaration may introduce amendments to it and/or to any of its Annexes. Preferably, these amendments should be made within the framework of the biennial monitoring of the Declaration and shall be sent to the other signatories for information purposes.

In addition, the Viladecans 2030-2040 Strategy incorporates a monitoring system based on strategic **indicators** and **metrics**⁴⁴, which enable the progress towards the defined objectives to be assessed in a concrete and periodic manner. This system not only guarantees the consistency and traceability of municipal actions, but also facilitates accountability to citizens. There are four sets of indicators divided by theme: Sustainable Development Goals, 25 City Challenges, Viladecans Urban Agenda, and Quality of Life in the City. These sets of indicators give continuity to the Climate Mission – Viladecans 2030 and the City Climate Contract as tools for accelerating the sustainable transformation of Viladecans.

⁴⁴ Viladecans City Council. (n.d.). *Viladecans Strategy 2030-2040*. Retrieved on 28 May 2025, from <https://www.viladecans.cat/ca/estrategia2030>



In Viladecans, on the date of the latest electronic signature.

Olga Morales Segura.

Mayor of Viladecans.

Olga Morales

Segura - DNI

52201549J (SIG)

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- DNI 52201549J (SIG)

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Governamental support for climate neutrality in the city of Viladecans

APOYO AL ACUERDO CLIMÁTICO DE CIUDAD DE VILADECANS

Apoyo de la Generalitat de Catalunya a la neutralidad climática de la ciudad de Viladecans para 2030.

La Generalitat de Catalunya, como administración responsable de las políticas regionales en materia de sostenibilidad, energía y acción climática, manifiesta mediante el presente documento su **respaldo institucional y estratégico** al proceso de neutralidad climática de la ciudad de **Viladecans**, enmarcada en la **Misión Europea de Ciudades Inteligentes y Climáticamente Neutras**.

La Generalitat de Catalunya considera que el éxito de esta Misión requiere una **gobernanza multinivel eficaz**, sustentada en la colaboración entre las administraciones locales, regionales, estatales y europeas. En este sentido, reconoce que el proceso impulsado por Viladecans a través de la **Misión Clima – Viladecans 2030** se alinea plenamente con los instrumentos de planificación estratégica regional.

La Generalitat de Catalunya considera que la Misión Clima de Viladecans constituye una oportunidad estratégica para avanzar hacia la descarbonización de la ciudad y para **impulsar** los objetivos de la **Visión Viladecans 2030** —que integra la **Agenda 2030**, la **Agenda Urbana Local** y los **Planes Sectoriales**—, y **respaldar** proyectos de la ciudad sostenible, como los siguientes:

- Ampliación doble red de alcantarillado urbano y red de depósitos pluviales.
- Proyecto Smart City de Viladecans.
- Encuentros IND+I i innovación de ciudad.
- Proyecto Vilawatt de Transición energética local
- Viu Verd. Proyecto de Renaturalización del núcleo urbano de Viladecans, a través del cumplimiento de los objetivos 3-30-300, para mejorar la conectividad y la biodiversidad de la infraestructura verde y la salud urbana (2023-2025).
- Proyecto AgroDeltaLab que promueve la innovación en la producción agrícola para mejorar su productividad y su sostenibilidad ambiental, social y económica.
- Proyectos de movilidad sostenible (ZBE, estrategia ciclista, plan puntos de carga VE...).

Con esta declaración, la Generalitat de Catalunya **respalda de forma institucional y estratégica el trabajo conjunto con Viladecans** y subraya el papel clave de las ciudades en la lucha contra el cambio climático.

SUPPORT FOR THE CLIMATE AGREEMENT OF THE CITY OF VILADECANS

Support from the Government of Catalonia for the Climate Neutrality of the City of Viladecans by 2030

The Government of Catalonia, as the administration responsible for regional policies in sustainability, energy, and climate action, hereby expresses its institutional and strategic support for the climate

neutrality process of the city of Viladecans, within the framework of the European Mission of Smart and Climate-Neutral Cities.

The Government of Catalonia considers that the success of this Mission requires effective multilevel governance, based on collaboration among local, regional, state, and European administrations. In this regard, it acknowledges that the process driven by Viladecans through the Climate Mission – Viladecans 2030 is fully aligned with the instruments of regional strategic planning.

The Government of Catalonia believes that the Viladecans Climate Mission represents a strategic opportunity to advance the decarbonisation of the city and to promote the objectives of the Viladecans 2030 Vision —which integrates the 2030 Agenda, the Local Urban Agenda, and the Sectoral Plans— and to support sustainable city projects such as the following:

- Expansion of the dual urban sewerage network and stormwater reservoir system.
- Viladecans Smart City Project.
- IND+I meetings and city innovation.
- Vilawatt Project for Local Energy Transition.
- Viu Verd: Renaturalisation Project of the urban core of Viladecans, through the fulfilment of the 3-30-300 objectives, to improve connectivity and biodiversity of green infrastructure and urban health (2023–2025).
- AgroDeltaLab Project: promotes innovation in agricultural production to improve its productivity and environmental, social, and economic sustainability.
- Sustainable mobility projects (Low Emission Zones – LEZ, cycling strategy, EV charging point plan...).

With this declaration, the Government of Catalonia provides institutional and strategic backing to joint work with Viladecans and underscores the key role of cities in the fight against climate change.

FIRMA DE APOYO AL ACUERDO CLIMÁTICO DE CIUDAD DE VILADECANS

A 29 de juliol de 2025, a Viladecans

Generalitat de Catalunya

Sonsoles Letang Jimenez de Anta.

Directora General de Canvi Climàtic i Qualitat Ambiental.

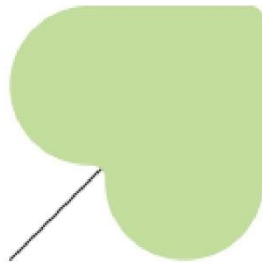
Departament de Territori, Habitatge i Transició Ecològica.

Ayuntamiento de Viladecans

Sra. Olga Morales, alcaldesa de Viladecans

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ANNEX 1:
*Climate Neutrality
Action Plan*



Introduction

Viladecans is a city located in the Baix Llobregat region, within the Barcelona Metropolitan Area, with a population of over 66,000 inhabitants and an area of 20.4 km². It is a compact, diverse and cohesive city that has distinguished itself through its ongoing commitment to sustainability, social equity and public innovation.

With this 2030 Climate Neutrality Action Plan, Viladecans consolidates its participation in the European Union's Mission for 100 Climate-Neutral and Smart Cities and commits to achieving climate neutrality across its entire municipal territory by 2030. This goal covers the entire territory and all emitting sectors under the direct control or influence of the municipality, without any exclusions. Indirect emissions (scope 3), although they pose a greater methodological challenge, are also incorporated into the strategy through collaborative approaches that will be progressively deployed beyond this timeframe.

This Action Plan is part of the Viladecans 2030-2040 Strategy, adopted by the City Council in April 2023. This strategy establishes six thematic areas (Economic revitalisation, Ecological transition, Educational innovation, Healthy lifestyle, Urban resilience and Urban regeneration), three cross-cutting areas (Digital and green transformation, Social inclusion and Gender equality), and 25 strategic city challenges, all of which are aligned with the Sustainable Development Goals (SDGs), the Spanish Urban Agenda, the Catalan Urban Agenda and the priorities of the European Union.

In addition, Viladecans was selected as a pilot city for the development of its own Local Urban Agenda, approved in July 2021. This document adapts the principles of the Spanish Urban Agenda to the local context through an action plan with 131 measures, organised into cross-cutting, sectoral and governance actions, which are monitored periodically using harmonised indicators. The Urban Agenda is therefore a structural pillar of integrated local action on sustainability and climate.

The governance of this plan is based on the mission-oriented innovation model adopted by the European Union. Within this framework, Viladecans has defined two major transformation missions for 2030: achieving climate neutrality and eliminate early school leaving. To this end, a public innovation ecosystem has been deployed that mobilises all actors in the territory (administration, citizens, businesses, knowledge centres) under a logic of shared responsibility and collective learning.

This approach has been recognised with the European Green Leaf 2025 award, granted by the European Commission, which values Viladecans' leadership in urban sustainability and climate action. In this context, initiatives such as the *Viu Verd* programme (Viladecans renaturalisation project) stand out, promoting the 3-30-300 urban model: seeing at least three trees from every home, guaranteeing 30% vegetation cover in every neighbourhood and ensuring that the entire population lives less than 300 metres from a green space. This vision was formalised in the Viladecans Declaration on Urban Nature and is funded by the Next Generation programme.

Another strategic pillar is the Vilawatt energy transition project, which has been running since 2016 with support from the EU's Urban Innovative Actions (UIA) programme. This is a public-private-citizen collaboration (PPCP) working in four key areas: renewable energy supply, energy renovation of housing, a local digital currency linked to energy



savings and the promotion of local trade, and training in green jobs. Thanks to this model, replicated at European level through URBACT, Viladecans has developed innovative tools such as a solar map, an energy community simulator and an active network of businesses participating in its digital currency. Also noteworthy is its impact in terms of public-private partnership projects to promote the renewable energy transition (Consorti Vilawatt), the renovation of homes in old neighbourhoods using energy efficiency criteria, and the installation of photovoltaic panels for self-consumption, among others.

The city's climate trajectory has its structural starting point in the PAESC approved in 2017, within the framework of the Covenant of Mayors, which defined 59 mitigation and 30 adaptation actions to climate change. **An updated and more ambitious version of the PAESC is currently under review and pending approval, and will provide an enhanced and up-to-date technical foundation for local climate planning.** In this context, the Viladecans Climate Contract Action Plan does not replace the PAESC or other strategic documents, but rather articulates and expands them, serving as a comprehensive coordination framework that aligns all relevant strategies — the PAESC itself, the Sustainable Urban Mobility Plan (PMUS), the Urban Agenda, the Local Climate Change Adaptation Plan (PLACC), the Air Quality Improvement Plan, the Waste Prevention Plan, the Energy and Climate Master Plan for the Barcelona Metropolitan Area, and the Vilawatt project — into a common roadmap towards climate neutrality. Thanks to this approach, the CCC makes it possible to bring together all existing and future efforts towards decarbonisation, to account for the emission reductions envisaged in each of them as part of the climate gap that needs to be closed, and to ensure technical, political and financial coherence in the transition. It also facilitates the creation of synergies, avoids redundancies and enables a transformative, participatory and shared-responsibility approach.

The development of the 2030-2040 Strategy began in 2020 with a city assessment and a broad process of shared reflection, which led to the definition of 25 strategic challenges and more than 100 proposals with citizen participation. Its implementation is supported by a consolidated governance structure, with four committees: the Strategy Steering Committee, the Budget Transformation Committee, the Urban Agenda Monitoring Committee and the Sectoral Plan Monitoring Committee. This model ensures consistency between sectoral plans, the overall strategy and the efficient use of public resources.

Through this plan, Viladecans aims to consolidate its position as a benchmark medium-sized European city: climate neutral, socially cohesive, economically active and with an empowered and co-responsible citizenry.

The table below shows Viladecans' climate neutrality targets for 2030:



Table I-1.1: Climate Neutrality Targets for 2030			
Sectors	Scope 1	Scope 2	Scope 3
Stationary energy	Included	Included	Excluded
	Petroleum products (petrol, diesel)	Electricity	-
Buildings	Included	Included	Excluded
	Petroleum products (petrol, diesel), natural gas (NG, CNG) and biomass	Electricity	-
Transport	Included	Included	Not included
	Petroleum products (petrol, diesel, diesel C) and natural gas (NG, LNG, CNG)	Electricity	-
Waste/wastewater	Included	Not applicable	Included
	Petroleum products (petrol, diesel, gas oil C) and natural gas (NG, CNG)	-	Waste management in the Barcelona Metropolitan Area
Industrial processes and use of products	Included	Not applicable	Excluded
	Natural gas (thermal consumption)	-	-
Agriculture, forestry and land use	Included	Not applicable	Excluded
		-	-
Other	Excluded	Excluded	Excluded
Geographical limit	Same as the administrative boundary of the city		
Specify excluded/additional areas	The airport, the C-31 (motorway) and the C-32 (highway) are excluded.		



Table I-1.1: Climate Neutrality Targets for 2030

Sectors	Scope 1	Scope 2	Scope 3
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Map



Work process

The Viladecans Action Plan towards climate neutrality in 2030 has been developed through a comprehensive, progressive, technical and strategic process, involving cross-cutting participation by municipal departments, key local stakeholders, and a range of existing planning instruments.

This process has been aligned with the methodology proposed by the European Union's Cities Mission and with the principles of the NetZeroCities programme.

The methodological starting point was the work initiated in 2020 as part of the development of the Viladecans 2030–2040 Strategy, which included a city diagnosis, a broad participatory process and the shared definition of 25 strategic challenges. This strategy, approved in April 2023, acts as an integrating and guiding strategic framework for all municipal public policies, including those relating to ecological and climate transition.



Throughout 2023 and 2024, a specific process has been carried out to formulate the Climate Contract Action Plan, led by Viladecans City Council through the Office for the Future of the City (part of the Viladecans City Foundation), in close coordination with all municipal departments. This process has included:

- The activation of a cross-cutting technical working group, with representatives from all areas involved, responsible for identifying, updating and validating climate indicators structured according to the NetZeroCities model. This group has been working continuously since 2023 and has been essential in defining the framework for monitoring and evaluating the plan.
- The review and consolidation of existing sectoral and cross-cutting plans, aiming to integrate their actions and objectives into the climate neutrality roadmap. Among the documents reviewed are:
 - PAESC (2017, and update in 2025)
 - Viladecans Urban Agenda (2021, latest version validated in 2025)
 - Sustainable Urban Mobility Plan (2015)
 - Local Climate Change Adaptation Plan – PLACC (2016)
 - Air Quality Plan "Aire Net" (2015)
 - Local Municipal Waste Prevention Plan (2021–2025)
 - Local Housing Plan (2008–2019)
 - Local Recovery Plans (2020 and 2021)
 - Feminist Policy Plan (2023–2026)
 - Local Plan for the Right to Sexual, Emotional and Gender Diversity (2025–2034)
 - Energy and Climate Master Plan, Barcelona Metropolitan Area (2018)
 - Vilawatt Project (2016 – ongoing)

This process has made it possible to align existing sectoral policies with the 2030-2040 Strategy and with the cross-cutting objective of climate neutrality, avoiding duplication and taking advantage of synergies. Methodological integration has been conducted in line with the requirements of *the Mission Info Kit*¹, considering the approach based on levers for transformation, portfolio of actions, and modular structure (current status, trajectories and governance).

¹ European Commission. (2021, 18 November). *Information kit for cities: Mission for climate-neutral and smart cities – now available*. EU Urban Mobility Observatory. https://urban-mobility-observatory.transport.ec.europa.eu/news-events/news/mission-climate-neutral-and-smart-cities-info-kit-cities-now-available-2021-11-18_en



In addition, formal alignment has also been maintained with the other two key elements of the Viladecans Climate Contract:

- The 2030 Climate Neutrality Commitment.
- The 2030 Climate Neutrality Investment Plan.

The Plan has been designed as a living document that will be updated iteratively. Future iterations are expected to include:

- Advanced energy models for estimating impacts by sector.
- Complementary tools for socioeconomic assessment.
- A definitive system of co-benefit indicators and quantified targets.
- An investment plan with detailed financial outlines.
- Strengthening the approach to climate adaptation and to mitigating its effects on public health in the design of all public policies and urban development.

Overall, the process has strengthened the institutional capacity of Viladecans City Council to lead the climate transition, as well as improving internal coordination, generating a shared culture and laying the foundations for cooperative governance that is inclusive of citizens as well as economic and social stakeholders.



PART A - CURRENT STATUS OF CLIMATE ACTION

Part A provides a comprehensive overview of the current context from which Viladecans embarks on its path to climate neutrality.

It comprises three modules: Module A-1 presents the baseline emissions inventory, establishing a reference against which future reductions will be measured; Module A-2 outlines the existing municipal policies, strategies, and initiatives relevant to climate action; and Module A-3 identifies systemic barriers—whether structural, regulatory or behavioural—that may impede progress. This section lays the analytical groundwork for the development of targeted, effective interventions.

MODULE A-1. Reference inventory of greenhouse gas emissions

Preliminary considerations on the baseline inventory

Viladecans has a proven track record in the field of local climate planning. For more details, see Module A-2 of this document.

In terms of previous efforts to report a greenhouse gas (GHG) emissions inventory, it is worth highlighting the participation in the Covenant of Mayors for Climate and Energy initiative, one of the leading platforms at European level for local commitments to climate mitigation, adaptation and justice. Specifically, Viladecans joined this initiative in 2008 and has approved successive climate planning instruments in accordance with the objectives established in this framework (the latest plan approved was in 2018).

Within this framework, the City Council has previously compiled GHG emission inventories and is currently at an advanced stage of drafting a new Sustainable Energy and Climate Action Plan (PAESC), which includes a GHG emissions inventory for 2022. This inventory is being developed under the coordination of the Barcelona Provincial Council, which provides a standardised methodology for emissions calculation across all municipalities in the Province of Barcelona.

Unlike other Mission cities that drafted their Climate Contracts earlier, Viladecans has made **use of the NetZeroPlanner tool**, developed within the framework of NetZeroCities² (NZC). This tool provides a common and standardised methodology for European cities participating in the Mission, allowing not only greater comparability between cities, but also a more robust and detailed analysis of emissions data. The adoption of this methodological approach ensures that the emissions inventory considered complies with the requirements set out in the Cities Mission's *Info Kit for Cities*, both in terms of sectoral coverage and the scope considered, and compatibility with the main gases required (at least CO₂, CH₄ and N₂O).

The geographical boundary of the inventory coincides with the **administrative boundary of the municipality** of Viladecans. **The base year** for the inventory is **2023**,

² NetZeroCities. *Support platform for climate-neutral cities*. Retrieved on 30 May 2025, from <https://netzerocities.app/signin>



as it corresponds to the most recent year with consolidated, high-quality data available. This choice also allows for comparability with the PAESC inventory.

To complement the 2023 inventory, Viladecans has developed a trend scenario for emissions for 2030, also known as **the BAU (Business-As-Usual) scenario**. This scenario describes the expected trajectory of GHG emissions if no additional measures are taken beyond those already in place or planned prior to the City Climate Contract, i.e. if the city continues with its current policies, technologies and behaviours. The BAU model does not replace the 2023 inventory, but rather complements it as **a counterfactual projection**, allowing the climate strategy adopted to be based on technical and prospective analysis, in line with European methodological standards.

The inclusion of the BAU scenario has two key objectives:

- Strategic diagnosis: it illustrates the net impact of maintaining current trends without incorporating new transformative actions to be visualised, showing the inadequacy of current policies to achieve climate neutrality by 2030.
- Rigorous calculation of the emissions gap: it provides a more realistic point of comparison than a static scenario by integrating social, economic and technological dynamics. This allows the Action Plan to more accurately quantify the additional efforts required to bridge this gap.

The BAU scenario for Viladecans has been generated within the modelled environment of the *NetZeroPlanner* tool, which allows for the integration of multiple local and regional variables: historical energy consumption, population projections, foreseeable technological changes, the evolution of the national energy mix and existing policies at the national, regional and local levels (e.g. actions already planned in the PAESC, the PMUS or the Urban Agenda).

This emissions inventory currently includes **scopes 1 and 2**, i.e. emissions generated within the geographical boundaries of the city (scope 1) and those associated with the consumption of purchased electricity and heat (scope 2), over which the City Council and other local actors can exert a direct or significant influence.

In line with the *NetZeroCities* methodology and local climate governance criteria, it has been decided not to systematically include **scope 3** emissions, as they are largely beyond the city's direct control. However, an exception has been made in the case of urban waste treated outside the municipal area, which has been partially included in the inventory under scope 3. This decision is based on criteria of shared responsibility and continuous improvement, which are part of Viladecans' commitment to climate neutrality.



To address the risk that scope 3 emissions may negatively affect the Action Plan as a whole, Viladecans is considering the following:

- Preparation of an influence *checklist* to assess the impact on Scope 3 emissions of the measures to be implemented under this Action Plan for the city's climate neutrality by 2030.
- Design of a tool for evaluating and monitoring the actions in this Action Plan, with a special emphasis on controlling and limiting these Scope 3 emissions.
- Ambition to also achieve Scope 3 neutrality for the entire city of Viladecans by 2040, for which it will be essential to act with particular focus on the transition towards a circular economic and production model, as well as an emphasis on a consumption model based on proximity and sustainability.

In any case, it should be noted that the reference inventory has been constructed from a combination of actual data and modelled estimates, following the data entry logic of *NetZeroPlanner*, which allows the results to be compared with other sources.

In this regard, the city expresses its **commitment to the progressive improvement of the inventory**, both in terms of data quality and resolution, and the gradual incorporation of scope 3 emissions when sufficiently robust information is available. Specifically, future iterations are expected to incorporate a greater degree of sectoral accuracy, particularly in areas such as non-motorised transport, non-electric thermal applications, and diffuse emission sources. This principle of continuous improvement is in line with the *NetZeroCities* guidelines *and* the iterative update cycle of the Climate Contract.



Results of the baseline inventory

A-1.1: Final energy use by source sector				
Base year	2023			
Unit	GWh/year			
Emitting sector	Scope	Scope 2	Scope 3	Total
Buildings	93.0	~100**	—	~193,0
(Type of fuel/energy used)	Natural gas, diesel	Electricity	—	
Transport	~75**	~10**	—	~85,0
(Type of fuel/energy used)	Petrol, diesel	Electricity (electric vehicles)	—	
Waste	—	—	<i>Pending</i>	—
(Type of fuel/energy used)	—	—	—	
Industrial processes and use of products	<i>Estimated low intensity</i>	<i>Included in electricity</i>	—	~5,0
(Type of fuel/energy used)	Gas, electricity	Electricity	—	
Agriculture, forestry and land use	—	—	—	Marginal / Not applicable



Technical notes:

- Electricity in buildings: It is estimated that approximately 100 GWh/year of total electricity consumption is used in buildings (residential, tertiary, and public).
- Total electricity: confirmed at 198.6 GWh/year. The remainder is distributed among industry, transport, and other sectors.
- Transport:
 - Data on "*vehicle_kilometres*" and "*energy carrier shares*" show a predominance of private petrol/diesel vehicles and incipient electrification (approximately 0.3% of cars).
 - Energy consumption for transport is estimated at around 85 GWh/year, mostly from fossil fuels (approximately 88%) and the rest from electricity.
- Industry: This is considered a relevant activity, but with low total energy intensity. Consumption is estimated at less than 5 GWh/year in net terms, with part included in overall electricity use.

The factors indicated are those usually used in European contexts (according to the GHG Protocol and reference values from the International Energy Agency or MITECO, in the absence of more accurate local data). They are expressed per unit of primary energy (generally per MWh or GJ, converted to tCO₂e where possible).



A-1.2: Emission factors applied						
Reference method: IPCC 2006 + GPC (Global Protocol for Community-Scale GHG Inventories)						
Base unit: t CO ₂ e per MWh of final energy consumed						
Primary energy/energy source	Carbon dioxide (CO ₂)	Methane (CH ₄)	Nitrous oxide (N ₂ O)	Hydrofluorocarbons and perfluorocarbons	Sulphur hexafluoride (SF ₆)	Nitrogen trifluoride (NF ₃)
Electricity (peninsular mix, 2023)	0,129*	0,005	0,003	0	0	0
Natural gas	0,202	0,005	0,0001	0	0	0
Heating oil	0,267	0,003	0,0004	0	0	0
Petrol (transport)	0,242	0,016	0,0019	0	0	0
Diesel (transport)	0,267	0,006	0,0013	0	0	0
Biogas/bio energy (if applicable)	0 (net neutral)	0,001	0,0005	0	0	0

Tables A-1.3.A and A-1.3.B, shown below, present the distribution of GHG emissions by source sector in the reference year (2023) and in the BAU scenario for 2030, modelled using the *NetZeroPlanner* tool.

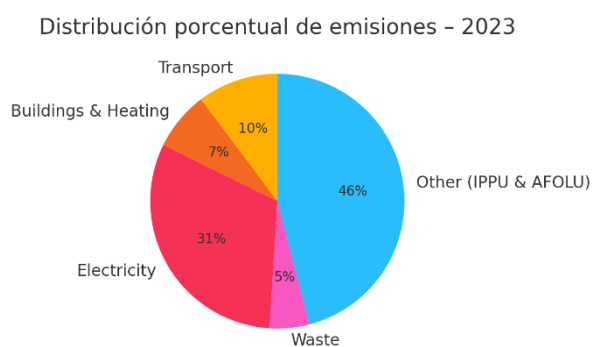
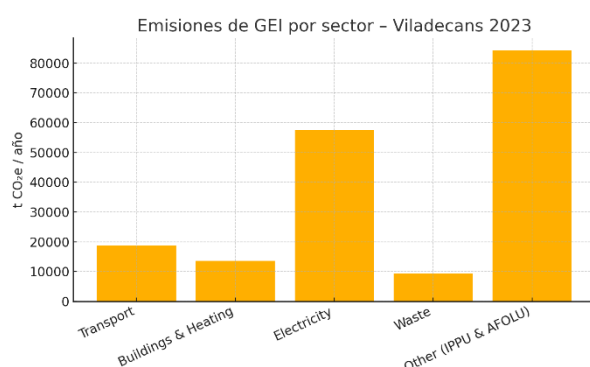
Both scenarios are broken down by scope (1, 2 and 3) and allow for the identification of priority emitting sectors, as well as establishing the quantitative basis for calculating the emissions gap to be covered by planned climate actions. This information is key to formulating the impact pathways of the Action Plan towards climate neutrality.



A. 2023 SCENARIO

A-1.3.A: GHG emissions by source sector (2023 scenario)					
Base Year	2023				
Unit	t CO ₂ equivalent/year				
	Scope 1	Scope 2	Scope 3	Total	% of Total
Transport	18.852	0		18.852	10%
Buildings & Heating	13.679	0	0	13.679	7%
Electricity		57.420		57.420	31%
Waste*			9.282	9.282	5%
Other (including IPPU & AFOLU)	84.290			84.290	46%
Total	116.821	57.420	9.282	183.523	100%

*Includes Scope 1 waste emissions (generated and treated within the city) and Scope 3 emissions (generated by the city but treated outside its boundaries) – solid waste only; wastewater is included in the "Other" sector.





The graphs above summarise the key results of the Viladecans inventory for 2023:

Relative weight by sector

- *Other (IPPU & AFOLU)* tops the emissions profile with 84,290 t CO₂e/year (46%). Content: industrial processes (use of fluorinated gases in industrial refrigeration, furnaces and chemical processes) and low net land emissions (AFOLU).
- Electricity (final consumption in all uses) contributes 57,420 t CO₂e/year (31%), explained by the still high carbon intensity of the Spanish peninsular mix (0.129 t CO₂e/MWh).
- Transport generates 18,852 t CO₂e/year (10%), mainly from petrol and diesel used in passenger cars and light vehicles.
- Buildings and heating account for 13,679 t CO₂e/year (7%), due to natural gas and diesel boilers in homes and the tertiary sector.
- Waste includes 9,282 t CO₂e/year (5%), almost all of which is scope 3 (waste treated outside the municipality).

Distribution by scope

- Scope 1 (direct local sources) represents 116,821 t CO₂e (64%): combustion in industry, transport and buildings.
- Scope 2 (imported electricity) accounts for 57,420 t CO₂e (31%).
- Scope 3 (currently only solid waste outside the municipality) adds 9,282 t CO₂e (5%).

This snapshot confirms that the levers with the greatest capacity for direct municipal intervention (scopes 1-2) account for most of the emissions and, therefore, the reduction potential until 2030.

Strategic interpretation and consistency with impact pathways

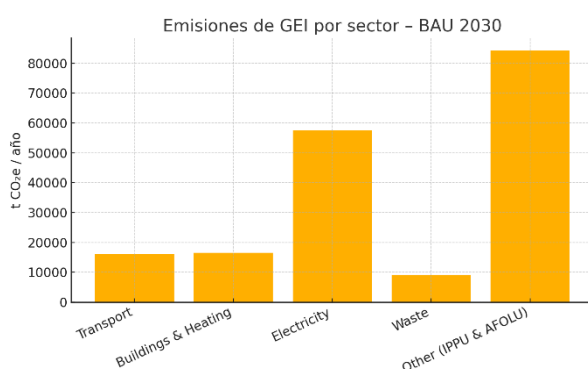
- Industry / "Other": the 46% share reveals the urgency of an ad hoc industrial decarbonisation programme (efficiency, renewable heat, replacement of F-gases). Public-private partnerships with companies in industrial estates will be key here.
- Electricity: achieving neutrality requires electrifying buildings and mobility, but simultaneously decarbonising the mix through PV self-consumption and collective PPAs.
- Transport: is the area with the highest social visibility; electrification, active mobility and VMT reduction measures will bring co-benefits for health and air quality.
- Buildings & Heating: the 13.7 kt CO₂e confirm the opportunity to accelerate energy renovation and connection to possible district renewable heat networks (if the feasibility study supports it).
- Waste: Scope 3 emissions stress the need for circular economy and biowaste reduction to cut emissions and meet EU recycling goals.



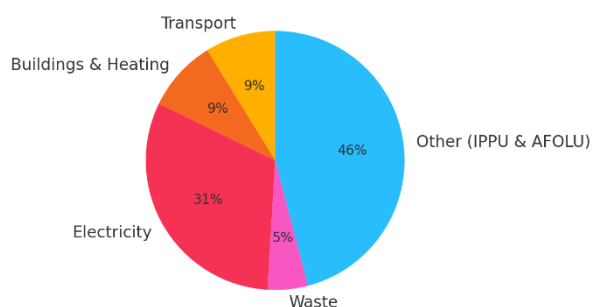
B. BAU SCENARIO 2030

A-1.3.B: GHG emissions by source sector (BAU scenario)					
Year	BAU 2030				
Units	t CO ₂ equivalent/year				
	Scope 1	Scope 2	Scope 3	Total	% of Total
Transport	16.164	0		16.164	9%
Buildings & Heating	16.481	0	0	16.481	9%
Electricity		57.420		57.420	31%
Waste*			9.220	9.220	5%
Other (including IPPU & AFOLU)	84.290			84.290	46%
Total	116.935	57.420	9.220	183.575	100%

**Includes Scope 1 waste emissions (generated and treated within the city) and Scope 3 emissions (generated by the city but treated outside its boundaries) – solid waste only; wastewater is included in the "Other" sector.*



Distribución porcentual de emisiones - BAU 2030





The graphs above summarise the key results of the Viladecans inventory for a prospective BAU 2030 scenario:

Relative weight by sector

- The industrial and process sector ("Other") remains the main source of emissions, with 84,290 t CO₂e/year (46%), unchanged from 2023.
- Electricity remains at 57,420 t CO₂e/year (31%), indicating that the peninsular energy mix is not sufficiently decarbonised on its own in this timeframe.
- Transport slightly reduces its emissions (–14%) to 16,164 t CO₂e, due to natural technological improvements and partial fleet renewal.
- In contrast, emissions from buildings increase by 20% (to 16,481 t CO₂e), due to higher energy use in the absence of renovation and deep electrification.
- Emissions from waste remain virtually unchanged, indicating that the current management system does not deliver significant reductions unless it is transformed.

Distribution by scope

- Scope 1 (direct local sources) continues to account for the majority of emissions and reinforces the importance of intervention at the municipal level and through local partnerships. It represents 116,164 t CO₂e (64%).
- Scope 2 (imported electricity) accounts for 57,420 t CO₂e (31%). The stability of the data between 2023 and 2030 reflects that the BAU scenario does not contemplate additional decarbonisation of the national electricity mix.
- Scope 3 (currently only solid waste outside the term) adds 9,220 t CO₂e (5%). Although marginal in relative weight, this is a strategic area in terms of circular policy and institutional example. As more robust information becomes available, other Scope 3 sources (such as material consumption or the food chain) may be incorporated.

Strategic interpretation and consistency with impact pathways

- Industry / "Other": The sector's weight remains unchanged from 2023: 84,290 t CO₂e (46% of the total). This confirms that, without regulatory changes or voluntary agreements with the business community, the mitigation potential in this area will remain untapped. The impact pathway aimed at industrial decarbonisation (energy efficiency, replacement of refrigerant gases, electrification of processes, renewable heat) takes on a central role.
- Electricity: at 57,420 t CO₂e (31%), emissions linked to electricity consumption are not reduced in this scenario, reflecting that the decarbonisation of the peninsular mix is not accelerating on its own. To achieve real reductions, an impact pathway focused on distributed renewable energies will be required, with a special focus on self-consumption, energy communities and municipal and private PPAs.
- Transport: there is a slight improvement compared to 2023 (–14%), which is attributed to the gradual renewal of the vehicle fleet. However, the projected 16,164



t CO₂e clearly show the need for more ambitious policies. Mass electrification, the promotion of public and active transport, and the reduction of private vehicle use must constitute a specific impact pathway.

- **Buildings & Heating:** far from decreasing, emissions from the residential and tertiary sectors are increasing to 16,481 t CO₂e (+20%). This upturn is linked to higher thermal demand and a lack of energy renovation measures. The impact pathway should prioritise the deep renovation of buildings, the phasing out of fossil gas and the introduction of renewable heating solutions (such as heat networks or heat pumps).
- **Waste:** emissions from waste treatment outside the city limits (9,220 t CO₂e) remain virtually stable. This shows that, in the absence of structural changes, the circular economy does not bring substantial climate benefits. A pathway focused on reducing organic waste, prevention, and improving selective collection and local treatment is required.

The BAU scenario reinforces the validity of the five preliminary impact pathways defined by the city:

1. Industrial decarbonisation
2. Renovation and renewable heat in buildings
3. Distributed renewable energy and electrification
4. Zero-emission mobility and active modes
5. Circular economy and local waste recovery

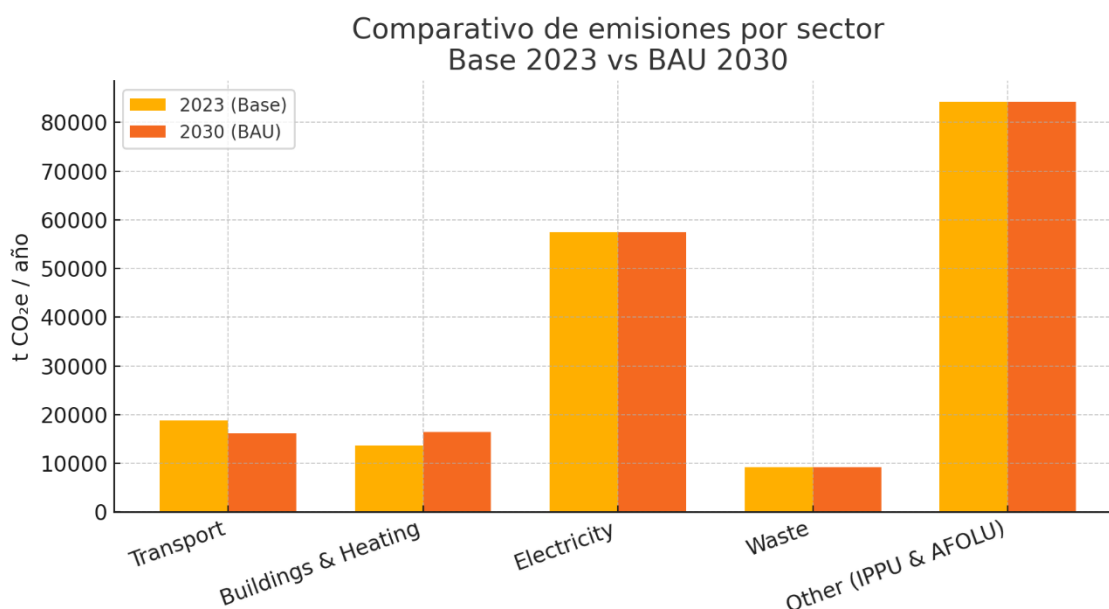
Each of these pathways directly addresses the emitting sectors that remain unchanged in the BAU and enables ambitious and measurable interventions to be articulated to close the climate gap by 2030. Quantitative information from the model will be essential to estimate the impact of each pathway and build an effective, realistic climate roadmap aligned with Viladecans' capabilities.

The BAU 2030 scenario offers a clear view of the cost of inaction: without additional measures, Viladecans will continue to emit at levels almost identical to current ones. This information allows us to accurately quantify the emissions gap to be closed through the impact pathways that will be detailed in the following modules of the Climate Contract.



C. COMPARATIVE SCENARIOS

The comparison between the 2023 reference inventory and the BAU 2030 trend scenario clearly shows the expected evolution of emissions if no new transformative measures are implemented. This information is essential for quantifying the emissions gap and guiding the strategic planning of climate actions.



A key conclusion is that the BAU scenario keeps total emissions virtually unchanged in 2030. The contrast between the two scenarios highlights the inadequacy of current policies to achieve substantial emissions reductions and reinforces the need for transformative interventions in the short term.

The distribution of scopes in 2030 is virtually identical to that in 2023, confirming that emissions are not being reduced structurally without direct intervention.

The dominance of scope 1 means that the city has a clear window of opportunity for action in the coming years, especially in sectors such as industry, mobility and construction. Scope 2 requires accelerating the energy transition so that electricity consumption is linked to local renewable sources. Finally, the progressive expansion of scope 3 will be key to addressing indirect emissions with a systemic approach, especially in the context of a circular economy and low-carbon public procurement.

Implications for the design of impact pathways:

The comparative analysis between the 2023 baseline inventory and the BAU trend scenario for 2030 allows key lessons to be drawn to guide Viladecans' climate strategy. Identifying how emissions would evolve in the absence of new interventions reveals both the limits of current policies and concrete opportunities to maximise the impact of future actions.



Based on this assessment, priority impact pathways and the systemic levers needed to close the emissions gap can be defined more precisely. This exercise helps to inform the selection of transformative measures in Module B of the Climate Contract, ensuring their consistency with the local emissions profile and their real decarbonisation potential.

BAU finding	Strategic implication (module B)
Global stagnation (–0%)	The emissions gap in 2030 is virtually the same as the baseline; additional measures equivalent to –100% of the target are required.
Transport –14% without action	Current policies (fleet renewal, slight improvements in mobility) are not enough; massive electrification and active transport are essential.
<i>Buildings & Heating</i> +6%	Without intervention, renovation does not offset the increase in demand; a Deep Renovation Plan and the deployment of renewable heat are urgently needed.
Electricity no improvement	The decarbonisation of the national mix is not accelerating in BAU; Viladecans must promote local +RE (photovoltaic, PPAs) to reduce intensity below 0.05 t CO ₂ /MWh by 2030.
<i>Other (IPPU & AFOLU)</i> constant	The industrial weight remains at 46%; it is consolidating its position as the critical lever for neutrality (efficiency, green heat, F-free gases).

Immediate priorities



Based on the sectoral diagnosis and the contrast between the 2023 and BAU 2030 scenarios, a series of key areas for action have been identified that require urgent and strategic intervention. These immediate priorities represent the areas with the greatest potential impact for reducing emissions in the short term, strengthening institutional capacity and laying the foundations for a structural transformation towards climate neutrality.

Addressing these priorities will be essential to designing an ambitious portfolio of actions that is coherent and aligned with local capacities, ensuring that Viladecans can meet the Climate Mission targets by 2030.

1. Industrial action: sectoral roadmap with industrial estate companies (audits, waste heat, green agreements, *F-gas phase-out*).
2. Renovation; renewable heat: building programme + possible district networks.
3. Electrification and RE: PV self-consumption, storage and PPAs for municipal services and the private sector.
4. Zero-emission mobility: electric fleet plan, charging infrastructure and strong promotion of active/public transport.
5. Circular economy: drastic reduction of biowaste and local treatment to cut Scope 3 emissions.

The analysis shows that, without a **transformative portfolio**, Viladecans will see little change in its emissions by 2030. Module B of the Action Plan will draw on these specific gaps to assess the expected impacts and priority investments.



MODULE A-2. Assessment of current policies and strategies

Viladecans has made a firm commitment to become a climate-neutral city by 2030, in line with European ambitions to accelerate the transition to a climate-neutral continent. This goal involves a profound transformation of the urban, economic, energy and mobility models, and will only be possible with the active involvement of the whole of society: citizens, businesses, research centres, social organisations and public administration. For Viladecans, climate neutrality is a collective and strategic process, aligned with the roadmap set out in the *European Green Deal* and the European Mission for Climate-Neutral and Smart Cities.

Viladecans' journey towards sustainability and climate action has been consolidated in recent years, in line with key European policies. The city began its environmental commitment with Local Agenda 21 and, in 2008, joined the Covenant of Mayors, an initiative promoted by the European Commission to mobilise cities in the fight against climate change. In 2018, Viladecans approved its Energy Sustainability Action Plan (PAES), reinforcing its local emissions reduction strategy in line with European decarbonisation commitments. In 2019, the city took a decisive step forward by approving the Local Climate Emergency Declaration, setting more ambitious targets than those initially set at European level and creating participatory governance structures.

Viladecans' climate commitment was renewed and expanded in 2021, when the city updated its membership of the Covenant of Mayors for Climate and Energy, adapting its objectives to the new European Union climate targets: to reduce emissions by at least 55% by 2030 and achieve climate neutrality by 2050 at the latest, as established in the European Climate Regulation. That same year, Viladecans approved its **Viladecans 2030-2040 Strategy and the Local Urban Agenda**, both instruments aligned with the United Nations 2030 Agenda, the European Urban Agenda and the Spanish Urban Agenda. The local strategy places the ecological transition as one of the priority areas for action, reinforcing Viladecans' contribution to the major European objectives of sustainability, urban resilience and climate justice.

In line with the new methodologies promoted by the European Commission, Viladecans adopted the **Mission-Oriented Innovation** approach, inspired by economist *Mariana Mazzucato*. This model, which is key to the design of the research and innovation missions of the European *Horizon Europe* programme, seeks to solve major social and environmental challenges through systemic solutions that integrate the economy, technology, governance and citizen participation. With this approach, **Viladecans designed several local strategic missions, of which Mission 1: Carbon Neutrality was consolidated as a priority**. This mission also integrates the perspective of sustainable mobility and the idea of the "15-minute city", in line with the principles of the New European Bauhaus and the urban proximity policies promoted by the EU.

Since the launch of its climate mission in June 2022, the City Council has been actively working to consolidate partnerships with businesses, research centres, citizens and administrations, following the collaborative governance model promoted by the European Commission to accelerate local transitions.



In short, Viladecans' transition to climate neutrality is deeply connected to the context of European climate policies. The city not only responds to the regulatory and strategic frameworks established at European level, but also positions itself as a proactive local actor that contributes decisively to the major shared objectives.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Law	National	Law 7/2021, of 20 May, on climate change and energy transition	Compliance with the objectives of the Paris Agreement.	Sets GHG reduction targets	Align the Viladecans 2030 Urban Strategy and the Viladecans 2030 Climate Mission with this national framework.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Plan	National	National Integrated Energy and Climate Plan (PNIEC) 2021-2030	Identifies challenges and opportunities across the five dimensions of the Energy Union: decarbonisation; energy efficiency; energy security; the internal energy market; and research, innovation and competitiveness. In June 2023, the draft of the new PNIEC 2023-2030 was presented (subject to public consultation and information until 4 September), a reform that increases the targets for 2030: • From 23% to 32% reduction in GHG emissions compared to 1990. • From 42% to 48% of renewable energy in final energy consumption. • From 39.5% to 44% improvement in energy efficiency in terms of final energy. • From 74% to 81% of renewable energy in electricity generation.	These will help the Commission determine the degree of joint compliance and establish actions to correct any deviations.	Align the Viladecans 2030 Urban Strategy and the Viladecans 2030 Climate Mission with this national framework.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
National	National	Long-term decarbonisation strategy 2050	It sets out a path that will enable fully renewable final energy consumption by mid-century.	It shows a decarbonisation path that will serve as a guide for investments in the coming years.	Align the Viladecans 2030 Urban Strategy and the Viladecans 2030 Climate Mission with this national framework.
Regulations	National	Royal Decree 1052/2022, regulating low-emission zones	Establishment of requirements for the design of urban low-emission zones.	High	Align the requirements with the design of the Viladecans LEZ



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Regulations	National	Royal Decree-Law 7/2025, of 24 June, approving urgent measures to strengthen the electricity system.	State regulation enabling priority actions to strengthen the electricity system and accelerate the energy transition, including financing for local distribution infrastructure, collective self-consumption, energy communities and storage. It establishes a regulatory framework that can facilitate access to national or European funds for investments in the energy sector.	High. It may enable the City Council to expand its investment capacity in energy transition, facilitate the implementation of energy communities and access funds for strategic climate projects.	Analyse the scope of the measures included, identify associated funding calls, prepare mature projects in the local energy field and collaborate with regional and national entities to submit investment proposals.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Strategy	National	Spanish Circular Economy Strategy (EEEC)	The EEEEC lays the foundations for moving beyond the linear economy and promoting a new model of production and consumption in which the value of products, materials and resources is maintained in the economy for as long as possible, waste generation is minimised and waste that cannot be avoided is used to the maximum.	It sets targets for 2030 that will, among other things, reduce national material consumption by 30%, improve water use efficiency by 10% and cut waste generation by 15% compared to 2010, making it possible to bring greenhouse gas emissions from the waste sector below 10 million tonnes in 2030.	Align the Viladecans 2030 Urban Strategy and the Viladecans 2030 Climate Mission with this national framework.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
National	National	National Strategy for Green Infrastructure and Ecological Connectivity and Restoration	This is the strategic planning document that regulates the implementation and development of green infrastructure in Spain.	It establishes a series of lines of action aimed at ensuring that the development of green infrastructure takes into account global change scenarios, with the objectives of contributing to the adaptation and mitigation of the effects of climate change.	Align the Viladecans 2030 Urban Strategy and the Viladecans 2030 Climate Mission with this national framework.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Regulations	National	Law 1/2025, of 1 April, on the prevention of food loss and waste	The Law aims to prevent and reduce food loss and waste throughout the agri-food chain by establishing a hierarchy of priorities, promoting the circular economy and raising awareness among all stakeholders and the general public.	Medium	Incorporation of the provisions of the laws into the specific needs and competences of the city of Viladecans



Regulations	Regional	Law 16/2017 on climate change	One of the five objectives of the law is <i>to promote and guarantee the coordination of all sectoral planning instruments related to climate change and the coordination of all Catalan public administrations, and to encourage the participation of citizens, social agents and economic agents.</i> The Law regulates the objectives relating to climate change mitigation and adaptation policies and provides for their integration into all sectoral policies of public administrations. It establishes commitments regarding electricity, provides for the establishment of three taxes related to CO2 emissions (which will be used to finance climate policies) and establishes the elimination of subsidies and similar measures for fossil fuels.	High	Ensure compliance and the use of the funds collected in accordance with the provisions of the Act itself. The departments responsible for social welfare, energy and water, and local authorities must define the conditions and methodology for establishing the minimum energy and water consumption required, as well as the social tariffs that ensure coverage of this minimum vital amount for the population living in poverty and at risk of social exclusion.
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A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Regulations	Regional	Decree Law 24/2021, on accelerating the deployment of distributed and shared renewable energies	Amends Decree Law 16/2019, incorporating measures to achieve greater consensus with the territory by promoting social dialogue in the implementation of renewable energy installations.	Measure	Ensure that the implementation of renewable energies in Catalonia is not halted.
Regulations	Regional	Energy Transition Law (in progress; expected 2023)	In line with the objectives of the Climate Change Act, it must promote a sovereign, democratised, sustainable, 100% renewable and local energy model.	High	Incorporation of legal requirements into the specific needs and competences of the city of Viladecans



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Regulations	Regional	Draft bill on waste prevention and management and efficient use of resources in Catalonia (start of processing: 1st half of 2023)	It must work on prevention and, in particular, on improving production and consumption patterns, including more traditional strategies such as eco-design and industrial symbiosis, as well as others such as dematerialisation, product-service techniques, or others aimed at reducing resource consumption and keeping consumed resources in circulation	High	Incorporation of legal requirements into the specific needs and competences of the city of Viladecans
Regulations	Regional	Draft bill on air quality (start of processing: 2nd half of 2023)	The aim is to bring regulations into line with the European framework, providing tools for managing the causes that contribute to inadequate air quality levels. Define priorities for tackling odour pollution	High	Incorporation of legal requirements into the specific needs and competences of the city of Viladecans



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Regulations	Regional	Decree 132/2024, of 30 July, approving the Air Quality Plan, horizon 2027	The aim is to define the actions necessary to improve air quality throughout Catalonia, comply with the limits set by the EU and the recommendations of the WHO	High	Incorporation of legal requirements into the specific needs and competences of the city of Viladecans
Strategy	Regional	Carbon Budgets for Catalonia (2021-2035)	The Committee of Experts on Climate Change (CECC) proposes carbon budgets for Catalonia, both global and broken down by sector, for the period 2021-2035 and for the five-year periods 2021-2025, 2026-2030 and 2031-2035. These carbon budgets are linked to the level of effort required for Catalonia to achieve climate neutrality by 2050, in line with existing regulatory frameworks and taking into account climate justice criteria.	Average	To establish a reference framework and assessment of the degree of contribution of the municipality of Viladecans to achieving the climate neutrality targets for the proposed sectors.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Plan	Regional	Integrated Energy and Climate Plan for Catalonia 2030 (PINECCAT30)	The Plan establishes milestones for the energy transition towards climate neutrality in Catalonia by 2030. It sets out GHG emission targets and measures to be implemented.	High	Incorporation of the measures of the energy transition plan and the specific competences of the city of Viladecans
Plan	Regional	Energy Outlook for Catalonia to 2050 (PROENCAT50)	Establishes long-term strategies to achieve climate neutrality by 2050	High	Incorporation of the measures of the energy transition plan and the specific competences of the city of Viladecans
Strategy	Regional	Climate Change Adaptation Strategy 2021-2030 (ESCACC30)	This is the strategic framework for the 2030 horizon, which provides continuity to the ESCACC20, approved in 2012 for the 2020 horizon.	Medium	Ensure consistency with the Climate Action Plan. Ensure its implementation.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Strategy	Regional	Horizon 2030: INDC. GHG emission reduction target in Catalonia for 2030	Estimated minimum GHG emission reduction target in Catalonia for 2030 in accordance with the Fit for 55 legislative package.	Average	Ensure consistency with the Viladecans Climate Action Plan
Strategy	Regional	Catalonia Green Infrastructure Programme	This consists of defining a strategically planned network of natural and semi-natural areas and other environmental elements, designed and managed to provide a wide range of ecosystem services and protect biodiversity in both rural and urban settlements.	Measures	Integrate the measures of the Plan for the protection of open spaces and the enhancement of associated ecosystem services, especially those related to the carbon absorption capacity of ecosystems.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Strategy	Regional	Catalonia Bioeconomy Strategy 2030	1. Improve the use of biomass; 2. Develop a business fabric based on the circular bioeconomy; 3. Encourage the use and consumption of bioproducts, bioenergy and biomaterials in the market; 4. Promote resilient agroforestry landscapes and the sustainable provision of ecosystem services.	Medium	Ensure consistency with the Viladecans Climate Action Plan
Strategy	Regional	Roadmap for the circular economy in Catalonia (FRECC) 2030 and action plan 2024-2026	Promote the circular economy in Catalonia through collaboration between sectors, cross-cutting governance and alignment with global policies, giving coherence and visibility to existing initiatives.	Medium	Ensure consistency with the Viladecans Climate Action Plan
Strategy	Regional	Catalonia Food Strategy	This is an action plan to move towards a more sustainable, safe, fair, cohesive, resilient, healthy and universally accessible food system.	Medium	Adopt measures, within the framework of the Climate Action Plan, to promote the development of this strategy.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Regulations	Regional	Law 9/2003, of 13 June, on mobility in Catalonia	Regulates sustainable mobility, promoting public transport, reducing private vehicle use and improving the environment. Establishes Urban Mobility Plans as a key instrument for planning efficient and safe transport.	High	Incorporation of the provisions of the law into the specific needs and competences of the city of Viladecans
Plan	Metropolitan	Mobility Master Plan 2020-2025	Mobility planning for the Barcelona Integrated Metropolitan Mobility System (SIMMB)	High. Due to its content, the plan is essential for decarbonising mobility and committing to sustainable and safe mobility.	Promote its implementation and ensure that it is mandatory



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Metropolitan Plan	Metropolitan	Infrastructure Master Plan 2021-2030	The Infrastructure Master Plan (pdI) sets out the public transport infrastructure actions planned for the period 2021-2030 within the scope of the Barcelona Integrated Metropolitan Mobility System (SIMMB), covering both the state and regional networks, regardless of the operator.	Registration. Due to its content, the plan is essential for decarbonising mobility.	Promote its implementation and ensure that it is mandatory
Plan	Regional	Barcelona Metropolitan Territorial Plan	The Barcelona Metropolitan Territorial Plan promotes compact urban development, protects natural spaces and encourages sustainable mobility to improve cohesion and quality of life.	Medium-High, defines the guidelines for open spaces in the municipality and their regional importance.	Align urban planning proposals with the criteria of the PMTB



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Plan	Metropolitan	Metropolitan Urban Master Plan (Initial approval)	The Metropolitan PDU establishes the regulatory framework and guidelines for metropolitan urban planning for 2050 with the aim of enhancing the natural values of the metropolitan area and promoting active and sustainable mobility.	Alta, urban guidelines for the transformation of the city	Align urban planning proposals with the criteria of the PDUM
Strategy	Metropolitan	Barcelona Metropolitan Strategic Plan (PEMB)	Metropolitan commitment, structured into eight missions, one of which is dedicated to the environmental and climate emergency	Medium, aligned with climate neutrality	Ensure consistency with the Strategy. Collaborate in the implementation of its climate mission
Plan	Metropolitan	Metropolitan programme for the prevention and management of municipal resources and waste 2019-2025 (PREMET25)	Defines the actions necessary to ensure compliance with the objectives set by the circular economy in the field of waste.	Medium	Ensure consistency with the Strategy. Collaborate in implementation.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Strategy	Local	The Viladecans 2030 - 2040 Strategy (September 2021)	Strategic framework for the city that aligns the UN Sustainable Development Goals. Within the six strategic axes, we highlight four due to their involvement in the processes of combating climate change and active decarbonisation, adaptation and mitigation measures in Viladecans: Ecological transition; City resilience; Healthy lifestyle; Urban regeneration model.	High	The ecological transition axis is aligned with climate neutrality, ensuring the implementation and degree of achievement of the city's challenges for this axis.
Strategy	Local	Viladecans Urban Agenda (2022)	This is the strategic instrument that champions a vision of sustainable urban planning in environmental, economic and social terms. Aligned with the 2030 Urban Agenda and various local plans and policies.	High	Align the actions and projects of the Urban Agenda that aim for climate neutrality.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Plan	Local	The PAESC (Sustainable Energy and Climate Action Plan), approved in 2018, currently under review and improvement	Includes energy improvement and transition measures, within the measures for climate change mitigation and adaptation	High	Align the proposed measures of the PAESC and the reduction scenarios with the climate neutrality objectives
Project	Local	Vilawatt Project	Municipal and citizen collaboration project encompassing Viladecans' energy transition actions (renewable energy production, energy rehabilitation of homes, creation of a local currency for local consumption, training programmes and citizen empowerment)	High	Integration of the Vilawatt project measures into the action plan to achieve climate neutrality objectives
Project	Local	<i>Viu verd</i> (Viladecans renaturalisation project) (2023-2025)	Project for the renaturalisation of the urban centre of Viladecans, through the fulfilment of the 3-30-300 objectives, to improve the connectivity and biodiversity of green infrastructure and urban health.	Medium	Integrate the measures planned for assessing CO2 absorption capacity.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Project	Local	AgroDeltaLab	Provide technological solutions for precision horticulture, intensive with sustainability criteria to maximise resource efficiency and reduce the impact on soil and water; Regenerative agriculture solutions that contribute to the recovery of soil quality and biodiversity and act as a carbon sink, such as embornar de Viladecans; develop nature-based projects to stabilise and improve biodiversity and the resilience of the territory to the effects of the climate emergency.	Medium	Integrate the measures planned for assessing CO2 absorption capacity.
Plan	Local	Action Plan for the Improvement of Acoustic Quality (2020)	Plan defining the municipality's noise quality zones and proposing improvement actions and noise reduction measures.	Low	Promote its implementation and ensure that the measures are carried out



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Plan	Local	Emergency Plan for drought situations 2023	Establish and plan in detail all measures to be taken by the municipality to comply with the limitations and restrictions set by the Regional Drought Plan for each state of drought.	Low	Verify the measures proposed in the plan and integrate them into water cycle efficiency measures.
Plan	Local	Viladecans Forest Protection Plan	Land use plan for non-developable forest land in the municipality of Viladecans.	Low	Identification of the degree of protection and feasibility of intervention as measures for carbon capture.
Plan	Local	Local Municipal Waste Prevention Plan for Viladecans 2021-2025 (under review)	This plan aims to establish a working strategy for the prevention, reuse and management of municipal waste for the period 2021-2025.	Medium	Integration of waste management measures related to climate neutrality.
Plan	Local	Local Housing Plan 2025-2030	Plan defining the municipality's housing policies: social housing, renovation, efficient land use, etc.	Average	Identify rehabilitation measures or objectives with mitigation actions.



A-2.1: List of relevant policies, strategies and regulations

Type	Level	Name and/or title	Description	Relevance	Actions required
Plan	Local	Viladecans Gender Equality Plan	Defines measures for gender equality in the municipality in different areas and sectors and for the promotion of women's rights and the improvement of care and support services for women, young people and children, among many others.	Low	Integration of measures related to urban planning and people's health.



A-2.2: Description and evaluation of policies

Through the application of the national regulations indicated in Table A2.1, the municipality of Viladecans can achieve overall emissions reductions of around 50% by 2030.

Below is a detailed description of how the main national policies contribute to reducing emissions and how they specifically impact Viladecans:

- **Law 7/2021 on Climate Change and Energy Transition**
This law is the national framework that establishes Spain's obligation to achieve climate neutrality by 2050 at the latest, with an interim target of reducing GHG emissions by at least 23% by 2030 compared to 1990 levels.

Main implications:

- It requires cities with more than 50,000 inhabitants to establish Low Emission Zones (LEZs) by 2023 (developed by RD 1052/2022).
- Requires sustainable mobility plans.
- Promotes the electrification of transport and improved energy efficiency.

Impact on Viladecans: contributes to a significant reduction in emissions from urban traffic, which account for 30-50% of local emissions.

- **National Integrated Energy and Climate Plan (PNIEC) 2021-2030**
This plan defines the national roadmap for meeting the 2030 climate targets and provides financing tools and specific sectoral targets to accelerate the energy transition at the local level.

Main implications:

- Promotion of local renewable energy generation, such as energy communities.
- Promotion of energy renovation of buildings and self-consumption.
- Promoting a modal shift towards active and electric mobility.

Impact in Viladecans: reduction of emissions in the building and mobility sectors, estimated at between 20-30%.



- **Long-Term Decarbonisation Strategy (ELP) 2050**
Establishes the roadmap to reduce national emissions by at least 90% by 2050 compared to 1990.

Main implications:

- Reinforces the need to transform urban systems towards low-energy demand and sustainable mobility models.
- Promotes the restoration of green and natural spaces as carbon sinks.

Impact on Viladecans: additional contribution to reducing emissions in the building and mobility sectors, with a reduction potential of between 20-30%.

- **Royal Decree 1052/2022: Regulation of Low Emission Zones (LEZ)**
This decree specifies the technical and operational requirements for the implementation of LEZs.

Main implications:

- Obligation to define areas with restrictions on the circulation of polluting vehicles.
- Promotion of public transport and active mobility.

Impact on Viladecans: potential reduction in urban traffic emissions of between 15-30%.

- **Spanish Circular Economy Strategy (EEEC)**
Promotes waste reduction, resource reuse and efficiency in the use of materials.

Main implications:

- Promotion of waste prevention, recycling and local composting.
- Promotion of responsible consumption models and sustainable food systems.

Impact in Viladecans: estimated additional reduction of 5-10%.



- **National Strategy for Green Infrastructure and Ecological Connectivity and Restoration**

Promotes the creation, restoration and connection of green and natural spaces.

Main implications:

- Promotion of urban renaturalisation and the creation of green corridors.
- Increase in local carbon sinks and improved adaptation to climate change.

Impact in Viladecans: increase in CO₂ capture capacity in the urban environment (see corresponding section for estimated calculation).

- **Law 1/2025 on the prevention of food loss and waste**

This law seeks to minimise food loss and waste throughout the value chain.

Main implications:

- Promotion of food waste prevention in shops, canteens and households.
- Promotion of food redistribution and sustainable organic waste management.

Impact in Viladecans: additional reduction in indirect emissions of around 5-10%.

At the regional level, Catalan policies and regulations are not only compatible with those of the Spanish government but, in many cases, are more ambitious, strengthening the framework for action to reduce emissions. This overlap offers Viladecans:

- Common minimum obligations, such as the implementation of the ZBE and national decarbonisation targets.
- Stricter and more specific requirements adapted to the Catalan context, with more demanding timetables, higher tax requirements and specific sectoral targets.
- Coordination of municipal policies with the objectives of the regional administration. Viladecans will have to adapt to the climate change and



sectoral policies that affect them, as dictated by the Generalitat de Catalunya (Catalan Regional Government).

The joint implementation of national and regional policies would enable Viladecans to achieve approximately 50% of the necessary emissions reduction by 2030. The remaining effort will depend on local policies and initiatives promoted by the municipality itself.

At the local level, Viladecans is rolling out a **comprehensive strategy based on sustainable urban planning, energy transition and citizen participation**. This commitment is mainly articulated through the **Viladecans 2030-2040 Strategy** and the **Viladecans Urban Agenda**, two complementary frameworks that align local action with the Sustainable Development Goals (SDGs) and national and international urban agendas.

One of the major challenges that Viladecans has set itself is to achieve climate neutrality by 2030, through the **Viladecans Climate Mission 2030**, and to move towards becoming a carbon-negative city by 2050. This goal requires a profound transformation of the energy model, mobility, urban planning and the consumption habits and behaviour of citizens. Viladecans is firmly committed to governance based on the quadruple helix, promoting the active involvement of the administration, businesses, social entities, the educational sector and citizens.

The Viladecans Urban Agenda acts as an operational roadmap, transforming strategic challenges into concrete measures. This plan, built on participation, promotes innovative, collaborative and cross-cutting projects, especially in the areas of energy transition, efficiency, sustainable mobility and shared management.

A key project in this process is **Vilawatt**, a pioneering experience in public-private-citizen energy management that promotes:

- The supply of local renewable energy.
- The energy renovation of homes.
- The creation of a local currency linked to energy savings.
- Professional training in new profiles in the energy sector.

Vilawatt has demonstrated that medium-sized cities can successfully lead the energy transition and has become a national and international benchmark.

Alongside Vilawatt, Viladecans has promoted other notable initiatives:

- A dual sewerage network to make use of rainwater.
- The development of a municipal fibre optic network that supports the smart city.



- The **Viu Verd** project (Viladecans renaturalisation project), which promotes green infrastructure and urban renaturalisation.

In addition, the city participates in various projects aimed at promoting sustainable mobility, improving air quality and directly involving citizens in climate action, such as the Co-Carbon Measurement Tree programme, where residents collaborate in measuring the CO₂ capture capacity of urban trees.

Viladecans focuses its efforts on the sectors with the greatest impact on GHG emissions and where local action has the greatest potential for impact:

- Mobility and transport.
- Renewable energy transition.
- Urban regeneration: housing, buildings, infrastructure and public spaces.
- Circular economy: waste management and resource optimisation.
- Restoration of biodiversity: natural ecosystems and green infrastructure.
- Economic transformation and growth: industry, commerce and agriculture.

To accelerate decarbonisation, the city will apply the **five levers methodology**, grouping strategic actions around:

1. Renewable energy.
2. Energy efficiency and savings.
3. Circular economy.
4. Electrification.
5. Increase in carbon sinks.

These five levers will guide local projects and enable an 80% reduction in emissions by 2030 through mitigation actions, complemented by an additional 20% reduction through carbon capture projects.

Table A-2.3 presents a quantitative view of the **emissions gap** separating Viladecans from its climate neutrality target in 2030, based on the business-as-usual (BAU) scenario and considering the projected effects of the Climate Neutrality Action Plan (CNAP). This tool allows us to visualise the total effort required and the ambition of the set of measures proposed.



A-2.3: Emissions gap									
	<i>Baseline Emissions (BAU 2030)</i>	<i>Emissions Reduction Resulting from CNAP</i>		<i>Remaining Emissions</i>		<i>Residual Emissions Offsetting¹</i>		<i>Emissions Gap (amount necessary to achieve net-zero)</i>	
	<i>(Absolute value)</i>	<i>(Absolute value)</i>	<i>(% of BAU 2030)</i>	<i>(Absolute value)</i>	<i>(% of BAU 2030)</i>	<i>(Absolute value)</i>	<i>(% of BAU 2030)</i>	<i>(Absolute value)</i>	<i>(% of BAU 2030)</i>
Transport	16	13	83%	3	17%	3	17%	0	0%
Buildings & Heating	16	13	77%	4	23%	4	23%	0	0%
Electricity	57	50	87%	7	13%	7	13%	0	0%
Waste	9	2	25%	7	75%	7	74%	0	0%
Other (including IPPU & AFOLU)²	84	6	81%	16	19%	16	19%	0	0%
Total	184	147	80%	37	20%	37	20%	0	0%

1 Residual emissions consist of those emissions which cannot be reduced through climate action and are being offset. Residual emissions may amount to a maximum of 20% as stated by the Mission Info Kit.

2 The emissions reduction target percentage for the "Other" sector is assumed to be the same as for the other four main sectors unless updated by the city. Activities and commitments to reduce these emissions are documented in the Climate Neutrality Action Plan.

The following conclusions can be drawn from the results obtained:

- An 80% reduction compared to the BAU 2030 scenario is expected:

The CNAP envisages an overall reduction in emissions of 147 kt CO₂e out of a total of 184 kt, representing a decrease of 80% compared to the trend scenario. This result is at the upper threshold of ambition required by the Climate Mission, which sets a maximum margin of 20% of residual emissions to be offset.

- Residual emissions (20% of total):

The 37 kt CO₂e remaining after implementing all planned actions are considered "residual emissions" that cannot be avoided using current levers. These correspond to industrial processes that are difficult to decarbonise, certain thermal demand in



buildings, and diffuse emissions from transport and waste. They are expected to be offset through equivalent absorption or neutralisation mechanisms (*offsetting*).

- No final gap:

Given that residual emissions do not exceed the 20% threshold, the current model leaves no emissions unneutralised. In other words, the emissions gap is completely closed, placing Viladecans on a technically feasible path towards climate neutrality by 2030, provided that the CNAP measures are fully implemented.

- At the sectoral level:

- Electricity and transport have the highest reduction percentages (87% and 83%, respectively), consistent with the planned electrification, efficiency and renewable generation measures.
- Waste shows a lower mitigation capacity (25%), reflecting the difficulty of intervening in scope 3 emissions and highlighting the importance of ambitious policies on prevention and circular management.
- The "Other" sector (mainly industry) continues to account for a significant share of residual emissions (16 kt), reinforcing the need for specific industrial decarbonisation actions included in the CNAP.

The emissions gap simulation confirms that the CNAP designed by Viladecans is technically sufficient to achieve climate neutrality by 2030, without relying on extraordinary external measures. The residual emissions margin remains within the Mission limits, and all sectors contribute significantly to the overall reduction. This scenario reinforces the credibility of the city's commitment and establishes a solid basis for progressive implementation, rigorous monitoring and future improvement of local climate policies.



MODULE A-3. Systemic barriers to climate neutrality by 2030

A-3.1: Description of systemic barriers and opportunities

Viladecans faces significant systemic barriers that limit its ability to achieve climate neutrality by 2030. These barriers are cross-cutting and affect several interrelated systems, including technological, institutional, organisational, financial and social systems. Overcoming them requires structural transformation, but there are also assets and opportunities that the city can leverage to accelerate this process.

Firstly, there are operational and regulatory barriers that limit the municipality's ability to implement climate action measures and require multi-level and multi-stakeholder coordination, involving an effort to transform the existing governance mechanisms. Specifically, these barriers are found in two areas:

1. Governance and public management

- **Limited administrative capacity:** Lack of specialised personnel and technical resources to manage complex decarbonisation projects, as well as a lack of updating of new management skills in local government on issues directly related to decarbonisation.
- **Difficulty in attracting public talent:** Legal and administrative barriers to recruiting the necessary technical and cross-cutting profiles.
- **Institutional fragmentation:** Lack of integration between different levels of government (state, regional, local) and between municipal departments (urban planning, mobility, energy, waste, etc.).
- **Excessive bureaucracy:** Slow administrative procedures that are ill-suited to the speed required for climate action.
- **Difficulties in public-private collaboration:** Lack of stable legal frameworks and mechanisms for mutual trust between sectors.

2. Regulatory and economic framework

- **Lack of regulatory stability and clarity:** Legal uncertainty on key issues such as the implementation of Low Emission Zones or the development of Energy Communities.
- **High initial investment costs:** Especially in renewable technologies, fleet electrification and urban transformation.
- **Lack of innovative financing mechanisms:** Dependence on traditional public subsidies, with little exploration of new formulas (mixed financing, green bonds, climate crowdfunding, green taxonomy).



At another level, there are specific sectoral constraints. The barriers and opportunities for the five decarbonisation levers of the Viladecans Climate Mission are described below.

1. Clean energy: production and consumption

Barriers:

- **Regulatory and legal constraints:** Lack of regulatory clarity for the development of local energy communities and shared self-consumption, especially in densely urbanised areas.
- **High initial costs:** High initial investment in solar installations, especially for vulnerable citizens and SMEs.
- **Lack of suitable spaces:** Difficulties in identifying and utilising municipal land, private roofs or industrial land for renewable energy generation.
- **Low energy culture:** Lack of public and business awareness of the benefits of local renewable generation.

Opportunities:

- **Scaling up the *Vilawatt* model and replicating it in other neighbourhoods:** Promoting new energy communities by leveraging previous experience.
- **Leverage public-private partnerships** to finance renewable installations (ESCO models, energy consortia, create community energy communities).
- **Strategic mapping of solar roofs:** Identify potential production spaces in the municipality.
- **Citizen training and awareness programmes:** Increase social participation in energy projects; promote shared self-consumption between the local council and citizens; Vilawatt energy office.

2. Energy efficiency

Barriers:

- **Lack of economic and technical resources:** Difficulties in tackling the massive energy renovation of the building stock, especially in vulnerable housing.
- **Complex bureaucratic processes:** Difficult access to aid and financing for efficiency measures.
- **Weak energy saving culture:** Lack of sustainable habits in residential, commercial and industrial consumption.



Opportunities

- Mobilise European subsidies and funds **for energy renovation programmes (Next Generation, PIREP, etc.)**.
- Extend the *Vilawatt* model **to support citizens in energy renovation and efficient energy management processes**: Vilawatt Energy Office, which promotes citizen training in changing energy habits and new professionals for the energy sector; actions to reduce energy bills and energy poverty.
- Incorporate efficiency criteria into all municipal contracts and tenders.
- Promote nearly zero-energy buildings (nZEB) **in new construction and renovations**.

3. Circular economy

Barriers:

- **Fragmentation of competences**: Difficulties in implementing comprehensive waste management and circularity models due to overlapping regional and local competences.
- **Inefficient recycling processes**: Insufficient separate collection and low recycling rates for household and commercial waste.
- **Slow cultural change**: Citizens have not yet fully adopted prevention, reuse and recycling habits.
- **Lack of local circular infrastructure**: Limited availability of facilities for small-scale repair, reuse and composting.

Opportunities:

- **Rollout of the Ecoindustry Programme**, promoted by various municipalities in the Llobregat Delta together with the Barcelona Provincial Council and the Barcelona Metropolitan Area, which prioritises prevention and promotes industrial development based on the principles of the circular economy.
- **Promote circular public procurement**: Include sustainability criteria in all municipal purchases.
- **Create spaces for circular innovation**: Repair workshops, second-hand markets, community composting.
- **Promote collaboration with local businesses and companies** to prevent waste and encourage reverse logistics.



4. Electrification of consumption

Barriers:

- **High initial investment costs:** Especially for the renewal of the municipal fleet, private fleets and the expansion of charging infrastructure.
- **Lack of sufficient and well-distributed charging infrastructure.**
- **Regulatory difficulties for the implementation of Low Emission Zones (LEZs):** Legal uncertainty in state regulations.
- **State subsidies for fossil fuels still exist,** slowing down the transition to electric technologies.

Opportunities:

- **Accelerate the electrification of municipal and public transport:** Access to European funds to renew fleets and expand the charging point network.
- **Plan an efficient and accessible public charging network** that encourages the mass adoption of electric vehicles.
- **Promote the electrification of private transport through tax incentives and easier access.**
- **Encourage the electrification of local industry and urban logistics processes.**

5. CO₂ storage

Barriers:

- **Competition for land use:** Limited land available to increase green areas and renaturalise spaces.
- **Lack of economic valuation of urban sinks:** They are not sufficiently accounted for or prioritised in public investment strategies.
- **Lack of local methodologies to measure CO₂ absorption capacity** in urban ecosystems.
- **Fragmented management of green space:** Lack of an integrated vision of urban green space as strategic infrastructure.

Opportunities:

- **Promote the *Viu Verd* project** (Viladecans renaturalisation project) **and expand green infrastructure** with ecological corridors, green roofs and vertical gardens.
- **Renaturalise grey urban spaces:** Convert streets and squares into green spaces.



- **Promote peri-urban agriculture and urban gardens** as sinks and spaces for food resilience.
- **Design a system for measuring and monitoring local carbon sequestration** to highlight the value of Viladecans' sinks.

To achieve a collective understanding of the different systemic perspectives, Viladecans City Council has launched the Climate Mission, inspired by *Mariana Mazzucato's* mission-based approach. This approach creates a space for collaboration and interrelation that is participatory, multi-level and multi-stakeholder, facilitating processes of co-creation and shared governance. The Mission allows the municipal strategy to be aligned with global climate neutrality objectives, promoting the active involvement of citizens, the private sector, administrations and all key actors in the local ecosystem.

In this context, continuous monitoring and data digitalisation will be crucial to ensuring informed decision-making and accurate measurement of progress towards emission reduction targets. Having integrated and accessible information systems will enable the city to evaluate the effectiveness of the measures implemented, make agile adjustments and ensure transparency and accountability throughout the process.



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
Public	- The European Commission through the Mission Platform and NetZeroCities within the European mission 100 cities - Viladecans City Council and its political forces in government and opposition - Other Spanish city councils - Spanish Government - Generalitat of Catalonia - Metropolitan public bodies	- NZC – European Platform of Cities for Climate Neutrality - Collaboration Platform for Climate Neutrality in Spanish Cities citiES 2030 - FEMP – Spanish Federation of Municipalities and Provinces - Barcelona Metropolitan Area - Barcelona Provincial Council - Barcelona City Council - Baix Llobregat Regional Council - Secretariat for Energy Transition (Government of Catalonia) - Barcelona Metropolitan Strategic Plan	Driving forces	- To meet the objectives and targets set by international policy frameworks, such as the Paris Agreement COP21, the United Nations Sustainable Development Goals (especially SDG 11), the Urban Agenda for the EU and the New Urban Agenda of Habitat III - Creating local, quality jobs - Improving health - Reducing noise and air pollution - Training, education and awareness - Right to energy - Training for economic and employment transformation



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
		- Viladecans Hospital - Agricultural Park Consortium - Consortium for the Protection and Management of the Natural Areas of the Llobregat Delta - Ministry for Ecological Transition and the Demographic Challenge - Ministry of Science and Innovation - Ministry of Transport, Mobility and Urban Agenda - Ministry of Social Rights and Urban Agenda - IDAE (Institute for Energy Diversification and Saving)		- Development of public policies for a just transition - Attracting private investment and turning the city into a hub for innovation and experimentation - Eco-social transition of the territory



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
		- Biodiversity Foundation - Spanish Office for Climate Change (OECC) - Catalan Office for Climate Change (OCCC)		
Academia: universities, research centres and technological institutes	- University research groups - Technology institutes - Educational centres with projects linked to the Mission	- IAAC (Institute for Advanced Architecture of Catalonia) - Polytechnic University of Catalonia - Polytechnic University of Madrid	Driving forces	- R&D development in technology institutes - Awareness raising in education - Knowledge transfer
Private sector	- Companies - SMEs and self-employed workers - Cooperatives - Technology clusters	- Entities affiliated with the Mission	Problem solvers	- Development of innovative, transformative demonstration projects by suppliers (start-ups, companies, research)



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
				- Development of R&D in companies - Employment and knowledge R&D&I in ecological transition - Anticipation of the ecological transition of the private sector - Business ecological transition plans - Positioning and competitive advantage in a decarbonised economy - Transformation of the economic model after the ecological transition
Civil society	- Associations - Foundations - Professional associations - Citizens - Sports clubs	- Agents affiliated with the Mission	Problem solvers	- Citizen empowerment around the Climate Mission - Contributions from civil society to the Climate Mission



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
Media	- Influential people in the territory - Role models: intergenerational women - <i>AmVaixadors</i> - Media	- Agents affiliated with the Mission	- Prescribers/disseminators	- Dissemination of the co-benefits of the Climate Mission
Beneficiaries	- People who live and interact in Viladecans and its area of influence. - Children, young people and future generations who will have a better city model. - Older people who will have a more liveable and accessible city - Pedestrians and cyclists. - Nature and biodiversity.	- Associations of different types	- Driving forces	- Citizen empowerment around the Climate Mission



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
	- Companies related to the economy and green transition. - People with health problems, mainly respiratory problems. - Residents of other municipalities in the surrounding area. - The healthcare system. - The job market with new types of jobs related to the ecological transition. - Local businesses and producers. - The Valencian productive fabric that anticipates the systemic transition brought about by the European Green Deal. - The city's innovation ecosystem, which is at			



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
	the forefront and has a European reach.			
Detractors, those who may be negatively affected by the Mission	- People with businesses that cannot be adapted to decarbonisation - Companies and workers in the fossil fuel sector and large emitters. - People linked by employment, use or other activities to large emitters (ports, airports, etc.) - People who are reluctant to accept or deny climate change - People who regularly travel by private vehicle and will encounter mobility restrictions (LEZ).	Not applicable	Detractors	No interest due to lack of knowledge and awareness



A-3.2 Mapping of systems and stakeholders

System description	Actors involved	Network	Influence	Interests
	- People affected by the change process and its inconveniences - People for whom the Mission will mean a loss of comfort. - People who generate a higher carbon footprint			



A-3.3: Description or visualisation of the participatory model for climate neutrality in the city

In 2021, Viladecans City Council presented the *Viladecans Strategy 2030-2040: "We are creating Viladecans 2030. Preparing the city for 2050"*, a plan that defines the strategic direction of the city with a view to 2030 and prepares Viladecans to face the challenges of 2050. This strategy, developed collaboratively, provides a framework for action that enables the city to anticipate global challenges and take advantage of the economic, social and institutional opportunities in its environment. The strategy is aligned with the Sustainable Development Goals (SDGs) and the various 2030 Agendas and Urban Agendas. It is structured around six strategic axes:

1. Economic revitalisation
2. Educational innovation
3. Healthy lifestyle
4. Ecological transition
5. Resilience
6. Urban regeneration

Based on these pillars, a space for active participation was opened, inviting public and private actors from the scientific field and citizens to think and innovate together about the future of the city. This approach was developed under the Mission-Oriented Innovation model, inspired by the work of Mariana Mazzucato and adopted by the European Commission. This model seeks to address complex local challenges through strategic actions that mobilise the city's economic and social ecosystem.

Within this framework, five initial missions were launched:

- Sustainable Building HUB Mission
- Carbon Neutrality Mission
- Zero School Dropout Mission
- Resilient City Mission
- 15-minute city mission

Through a participatory process with local stakeholders, two priority missions were finally consolidated:

Mission 1: Carbon neutrality (Climate Mission)

Mission 2: Zero school dropouts



The Climate Mission became a key space where all economic and social sectors in Viladecans come together to work towards carbon neutrality by 2030. This collaborative space is made up of representatives from the quadruple helix:

- Citizens and citizen organisations
- Industry
- Financial sector
- Agri-food sector
- Commerce and catering
- Construction and real estate
- Mobility and transport
- Distribution and logistics
- Energy and renewables
- Waste management
- Natural space management
- Public administration

To structure and boost participation, Viladecans has enriched the Mazzucato model by introducing the concept of decarbonisation levers, known as the 5Es, which guide specific actions towards climate neutrality:

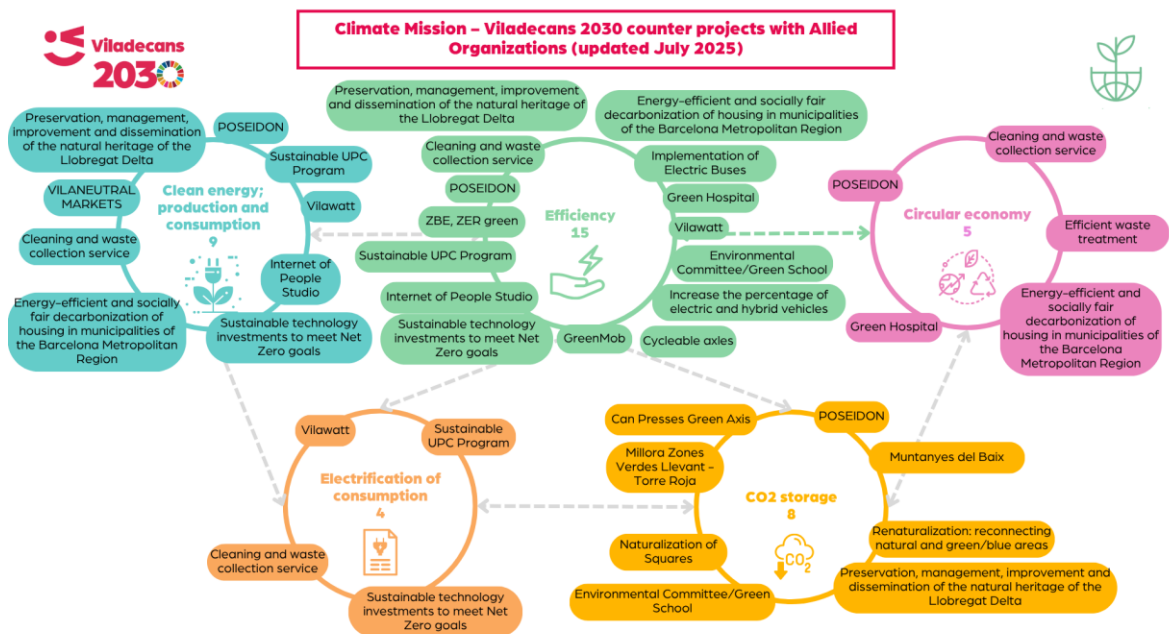
- **Clean energy:** Production and use of renewable energies and self-consumption.
- **Efficiency:** Optimisation of resource use and improvement of energy performance.
- **Electrification of consumption:** Replacement of fossil fuel-based technologies with electric solutions.
- **CO₂ sinks:** Development of natural sinks and solutions for carbon capture.
- **Circular economy:** Circular management of resources and waste reduction.

Each actor that joins the Mission can participate in one or more of these levers, adapting their level of involvement according to their capabilities and resources.

Finally, the Viladecans Climate Mission is visualised through a dynamic and constantly evolving diagram, where the actors themselves manage and adapt their contributions. This multi-level and multi-actor approach allows for the integration of different systems within the local urban ecosystem and generates effective spaces for collaboration and transformation.



Gran reto		
CAMBIO CLIMÁTICO		
Alineamiento	Directo	Indirecto
ODS		
Estrategia Viladecans 2030	Transición Ecológica	Dinamización Económica Estilo de Vida Saludable Modelo de Regeneración Urbana
Retos de Ciudad	6, 7, 8, 9, 10	3, 4, 15, 20, 21, 24
Agenda Urbana Local		1.2, 1.3 2.4, 2.6 4.1, 4.2, 4.3 5.1, 5.2



To reinforce the participatory structure advocated by Viladecans within the framework of the Missions, it is worth highlighting the *Alia't* community, made up of Allied Organisations representing the quadruple helix that share common values and an active commitment to the city's strategic challenges. Their participation is coordinated through demonstration projects, spaces for shared reflection and actions aligned with the levers of the missions.



In addition, Viladecans has created the *Viladecans me cuida* (Viladecans cares for me) *network*, a relational governance space that facilitates dialogue, co-creation and shared innovation among the participating agents. Unlike the Missions, which have a defined time frame, this network is a living ecosystem that evolves with new objectives and alliances. Its purpose is to maximise the impact of public policies, improve quality of life and promote social inclusion from a community perspective.

Finally, it is worth mentioning the Viladecans Climate Pact, promoted following the municipal declaration of a climate emergency in the city, which forms a programme for coordinating actions against climate change with citizens. This Pact emerged from the Citizen Climate Roundtable, which addresses climate emergency issues (adult and youth roundtables) and is open to all citizens as a driver of change.



PART B - PATHWAYS TO CLIMATE NEUTRALITY BY 2030

Part B constitutes the strategic core of the Viladecans Climate Action Plan, outlining the city's decarbonisation roadmap to achieve neutrality by 2030.

It includes three modules: Module B-1 introduces decarbonisation scenarios aligned with the European Climate Mission, quantifying emissions reductions through key levers and mapping the sectoral and cross-cutting transformation pathways necessary to shift the urban model. Module B-2 details the full portfolio of planned actions, including those aimed at enhancing carbon sinks to offset residual emissions. Finally, Module B-3 presents a set of indicators designed to support systematic monitoring, impact evaluation, and institutional learning throughout implementation.

MODULE B-1. Climate neutrality scenarios and impact pathways

This module constitutes the strategic core of the Viladecans Climate Action Plan, which defines the GHG emission reduction scenarios needed to achieve climate neutrality by 2030. Based on the baseline analysis, existing policies and identified barriers, the impact pathways that will enable the transformation of the city's main emitting systems are articulated.

Impact pathways are structured roadmaps that connect short-term changes with medium- and long-term systemic results, both in terms of direct emissions reductions and indirect impacts or co-benefits (health, equity, biodiversity, resilience, innovation, etc.). Each impact pathway is designed as an integrated responses to climate challenges and local ecosystem capacities, and is associated with one or more priority emitting sectors, as well as systemic levers that facilitate its effective deployment.

Systemic levers are key drivers of transformation that act as catalysts to accelerate the transition. They are not limited to technological changes, but include organisational, cultural, regulatory, financial and social dimensions. Viladecans adopts this approach, recognising that the necessary transformations do not depend solely on implementing clean technologies, but on reconfiguring structures, habits, incentives and institutional relationships. For this reason, each impact pathway in this module is accompanied by one or more systemic levers that enable its impact to be scaled up and its viability guaranteed.

The impact pathways presented are organised around six strategic action areas, defined by the City Council to articulate the challenge of climate neutrality in a manner consistent with local governance and the existing institutional structure.

1. Mobility and transport
2. Renewable energy transition
3. Urban regeneration (buildings, infrastructure and public space)



4. Circular economy, waste and hybrid cycle
5. Biodiversity regeneration and green infrastructure
6. Economic transformation and growth (industry, commerce and agriculture)

It should be noted that these sectors of action differ from the standardised classification of emitting sectors proposed by *NetZeroPlanner* and used in particular in Module A-1. In the case of Viladecans, the decision was made to prioritise a functional and local public policy approach, more closely linked to municipal responsibilities, actual capacity for intervention and alignment with the city's strategic framework. This structure allows Viladecans to better align its planning tools with its actual competences, administrative structures and local actors, while still covering the thematic and sectoral spectrum necessary to achieve climate neutrality.

Below is a matrix linking the NetZeroPlanner categories with Viladecans' areas of action:

NZP Category		Viladecans category
BLD	Building: energy, renovation and use	Urban regeneration (buildings and housing)
MOB	Mobility and transport	Mobility and transport
ENE	Energy systems: generation, distribution and efficiency	Renewable energy transition
NBS	Nature-based solutions / green infrastructure	Biodiversity regeneration
WCE	Waste and circular economy	Circular economy, waste and hybrid cycle
IND	Industry and product use	Transformation and economic growth (industry, trade, agriculture)
GOV	Governance and enabling actions	Cross-cutting throughout the structure
SOC	Social (no direct impact on emissions)	Integrated as a cross-cutting criterion: climate justice and social co-benefits

The impact pathways described below constitute the reference framework for the design of transformative action portfolios (module B-2), economic analysis (C-3), and monitoring and learning systems (B-3). They also reflect the ambition set out in the city's Climate Neutrality Commitments and are aligned with the ongoing process of evaluation and improvement of its Climate Contract.



B-1.1: Impact pathways				
<i>Action sector</i>	<i>Sub-sector / Line of action</i>	<i>Systemic levers</i>	<i>Impact on emissions reduction</i>	<i>Expected co-benefits</i>
Mobility and transport	Promotion of active and safe mobility	Urban infrastructure, mobility culture, participation	Decrease in private motor vehicle use	Public health, road safety, social cohesion
	Electrification of private and public transport	Technology, economic incentives, planning	Replacement of fossil fuel vehicles with electric vehicles	Less noise and air pollution
	Reduction of last-mile motorised transport	Logistics regulation, business innovation, digitalisation	Reduction of urban logistics emissions	Reduction of traffic and improvement of the urban environment
Renewable energy transition	Energy communities and collective self-consumption	Social innovation, local governance, financing	Decarbonisation of the local energy mix	Citizen empowerment, energy poverty
	Renovation of thermal systems in existing buildings	Technical training, subsidies, regulation	Reduction in gas consumption for heating	Thermal comfort, indoor health, energy savings
	Municipal photovoltaic solar energy production	Public investment, local regulations, citizen participation	Increase in clean energy in the local grid	Public savings, visibility of climate commitment



B-1.1: Impact pathways				
<i>Action sector</i>	<i>Sub-sector / Line of action</i>	<i>Systemic levers</i>	<i>Impact on emissions reduction</i>	<i>Expected co-benefits</i>
Urban regeneration	Energy renovation of housing	Financing, local capacities, integrated planning	Reduction of domestic energy demand	Urban regeneration, local employment
	Climate naturalisation of neighbourhoods	Urban design, urban nature, intersectoral collaboration	Reduction of heat island effect and increased thermal resilience	Well-being, shade, mental health
	Transformation of public space with climate criteria	Urban governance, tactical urban planning, community participation	Reduction of indirect emissions from conventional urban planning	More accessible and equitable urban spaces
Circular economy	Waste prevention and reuse	Circular economy, local regulation, environmental culture	Reduction of waste and associated emissions	Changing habits, green jobs
	Digitalisation and improvement of selective collection	Technology, citizen participation, governance models	Logistics optimisation and reduction of inappropriate waste	Greater efficiency and public awareness
	Promotion of composting and local treatment of biowaste	Composting culture, citizen regulation, training	Reduction of methane through local treatment of organic waste	Waste recovery and soil fertility



B-1.1: Impact pathways				
Action sector	Sub-sector / Line of action	Systemic levers	Impact on emissions reduction	Expected co-benefits
Biodiversity regeneration	Ecological restoration of peri-urban areas	Territorial governance, ecological restoration, regulation	Natural CO ₂ capture and soil regeneration	Landscape conservation, ecological resilience
	Network of green corridors and infrastructure	Ecological infrastructure, territorial connectivity	Biodiversity-based urban mitigation	Improved urban well-being, pedestrian connectivity
	Sustainable urban drainage systems and climate adaptation	Water planning, nature-based solutions	Reduction of runoff and extreme climate impacts	Flood prevention, local water regulation
Economic transformation and promotion	Agroecological conversion in the Agricultural Park	Agricultural model, scientific knowledge, incentives	Carbon sequestration in agricultural soils	Food sovereignty, agricultural employment
	Industrial transition towards low-carbon processes	Digitalisation, technological innovation, business collaboration	Energy efficiency and reduction of industrial emissions	Local competitiveness, just transition
	Green and circular economy in local trade	Responsible consumption, networks, local social economy	Reduction of waste and energy consumption in commerce	Economic relocation, conscious consumption



B-1.2: Description of the impact pathways

When explaining the impact pathways that structure the Climate Action Plan we propose in Viladecans (and its portfolio of transformative actions), two key factors must be considered.

Firstly, the need to adopt a broader view of the sectors and subsectors that have an impact on climate neutrality, beyond those strictly included in the quantitative emissions modelling (such as transport, buildings, electricity and waste). Based on the climate diagnosis carried out in Part A, which includes the baseline, the trend line and the gap analysis, it has been shown that in order to effectively address GHG emissions, it is essential to also act on other key urban systems such as biodiversity, agro-urban metabolism, green infrastructure and the local productive economy.

Viladecans has therefore defined its areas of impact around six major sectors for action, identified by their weight in the emissions balance, their relevance for municipal action and their transformative potential:

1. **Mobility and transport**
2. **Renewable energy transition**
3. **Urban regeneration (housing, buildings, public space and infrastructure)**
4. **Circular economy, waste and hybrid cycle**
5. **Biodiversity regeneration and ecosystem restoration**
6. **Economic transformation and growth (industry, commerce and agriculture)**

Each of these pathways has been defined based on a systemic vision that considers not only the potential for direct emissions reductions, but also the activation of systemic levers such as governance, civic culture, digitalisation and local financing. These levers, aligned with the *NetZeroCities* methodological framework, make it possible to scale up the impact of interventions and ensure their sustainability over time.

The impact pathways are built on the lessons learned by Viladecans in recent years, as well as on the strategies and systemic barriers identified in Part A. The selected pathways are also directly aligned with the Climate Neutrality Commitments of the Viladecans Climate Contract, which recognise that neutrality can only be achieved through integrated, multi-sectoral action with a mission-oriented approach. In particular:

- **Interventions with the highest impact per €/tCO₂e avoided** are prioritised.
- **Local co-responsibility** is promoted, connecting impact pathways with sectoral commitments from key actors (Alia't).
- Work is carried out under a **just transition** approach, ensuring that the benefits of climate action reach the most vulnerable groups.



Each pathway combines short-term actions (1–2 years), such as demonstrations or community activation, with medium- and long-term structural transformations (3–6 years). This allows for a constant and credible reduction curve, as reflected in the emissions scenario modelled with *NetZeroPlanner*.

Taken together, the impact pathways of the Viladecans Climate Action Plan are not a sectoral list of actions, but a set of systemic transformation trajectories that articulate ambition, operational realism and long-term vision. They constitute, in themselves, a structured framework to guide and evaluate the impact of the city's climate action in its transition to neutrality by 2030.

Finally, it should be noted that the proposed Action Plan is based on the Valencia 2030 Urban Strategy and its associated Action Plan. This is because, in its very conception and construction, the Innovation Missions approach and, above all, the Valencia 2030 Climate Mission have been at the centre, as demonstrated by the fact that around 90% of its lines of action can have an impact on this Mission. Consequently, our portfolio of transformative actions has been configured in accordance with the concepts of the Urban Strategy:

- **Programme:** This is the main concept around which the Local Action Plan of the Viladecans 2030 Urban Strategy is structured. It refers to an orderly grouping of lines of action and specific projects in accordance with the municipal competences and the current organisational structure of Viladecans City Council. It describes the main areas of action on which the Urban Strategy, through the public policies implemented by the City Council, should have an impact over the next decade.
- **Line of action:** This allows the programmes of the Local Action Plan to be specified, defining specific lines of work on which they should be developed.
- **Demonstration project:** These are actions that can be implemented in a relatively short period of time (some have already been implemented) and are characterised by their ability to demonstrate in practice some of the key elements of the city model developed by this strategy. They are used as a source of learning for replication and scaling up to other areas of the city.



MODULE B-2. Portfolio of transformative actions

Viladecans' proposal is based on a systemic, territorialised and mission-oriented approach that combines climate ambition with urban regeneration, social justice and economic revitalisation. The actions are grouped into **six main strategic axes**, representing both the key emitting sectors and the areas with the greatest potential for positive impact:

1. **Mobility and transport:** commitment to active mobility, the reduction of private vehicle use, the electrification of fleets, and the transformation of public space as a catalyst for cultural and urban change.
2. **Renewable energy transition:** expansion of local clean energy generation, collective self-consumption, energy communities and electrification of end uses such as heating and cooking.
3. **Urban regeneration:** energy rehabilitation of housing, renovation of public buildings, naturalisation of urban space and redesign of public space with climate, social and health criteria.
4. **Circular economy, waste and hybrid cycle:** reconfiguring waste and consumption systems to advance towards a circular urban metabolism, as a vector for environmental protection and urban resilience.
5. **Biodiversity regeneration:** restoration of natural ecosystems, expansion of green infrastructure, increase in CO₂ sink capacity and improvement of resilience to climate impacts.
6. **Transformation and economic boost:** promoting a greener, fairer and more digital production model, incorporating local industry, local trade and an agroecological transition in the municipality's agricultural areas.

Each of these axes **is connected to the impact pathways** described in the previous module, defining a clear and coherent path to achieve climate neutrality in a cross-cutting, inclusive and measurable way. The approach adopted by Viladecans not only seeks to reduce emissions, but also to structurally transform the city for the benefit of its citizens, its local ecosystem and its common future.



B-2.1: Description of the portfolios of transformative actions	
Emissions sector	List of actions in the portfolio
Mobility and transport	1.1 Review of mobility around the train station 1.2 Improving connectivity between neighbourhoods and facilities 1.3 Implementation of low-emission zones 1.4 Promotion of car sharing 1.5 Promotion of the local cycle network 1.6 Reorganisation of public space for active mobility 1.7 Improving inter-municipal connectivity 1.8 Prioritising electric public transport 1.9 Promotion of intermodality 1.10 Progressive renewal of the municipal fleet towards zero emissions
Renewable energy transition	2.1 Promotion of local energy communities 2.2 Installation of photovoltaic panels in public facilities 2.3 Design of a local energy operator 2.4 Support for renewable energy production in homes 2.5 Self-consumption and energy efficiency campaigns 2.6 Feasibility study for local energy storage 2.7 Activation of aggregated clean energy purchases 2.8 Support for renewable heating projects in buildings
Urban regeneration (buildings, infrastructure and public space)	3.1 Energy renovation in residential buildings 3.2 Climate-friendly neighbourhood regeneration 3.3 Improving energy efficiency in public facilities 3.4 Application of NZEB criteria in new public buildings 3.5 Promotion of the use of low-impact materials 3.6 Introduction of green roofs and facades 3.7 Climate adaptation of public spaces 3.8 Activation of renovation offices



Circular economy, waste and hybrid cycle	4.1 Strengthening selective waste collection 4.2 Activation of community reuse spaces 4.3 Implementation of domestic composting systems 4.4 Campaigns to reduce food waste 4.5 Support for responsible consumption initiatives 4.6 Programme to reduce packaging at public events 4.7 Review of public contracts with circular criteria 4.8 Digitalisation for urban waste traceability
Biodiversity regeneration and green infrastructure	5.1 Creation of new green corridors 5.2 Restoration of degraded ecosystems 5.3 Increasing urban tree cover 5.4 Sustainable management of existing trees 5.5 Urban biodiversity plan 5.6 Implementation of nature-based solutions 5.7 Activation of collective urban gardens 5.8 Study of urban soil permeability
Transformation and economic boost (industry, commerce and agriculture)	6.1 Support for the green transformation of local industry 6.2 Promotion of business eco-innovation 6.3 Revitalisation of sustainable markets 6.4 Support for local trade based on circular criteria 6.5 Transformation of local agriculture towards regenerative models 6.6 Promotion of sustainable food production 6.7 Valorisation of agri-food by-products 6.8 Integration of sustainability criteria into vocational training



B-2.2: Individual action plans

Below is a more detailed description of the proposed portfolio of actions.

Actions: mobility/transport

Preparation of a study on the deployment of electric charging points in the municipality.		
Action plan	Name of action	Preparation of a study on the deployment of electric charging points in the municipality.
	Description	Progressive implementation of electric vehicle chargers in the public domain to facilitate the development of electric mobility, using and optimising existing electrical infrastructure (street lighting, municipal buildings, etc.), in order to achieve synergies that result in a greater supply of charging points under competitive conditions.
Reference to the impact pathway	Scope of emission	Mobility and transport
	Systemic lever	Electrification
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Viquial
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable



	Estimated reduction in GHG emission (total)	Approximately 3,04 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	760000

Promotion of the development of remote management systems in relation to urban mobility.		
Action plan	Name of action	Promotion of the development of remote management systems for urban mobility.
	Description	Application of digital remote management tools to urban mobility. Specifically, the proposal is to implement a Mobility Control Centre with urban sensors, cameras and a digital platform that will enable: • Regulate traffic lights and parking in real time to reduce congestion and unnecessary emissions. • Facilitate dynamic traffic monitoring and prioritisation of public transport. • Generate real data for urban analysis and efficient planning, strengthening local digital governance.
Reference to the impact pathway	Scope of issuance	Mobility and transport
	Systemic lever	Electrification
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Digital Innovation and Data Governance Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.



Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 335 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	839413.36

Creation of healthy and safe routes incorporating a gender perspective in their design.		
Action plan	Name of the action	Creation of healthy and safe itineraries incorporating a gender perspective in their design.
	Description of the action	Develop a network of urban routes designed to encourage walking and cycling in a safe, accessible and attractive way for all groups, explicitly integrating the gender perspective. The aim is to adapt public spaces to respond to different forms of everyday mobility, especially those most common among women, older people and children, such as multimodal travel, accompanied travel and travel outside working hours.
Reference to the impact pathway	Scope of issuance	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Community Action Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents



	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 42 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	105400.45

Implementation of a low-emission zone to reduce pollution from private vehicles.		
Action plan	Name of the action	Implementation of a low-emission zone to reduce pollution from private vehicles.
	Description	The action consists of designing and implementing a low-emission zone (LEZ) in Viladecans, with the aim of reducing air pollution and greenhouse gas emissions from road traffic. This measure is part of the municipal commitment to climate neutrality and responds to the requirements established by state (, Climate Change and Energy Transition Act) and regional legislation. The LEZ will restrict access to certain polluting vehicles in specific areas of the city, prioritising school and commercial areas and areas with high pedestrian traffic. To implement the measure, the use of automated number plate recognition technology, information campaigns and accompanying measures such as improvements to public transport, the cycle network and park-and-ride facilities are planned. In addition, the action takes into account social equity and just transition criteria, establishing progressive phases, specific exemptions and



		support for vehicle renewal for vulnerable groups.
Reference to the impact pathway	Scope of issuance	Mobility and transport
	Systemic lever	Electrification
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Viquial
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced or to, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed

Clean municipal vehicle fleet: purchase of electric vehicles		
Action plan	Name of action	Clean municipal vehicle fleet: acquisition of electric vehicles
	Description	This action aims to gradually replace the municipal fleet of combustion vehicles with 100% electric vehicles, in line with Viladecans' commitment to climate neutrality by 2030. It will apply to both light vehicles used by administrative services and operational



		vehicles for urban maintenance, the environment, mobility and cleaning.
Reference to the impact pathway	Scope of issuance	Mobility and transport
	Systemic lever	Electrification
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Internal Government Area and Municipal Resources
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 566 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	1416405.71

Redefinition of the existing bus network		
Action plan	Name of the action	Redefinition of the existing bus network
	Description	This action aims to review and restructure the urban and interurban bus network in Viladecans to improve its efficiency, accessibility and adaptation to the city's new sustainable mobility dynamics. A reorganisation is proposed that takes into



		account urban growth, the real needs of different neighbourhoods, mobility hubs (educational, health, commercial and industrial centres) and the modal shift towards less polluting means of transport.
Reference to the impact route	Scope of implementation	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 102 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	256115.75

Preparation of a study for the creation of deterrent parking spaces in areas adjacent to the town centre.		
Action plan	Name of the action	Preparation of a study for the creation of surface parking spaces in areas adjacent to the town centre.
	Description	This action consists of conducting a technical and strategic study to identify, evaluate and



		plan the creation of surface-level dissuasive parking areas in areas close to the town centre of Viladecans. The aim is to reduce the volume of private vehicle traffic accessing the town centre, encouraging a modal shift away from private vehicles towards public transport, cycling or walking.
Reference to the road affected	Scope of issuance	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Viqual
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 260 kg CO ₂ e/year.
	Total costs and costs per unit of CO₂ eq	650233.57



Promotion of urban intermodality		
Action plan	Name of the action	Promotion of urban intermodality
	Description	This action aims to facilitate and promote the combined use of different modes of sustainable transport for urban and metropolitan travel, with the aim of reducing dependence on private vehicles and improving the efficiency and comfort of everyday mobility in Viladecans. The promotion of intermodality will result in improved connectivity between public transport (bus, train), cycling, walking and new models of shared mobility.
Reference to the impact pathway	Scope of emission	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable



	Total costs and costs per unit of CO₂ eq	Completed
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Expansion of urban space for pedestrian use with the implementation of measures to eliminate surface parking spaces		
Action plan	Name of action	Expansion of urban space for pedestrian use with the implementation of measures to eliminate surface parking spaces
	Description	This action aims to gradually increase public space for pedestrian mobility and social and community uses by removing surface parking spaces in streets and established urban areas. It is part of the transformation of the urban model towards a more liveable, healthy and people-centred city, in line with the principles of the Viladecans Urban Agenda and the Sustainable Urban Mobility Plan. The planned interventions will include: • redeveloping streets to widen pavements or create single platforms, • the incorporation of street furniture, vegetation and leisure areas, • improving universal accessibility, • traffic calming and pedestrian priority.
Reference to the road affected	Scope of application	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.



Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 21 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	53370.28

Deployment of parking spaces and secure parking facilities for bicycles and scooters in public spaces and equipment to promote the use of bicycles for citizens' daily travel		
Action plan	Name of the action	Deployment of parking spaces and secure parking facilities for bicycles and scooters in public spaces and equipment to promote the use of bicycles for citizens' daily travel
	Description of the action	This initiative aims to promote the everyday use of bicycles and scooters as sustainable and accessible modes of transport in Viladecans, through the installation of safe, visible and strategically distributed parking facilities throughout the city. The rollout will include: • open bicycle parking in high-demand public spaces (educational, commercial and administrative centres, etc.), • covered or enclosed and monitored parking facilities, especially at public transport stations, sports and cultural facilities, • signage and integration with the existing cycle network, • the possibility of incorporating smart access or reservation systems. The aim is to reduce barriers associated with theft or lack of convenience and consolidate an active and intermodal mobility system that



		complements public transport and reduces dependence on private cars.
Reference to the impact pathway	Scope of issuance	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced or to, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 383 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	959123.70

Expansion of the area for pedestrians and cyclists on the road connecting the city with Viladecans beach by separating a lane for cyclists.		
Action plan	Name of the action	Expansion of the area for pedestrians and cyclists on the road connecting the city with Viladecans beach by separating a lane for cyclists.
	Description	This action aims to improve the connection between the town centre of Viladecans and its seafront by creating a safe, comfortable and attractive route for cyclists and pedestrians.



		The intervention will consist of segregating a specific lane for bicycles and partially redeveloping the current road, prioritising active mobility and reducing the dominance of private vehicles. The access road to the beach is currently a key connection with high potential for transformation for recreational, tourist and sustainable mobility uses. This action will recover public space for people, facilitating emission-free access to one of the municipality's main natural assets: the coastline and the Llobregat Delta.
Reference to the road affected	Scope of emission	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Planning area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	-



Creation and consolidation of a network of continuous cycling and walking routes: promoting walking and cycling in the city through the creation and adaptation of continuous and safe routes for pedestrians and cycle lanes connecting residential areas		
Action plan	Name of the action	Creation and consolidation of a network of continuous cycling and walking routes: promoting walking and cycling in the city through the creation and adaptation of continuous and safe routes for pedestrians and cycle lanes connecting residential areas
	Description	This action aims to promote active mobility in Viladecans by creating and adapting a connected, safe and continuous network of routes for pedestrians and cyclists that structures the city and facilitates sustainable travel between neighbourhoods, facilities, educational centres, public transport stations and green areas. The network will be designed according to criteria of universal accessibility, territorial equity and road safety, incorporating: • Segregated or shared-platform cycle lanes depending on the context. • wide, shaded and accessible pavements, • consistent signage, • street furniture and rest areas, • and connections to metropolitan or supra-municipal networks. This action responds to the need to guarantee sustainable, non-polluting and accessible mobility options for all groups, especially for everyday journeys such as going to work, to school or to shop.
Reference to the road affected	Scope of implementation	Mobility and transport
	Systemic lever	Technology and infrastructure
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public space



Impacts and costs	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	5.03 kton
	Total costs and costs per unit of CO₂ eq	Completed

Support for the renewal of the city's vehicle fleet through the purchase of 100% electric vehicles		
Action plan	Name of the action	Support for the renewal of the city's vehicle fleet through the purchase of 100% electric vehicles
	Description	This action aims to promote the electrification of the fleet of private and commercial vehicles in Viladecans through awareness campaigns, institutional support, grants or incentives, especially targeting key groups such as the self-employed, small businesses, urban logistics services and residents with polluting vehicles. The initiative will be developed in coordination with other complementary measures, such as the implementation of a Low Emission Zone (LEZ), the expansion of public charging infrastructure and the development of electric parking spaces to discourage car use. The aim is to facilitate a fair transition to zero-emission mobility by removing economic and



		knowledge barriers and strengthening the local electric mobility ecosystem.
Reference to the impact pathway	Scope of impact	Mobility and transport
	Systemic lever	Electrification
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Internal Government Area and Municipal Resources
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 717 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	1794550

Improvement of metropolitan communications with the completion of the C-245 road transformation project		
Action plan	Name of the action	Improvement of metropolitan communications with the completion of the C-245 road transformation project
	Description	This action consists of completing the comprehensive transformation project for the C-245 road, one of the main metropolitan arteries in the Baix Llobregat region, connecting Viladecans with Sant Boi, Gavà



		and Castelldefels. The aim is to convert this interurban infrastructure into a multimodal metropolitan corridor, with priority for public transport, active mobility and the recovery of public space. The action includes: • The implementation of an exclusive bus lane to improve commercial speed and the reliability of public transport. • Creation of new segregated and safe pedestrian and cycle routes. • Redesign of the road space with priority for sustainable modes of transport. • Improvement of the urban landscape, accessibility and road safety. The completion of the project, which is being developed in coordination with the Barcelona Metropolitan Area (AMB), will have a significant impact on the daily mobility of thousands of people travelling between municipalities and represents a milestone in the transition towards a decarbonised, safe and healthy metropolitan model.
Reference to the impact path	Scope of issue	Mobility and transport
	Systemic lever	Electrification
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Planning area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable



	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	216 t CO ₂ e/year
	Total costs and costs per unit of CO₂eq	Completed

Actions: nature-based solutions

Design and construction of vertical gardens on municipal buildings		
Action plan	Name of action	Design and construction of vertical gardens on municipal buildings
	Description	This action proposes installing vertical gardens on the façades of municipal public buildings, such as libraries, social centres and administrative buildings, in order to improve climate comfort, promote urban biodiversity and contribute to energy savings. The action also ties in with the Viu Verd plan, which aims to double the city's tree cover and expand urban green spaces through innovative green infrastructure.
Reference to the impact pathway	Scope of emission	Green infrastructure / Nature-based solutions
	Systemic lever	Increase in carbon sinks
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Planning area
	Scale of action and target entities	Municipal



Impacts and costs	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced r to, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	1,3 tonnes of CO ₂ e per year per facility (estimate applied to the Can Xic example)
	Total costs and costs per unit of CO₂eq	Completed

Boost to urban green infrastructure: connection of the Mas Ratés forest area with the Can Ribagorçana park and the creation of other green corridors between the mountains and the sea.		
Action plan	Name of the action	Boosting urban green infrastructure: connecting the Mas Ratés forest area with Can Ribagorçana Park and creating other green corridors between the mountains and the sea.
	Description	This action aims to structure a continuous network of urban green infrastructure connecting the main natural spaces, green areas and parks in Viladecans, with a special focus on ecological corridors between the mountains and the sea. Specifically, the proposal is to connect the Mas Ratés forest area with Can Ribagorçana Park, creating an ecological and sustainable mobility corridor that will also serve as a space for biodiversity, relaxation and transition between urban areas. The action includes: • the recovery of degraded or underused spaces for green use, • creation of footpaths, pedestrian and cycle paths,



		- planting trees and native vegetation adapted to the Mediterranean climate, - integration of universal accessibility, shade and environmental comfort criteria. This action is part of the urban renaturalisation strategy set out in the Viladecans Urban Agenda and responds to the principle of a healthier, more resilient city that is connected to its natural environment.
Reference to the impact route	Scope of emission	Green infrastructure / Nature-based solutions
	Systemic lever	Increase in carbon sinks
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 663 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	3319873.79



To promote the transformation of the Viladecans area from an agricultural park in the delta into a local agri-food activity zone with high productivity and maximum sustainability, in coordination with producers.		
Action plan	Name of the action	Promote the transformation of the Viladecans area from an agricultural park in the delta into a local agri-food activity zone with high productivity and maximum sustainability in coordination with producers
	Description	This strategic action aims to progressively transform the agricultural land of Viladecans, which is part of the Llobregat Delta Agricultural Park, into a highly efficient and environmentally sustainable production area based on local agriculture models, agroecological innovation and public-private collaboration with local producers. The action is based on: • promoting more sustainable agricultural practices (reduction of inputs, water efficiency, crop rotation, etc.), • facilitating the incorporation of young people and new profiles into the agri-food sector, • encouraging direct sales and short marketing channels (local produce baskets, restaurants, schools, etc.), • promoting the digitisation of agricultural activity and the use of data to improve productivity, • integrating this area into an urban food strategy focused on the right to healthy, local and fair food. The transformation will be carried out in coordination with the park's farmers, the AMB and agricultural and environmental organisations in the area, ensuring the economic viability of the model and its consistency with the values of the Delta.
Reference to the impact pathway	Scope of issuance	Green infrastructure / Nature-based solutions
	Systemic lever	Increase in carbon sinks
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.



Implementation	Organisations/persons responsible for implementation	Directorate for Ecological Sustainability, Employment and Economy
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 19 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	99000

Increase in the number of trees in Viladecans to have 30,000 trees by 2030.		
Action plan	Name of action	Increase the number of trees in Viladecans to have 30,000 trees by 2030.
	Description	This flagship initiative aims to double the number of trees in Viladecans to reach a total of 30,000 by 2030, as part of the " " Viu Verd project and the municipality's climate neutrality strategy. The initiative includes: • Significantly increasing tree cover in streets, squares, parks and inter-block spaces. • Prioritising planting in areas with a lack of shade, urban overheating or a concentration of vulnerable populations. • Use native species adapted to the Mediterranean climate, with low water



		requirements and high ecological value. Integrating planting with efficient irrigation systems, draining pavements and urban greening measures. In addition, the process will be participatory and educational, promoting the involvement of schools, neighbourhood associations and citizens as part of the collective commitment to tackle the climate crisis.
Reference to the impact pathway	Scope of emission	Green infrastructure / Nature-based solutions
	Systemic lever	Increase in carbon sinks
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 404 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	2023932.94



Creation of different types of urban forests to create CO2 sinks and climate-friendly spaces.		
Action plan	Name of the action	Creation of different types of urban forests to create CO2 sinks and climatically comfortable spaces.
	Description	This action proposes the design and development of new urban forests of different types within the urban and peri-urban fabric of Viladecans, with the aim of acting as natural carbon sinks, reducing the effects of climate change and creating more liveable and healthier public spaces. The initiative is part of the Viu Verd project and is aligned with the Viladecans Urban Agenda, which promotes the renaturalisation of urban space as a key tool for climate mitigation and adaptation.
Reference to the impact pathway	Scope of emission	Green infrastructure / Nature-based solutions
	Systemic lever	Increase in carbon sinks
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 62 kg CO2e/year



	Total costs and costs per unit of CO₂ eq	312315.41000000003
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Approval and implementation of the city's naturalisation plan: revegetation of public spaces on 3 levels		
Action plan	Name of the action	Approval and implementation of the city naturalisation plan: revegetation of public spaces on three levels
	Description	This strategic action aims to roll out the Viladecans Urban Naturalisation Plan, a comprehensive tool that lays the foundations for increasing vegetation in public spaces through planned and systematic interventions at three levels: ground, façade and roof. This multi-layered approach will increase the presence of nature in the city of n across-the-board manner, helping to improve thermal comfort, biodiversity, public health and adaptation to climate change. The three levels of action include: 1. Urban soil revegetation: increasing roadside trees, landscaping tree pits, creating green areas, natural meadows and permeable surfaces. 2. Vertical revegetation (facades): installation of vertical gardens on public buildings and promotion of actions on private buildings through incentive or awareness programmes. 3. Roof revegetation: promoting extensive and intensive green roofs on public and strategic buildings for thermal insulation, rainwater management and biodiversity generation. The plan will be implemented in phases, prioritising dense and vulnerable areas and combining technical actions with participatory and educational processes to involve citizens.
Reference to the	Scope of emission	Green infrastructure / Nature-based solutions
	Systemic lever	Increase in carbon sinks



impact pathway	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public Space Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 17 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	86553.28

Actions: buildings

Construction of social housing through the promotion of new urban developments and in coordination with supra-municipal planning.		
Action plan	Name of action	Construction of social housing through the promotion of new urban developments and in coordination with supra-municipal planning.
	Description	This action aims to promote the construction of new social housing developments in Viladecans, in response to the social needs of the municipality and in coordination with supra-municipal urban planning, such as the Metropolitan Urban Development Plan (PDUM) and the guidelines of the Barcelona Metropolitan Area (AMB).



		These new developments will be built on land designated for orderly urban growth, giving priority to sustainability, energy efficiency and climate adaptation criteria, in line with the climate neutrality objectives set out in the Viladecans Urban Agenda and the 2030 Climate Mission. Design and implementation principles: • Building decarbonisation: use of sustainable materials, high energy efficiency, passive air conditioning systems and on-site renewable energy production (such as photovoltaic panels). • Climate resilience: bioclimatic design, natural shade, sustainable water management (green roofs, permeable paving, cisterns, etc.) and thermal comfort during heat waves. • Sustainable mobility: direct connection to public transport, bicycle spaces, limited parking and access to safe pedestrian routes. • Equity and social cohesion: access to decent and healthy housing, with a focus on ly for young people, older people and families with low or middle incomes.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory



	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 155 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	258939

Increasing the resilience of public spaces		
Action plan	Name of the action	Increasing the resilience of public spaces
	Description	This action aims to adapt and transform public space in Viladecans to make it more resilient and functional in the face of climate change impacts, especially phenomena such as heat waves, torrential rains, water shortages and loss of thermal comfort in dense urban areas. The planned interventions include: • Expansion of areas with natural shade by planting trees adapted to the Mediterranean climate. • Revegetation of streets, squares and inter-block spaces with low-maintenance species of ecological value. • Incorporation of draining materials and cool pavements to reduce ground temperature and improve water absorption. • Installation of sustainable urban drainage systems (SUDS) such as flower beds, open tree pits and infiltration areas.



		Creation of multifunctional public spaces that combine leisure, play, mobility and environmental regulation. These actions will be prioritised in areas of greater thermal and social vulnerability, with a special focus on school and residential environments and areas with a lack of green infrastructure.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 157 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	262532.26

Promotion of climate-adapted urban planning		
Action plan	Name of the action	Promotion of climate-adapted urban planning



	Description	This action proposes moving towards an urban development model that systematically incorporates climate adaptation criteria into all phases of land-use planning, design and management. The aim is to integrate nature-based solutions, passive thermal regulation measures, water management and resilience to extreme events into new urban development and urban planning projects and into the transformation of the exist . The planned actions include the incorporation of measures such as: • designing public spaces with natural shade, permeable materials and adapted vegetation • creation of urban green networks that promote ecological connectivity and thermal comfort • planning of neighbourhoods with a compact structure, mixed uses and easy access to services and public transport • incorporation of sustainable urban drainage systems in streets, squares and built environments • risk prevention through climate vulnerability mapping and adaptive urban planning This climate-friendly urban planning approach will be applied across the board, both in new development operations and in urban regeneration actions, with a special focus on vulnerable environments and climate justice.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area



	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
	Renewable energy generated (if applicable)	Not applicable
Impacts and costs	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 176 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	294253

Development of the local housing plan		
Action plan	Name of the action	Development of the local housing plan
	Description	This action consists of drawing up and implementing the local housing plan, which will establish the municipality's strategies and priorities in terms of access, renovation and management of the housing stock over the coming years. The plan will cover both the promotion of new affordable housing and the improvement of the existing building stock, with a special focus on the most vulnerable groups. One of the central pillars of the plan will be the transition towards a more energy-efficient and climate-responsible housing stock. To this end, priority will be given to decarbonisation measures such as: energy renovation of residential buildings with improvements to insulation, roofs, windows and air conditioning systems



		- incorporating renewable energies in neighbourhood communities, with an emphasis on collective self-consumption - designing new developments with high efficiency and low environmental impact standards - introducing climate change adaptation criteria in the planning and implementation of actions: natural ventilation, shade, sustainable materials, etc. The plan will also include instruments to mobilise empty housing, expand the public and subsidised housing stock, and promote innovation in housing models, such as cohousing and affordable rental.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Vimed
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 62 kg CO ₂ e/year



	Total costs and costs per unit of CO₂ eq	104362
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Definition of the housing model for specific groups		
Action plan	Name of the action	Definition of housing model for specific groups
	Description	This action aims to establish a clear and operational housing model adapted to the needs of certain groups with greater residential or social vulnerability, such as older people, young people, single-parent families, people with disabilities or those in situations of exclusion. The model will combine criteria of accessibility, affordability and functionality, while also incorporating an environmental and climate justice perspective. Adapted housing types will be designed to facilitate autonomy, coexistence and social support, in formats such as social housing, temporary modules, cooperatives or shared accommodation. The model's approach will include the decarbonisation of the housing stock intended for these groups as a strategic axis. This will translate into: • construction or renovation to high energy standards (nearly zero consumption, sustainable materials, renewable energy) • design adapted to climate comfort in heat waves or cold spells, reducing energy vulnerability • reduction of structural energy and water costs for households • integration of sustainable mobility criteria, nearby green spaces and urban health The model will be developed in collaboration with social entities, public and private developers, municipal social services and citizens, ensuring a fair transition in access to



		housing in the context of the climate emergency.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Civil Rights and Inclusion Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 41 kg CO ₂ e/year.
	Total costs and costs per unit of CO₂ eq	68896.5

Preparation of renovation and refurbishment projects for historic buildings and existing municipal facilities to adapt them and make them multifunctional		
Action plan	Name of the action	Development of projects for the renovation and refurbishment of historic buildings and existing municipal facilities to adapt them and make them multifunctional
	Description	The purpose of this action is to promote the comprehensive renovation of historic buildings and existing municipal facilities, with the dual objective of preserving their heritage value and



		adapting their functional and environmental characteristics to the current needs of the city. The aim is to provide these spaces with a multifunctional, flexible and accessible use that responds to new social, cultural, community and administrative demands. The refurbishment will include physical adaptation, improvement of universal accessibility, modernisation of facilities and adaptation to mixed uses. Special attention will be paid to the integration of sustainability and energy efficiency criteria, in line with the decarbonisation objectives for public buildings. The planned actions may include: • improving thermal insulation, replacing carpentry and efficient air conditioning systems • incorporation of renewable energies, such as solar thermal or photovoltaic panels • optimisation of water consumption and low environmental impact materials • reorganisation of spaces to accommodate cultural, community, training or public service activities Projects will be designed taking into account the urban environment in which they are located, seeking to integrate them into the landscape and contribute to the vitality of the neighbourhood.
Reference to the impact pathway	Scope of emissions	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal



Impacts and costs	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Not defined

Network of climate shelters in municipal buildings and public spaces, which will be equipped to cope with heat waves		
Action plan	Name of the action	Network of climate shelters in municipal buildings and public spaces which will be prepared to cope with heat waves
	Description	This action consists of creating a municipal network of climate shelters distributed throughout the municipality of Viladecans, with the aim of providing safe, accessible and cool spaces for the population during episodes of high temperatures, which are becoming increasingly frequent and intense as a result of climate change. The network will combine indoor spaces, such as libraries, civic centres and sports centres, with outdoor spaces, such as parks, squares and green areas with shade and fountains, which meet the requirements of thermal comfort, accessibility and proximity. The actions will include: • adapting municipal buildings to ensure stable indoor temperatures, ventilation and comfortable areas to stay



		• visible signage and accessible information on the location and opening hours of shelters • design of outdoor spaces with dense vegetation, cool paving and adapted street furniture • coordination with social, health and emergency services to assist people in vulnerable situations The implementation of this network will be integrated into municipal prevention and response protocols for heat waves and other extreme weather events, and will form part of the local climate change adaptation system.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Energy efficiency and savings
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Planning area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Not defined



Urban transformation programme for public spaces: Avenida del Molí		
Action plan	Name of action	Urban transformation programme for public spaces: Avenida del Molí
	Description	This action aims to promote a comprehensive transformation of the public space on Avenida del Molí, one of the main thoroughfares in Viladecans, to make it a more liveable, safer and climate-friendly urban hub. The project involves the redevelopment of this road based on criteria of sustainable mobility, climate comfort, universal accessibility and environmental improvement. Priority will be given to space for pedestrians and cyclists, the role of private vehicles will be reduced, and green infrastructure and sustainable drainage solutions will be incorporated. The planned interventions include: • widening of pavements, creation of cycle lanes and improvement of pedestrian crossings • increasing urban tree cover and revegetating flower beds to provide shade and coolness • redesigning the road network to reduce traffic speed and increase safety • installation of accessible street furniture, efficient lighting and rest areas • integration of permeable paving and rainwater collection and filtration elements The transformation of Avenida del Molí will be carried out in coordination with citizens and local stakeholders, through participatory processes and active listening to tailor the design to the needs of the neighbourhood.
Reference to the road affected	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.



Implementation	Organisations/persons responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed

Promotion of demonstration projects in public spaces to implement the objectives of the Viladecans 2030 missions.		
Action plan	Name of the action	Promotion of demonstration projects in public spaces to implement the objectives of the Viladecans 2030 missions.
	Description	This action aims to develop and raise awareness of pilot interventions in Viladecans' public spaces that exemplify the principles and objectives of the Viladecans 2030 local strategy, linked to the European mission to achieve climate neutrality. The demonstration projects will act as spaces for learning, awareness-raising and experimentation at urban level, applying sustainable solutions in areas such as mobility, climate comfort, energy, urban greenery and water management. Possible actions include:



		• installation of nature-based solutions in squares, streets or courtyards (vegetation, shade, biodiversity) • generating renewable energy in public facilities or spaces • creation of temporary low-emission zones or experimental mobility areas • use of recycled or circular materials in urban interventions • real-time environmental monitoring and dissemination of accessible data These spaces will act as urban showcases to demonstrate to citizens how the changes needed to achieve a more sustainable, healthy and climate-neutral city can be applied in practice.
Reference to the impact pathway	Scope of emission	Urban regeneration (buildings, infrastructure and public space)
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/persons responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Implementable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable



	Total costs and costs per unit of CO₂ eq	Not defined
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Actions: energy systems

Implement energy efficiency measures and renewable energy generation in municipal buildings		
Action plan	Name of action	Implement energy efficiency measures and renewable energy generation in municipal buildings
	Description	This action aims to reduce energy consumption and greenhouse gas emissions in Viladecans' public buildings through the combined application of energy efficiency measures and the installation of renewable energy systems. The action will focus both on the energy renovation of existing buildings and on the incorporation of more efficient technologies in their daily operation. These interventions will enable progress towards exemplary public administration in the fight against climate change and the energy transition. The planned measures include: • improving thermal insulation in roofs, facades and enclosures • replacement of air conditioning systems with high-efficiency equipment • installation of LED lighting and automation to reduce consumption • implementation of energy monitoring and management systems • installation of photovoltaic solar panels for self-consumption of electricity • exploration of energy storage solutions and smart energy use The actions will be prioritised in facilities with higher consumption or impact (educational, sports and administrative centres) and will be accompanied by training and awareness-



		raising activities for municipal staff and citizens.
Reference to the impact pathway	Scope of emissions	Energy systems
	Systemic lever	Renewable energy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 96 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	120694.16

Support for the creation of shared self-consumption projects in neighbourhood communities		
Action plan	Name of the action	Support for the creation of shared self-consumption projects in neighbourhood communities
	Description	This action aims to promote the roll-out of shared electricity self-consumption in residential areas, especially among neighbourhood communities in the municipality, facilitating collective access to



		solar energy as a way to reduce energy costs, advance decarbonisation and democratise the use of renewable energies. Shared self-consumption allows several households to benefit from the energy generated by a common photovoltaic installation, whether located on the roof of the building or in another nearby location, distributing the energy proportionally among the participants. Municipal support will take the form of: • information and awareness campaigns aimed at neighbourhood communities • technical and legal advice for the establishment of collective self-consumption projects • assistance in applying for available grants or tax breaks • exploration of public-private partnership formulas or the transfer of municipal roofs for shared use • coordination with local stakeholders such as local installers, energy cooperatives or neighbourhood associations Promoting shared self-consumption is key to ensuring an inclusive energy transition, allowing households and individuals without individual investment capacity to benefit from clean energy.
Reference to the impact pathway	Scope of emission	Energy systems
	Systemic lever	Renewable energy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory



	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 463 kg CO ₂ e/year
	Total costs and costs per unit of CO₂ eq	579102.92

Support for improving the energy efficiency of the Viladecans building stock as part of the Vilawatt project		
Action plan	Name of the action	Support for improving the energy efficiency of the building stock in Viladecans as part of the Vilawatt project
	Description	This action aims to promote the energy renovation of the residential building stock in Viladecans, with a special focus on the most energy-vulnerable neighbourhoods, through the development and consolidation of the Vilawatt project. Vilawatt is an innovative initiative promoted by the City Council that combines building renovation, citizen participation, renewable energy generation, energy education and new models of governance, articulating a local ecosystem geared towards a fair energy transition. The project focuses on: • improving the insulation and efficiency of building envelopes, thermal systems and lighting in residential buildings • supporting neighbourhood communities in decision-making and the management of renovation works



		• coordinating combined financing (grants, aid mechanisms and community financing) • strengthening a shared energy culture through personalised advice and citizen training • promoting self-consumption, sustainable mobility and climate comfort from a comprehensive perspective This action seeks to multiply the impact of Vilawatt at the municipal level, with the aim of consolidating a replicable model of urban energy transition based on criteria of equity, efficiency and collective empowerment.
Reference to the impact pathway	Scope of emission	Energy systems
	Systemic lever	Renewable energy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Approximately 184 kg CO ₂ e/year



	Total costs and costs per unit of CO₂ eq	230106
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Actions: Governance and enabling actions

Develop and validate processes and best practices for the successful implementation of sustainability and innovation clauses in municipal public procurement.		
Action plan	Name of action	Develop and validate processes and best practices for the successful implementation of sustainability and innovation clauses in municipal public procurement.
	Description	This action aims to strengthen the role of public procurement as a lever for transformation towards a more sustainable, fair and innovative urban model, through the effective incorporation of sustainability and innovation clauses in the specifications and procedures of Viladecans Town Council. The aim is to design, test and consolidate a procurement framework that allows environmental, social and innovation criteria to be assessed and incentivised in the selection of suppliers and the execution of municipal contracts, ensuring their effectiveness and legal certainty. The lines of work will include: • defining standard clauses for services, works and supplies with criteria for energy efficiency, low emissions, circularity, social inclusion and technological innovation • review and adaptation of procurement procedures and tools • training of municipal technical and legal staff • piloting contracts with sustainable criteria in different areas of the City Council



		evaluation of results and development of best practice guidelines for widespread use The action will seek to integrate sustainability throughout the entire procurement cycle, from planning to monitoring and control of contracts, generating a structural impact consistent with the objectives of a climate-neutral and innovative city.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/persons responsible for implementation	Internal Governance and Municipal Resources Department
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	87152.32



Configuration of Viladecans as a laboratory city for healthy living: an environment for experimentation and project deployment		
Action plan	Name of the action	Setting up Viladecans as a laboratory city for healthy living: an environment for experimenting and rolling out projects
	Description	This action aims to consolidate Viladecans as a benchmark urban environment for the promotion of comprehensive health and well-being, establishing the municipality as a living lab for the implementation of projects, solutions and lifestyles that promote a healthy, inclusive and climate-responsible city. The aim is to generate an applied urban innovation ecosystem, bringing together public policies, citizen initiatives, technological projects, research and public-private collaboration dynamics, focused on improving quality of life in all its dimensions. The lines of action include: • designing healthy public spaces: thermal comfort, safety, accessibility, play, physical activity and rest • promotion of healthy, local and sustainable food from the community and educational spheres • deployment of green infrastructure and nature-based solutions with direct health benefits • promotion of active, safe and non-polluting mobility • development of pilot projects in urban health with citizen and institutional participation The configuration of Viladecans as a laboratory city will allow for the testing and scaling up of solutions that connect health, sustainability, innovation and equity, generating replicable knowledge and strategic alliances.
Reference to the	Scope of issuance	Governance and enabling actions
	Systemic lever	Others



impact pathway	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Area of employment and companies
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	422857.72

Promotion of a regulatory framework that facilitates relations, information exchange, funding application processes and the implementation of actions		
Action plan	Name of action	Promotion of a regulatory framework to facilitate relations, information exchange, funding application processes and the implementation of actions
	Description of the action	This action aims to develop and consolidate a regulatory, administrative and organisational framework that facilitates collaboration between the different actors involved in the sustainable transformation of Viladecans, improving the efficiency of internal and external processes linked to resource mobilisation, project management and shared decision-making.



		The new framework will seek to streamline and structure relations between the City Council, other administrations, local stakeholders, citizens, businesses and knowledge entities, thereby reducing bureaucratic barriers, increasing transparency and facilitating the implementation of strategic actions. The lines of work will include: • reviewing and simplifying administrative procedures for processing grants and innovation or sustainability projects • designing protocols for interdepartmental collaboration and collaboration with external agents • creation of digital channels for information exchange, action monitoring and document management • improvement of technical and political coordination in the implementation of multi-actor projects • strengthening the capacities of municipal staff in fund management and collaborative work This framework will enable greater agility and cohesion in the deployment of actions related to climate neutrality, urban regeneration and digital transformation.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Municipal management
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents



	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	20268.04

Analysis and update of regulatory frameworks for new types of tourist accommodation and trends, linking different adaptation and improvement plans		
Action plan	Name of the action	Analysis and update of regulatory frameworks for new types of tourist accommodation and trends, linking different adaptation and improvement plans
	Description	This action aims to review and update the regulatory and planning frameworks related to tourist accommodation in Viladecans, with the aim of adapting regulations to new emerging types and trends in the sector, ensuring urban sustainability, neighbourly coexistence and consistency with local plans for adaptation and improvement of the urban environment. The growth of new types of accommodation, such as tourist apartments, co-living and medium-term stays, poses challenges and opportunities that require a comprehensive, balanced and forward-looking approach. The lines of work will include: • diagnosis of the territorial, social and environmental impact of the different types of tourist accommodation that exist or could exist in Viladecans • review of municipal by-laws, urban planning regulations and licensing



		criteria to adapt them to the current context • evaluation of the compatibility of these uses with the objectives of local housing, mobility, public space and climate transition plans • definition of specific conditions by area, type or characteristics of the environment • coordination with the supra-municipal regulatory framework and the local tourism sector Updating this regulatory framework will enable the tourism offer to be aligned with the values of sustainability, equity and urban quality pursued by the municipality.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Others
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Business and Innovation Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable



	Total costs and costs per unit of CO₂ eq	Not defined
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Promote competitiveness and trade development based on digitalisation criteria		
Action plan	Name of the action	Boost competitiveness and trade development based on digitalisation criteria
	Description	This action aims to modernise and strengthen the commercial fabric of Viladecans by incorporating digital solutions that, in addition to improving the competitiveness of businesses, contribute to reducing emissions and promoting a more sustainable economic model. The digitalisation of local trade is not only seen as a means of technological adaptation, but also as a strategic tool for improving management efficiency, reducing unnecessary travel, optimising consumption and moving towards low-carbon proximity models. The main lines of action include: • technical support for local businesses in the implementation of digital tools for management, online sales, logistics and customer service • promoting collective e-commerce platforms with a focus on proximity and sustainable delivery • promoting shared and grouped home delivery services using non-polluting vehicles • use of digital tools for monitoring energy consumption, waste management and product traceability • support for pilot projects that connect digitalisation, circularity and responsible consumption The action will be carried out in coordination with trade associations, local economic agents and supra-municipal programmes supporting sustainable trade.



Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Area of employment and companies
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	802187.04

Internal and external innovation processes		
Action plan	Name of action	Internal and external innovation processes
	Description	This action aims to activate and consolidate innovation processes both within the City Council and in collaboration with external actors in the territory, with the aim of accelerating the transition towards a decarbonised and sustainable urban model. From an internal perspective, continuous improvement in public management will be promoted through the introduction of digital



		tools, new working methodologies and organisational structures that enable efficiency gains, reduce energy consumption and facilitate the integration of climate criteria into all municipal policies. Externally, the action seeks to strengthen a local innovation ecosystem geared towards decarbonisation, promoting partnerships between the administration, companies, technology centres, social entities and citizens to design, test and scale up impactful solutions in areas such as mobility, energy, construction, the circular economy and consumption. Planned lines of work: • review of municipal processes to optimise resources and reduce the institutional carbon footprint • training and activation of municipal teams in innovation methodologies aimed at sustainability • promotion of open innovation calls to solve local climate challenges • collaboration with start-ups, SMEs and community projects that develop green solutions applicable to the municipality • use of data and urban intelligence tools to prioritise and evaluate emission reduction actions
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Digital Innovation and Data Governance Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents



	Comments on implementation	Included in the Urban Agenda. Implementable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	661834.97

Implementation of a smart urban management model: development and implementation of the Viladecans smart model		
Action plan	Name of the action	Implementation of a smart urban management model: development and implementation of the Viladecans smart model
	Description	This action aims to develop and implement a comprehensive smart city model for Viladecans that will improve the efficiency of urban service management, optimise the use of available resources and accelerate the decarbonisation process through the strategic use of technology, data and digitalisation. The Smart Viladecans model will be structured as a cross-cutting platform connecting different municipal systems (energy, mobility, waste, lighting, public space, facilities), promoting data-driven decision-making and process automation based on sustainability, efficiency and resilience criteria. Main lines of action: • deployment of sensors and monitoring systems to collect environmental, energy and urban space usage data • implementation of digital platforms for the integrated management of urban services (energy, lighting, traffic, irrigation, etc.)



		• support for urban planning and operation with real-time data analysis and artificial intelligence • activation of dashboards accessible to citizens and technical staff • interoperability between municipal areas and with other levels of administration The model will also include a participatory approach, allowing citizens to access, interpret and contribute to data that affects the day-to-day life of the city.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Digital Transformation and Technological Innovation Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed



Creation of a working group with neighbouring municipalities		
Action plan	Name of the action	Creation of a working group with neighbouring municipalities
	Description	This action aims to establish an inter-municipal governance structure that facilitates coordination, knowledge sharing and the joint implementation of public policies between Viladecans and neighbouring municipalities, especially in strategic areas such as mobility, land use, energy transition, environmental management and urban planning. The working group will enable the identification of synergies, the sharing of resources, the alignment of priorities and the promotion of joint projects with a supra-municipal impact, thereby strengthening the metropolitan area as a key operational space for addressing complex challenges such as decarbonisation and adaptation to climate change. Main functions of the working group: • to create a stable space for political and technical dialogue between neighbouring municipalities • identify common challenges and opportunities for collaboration • coordinate joint actions in border or shared areas (inter-municipal roads, natural spaces, green corridors, service networks) • promote joint projects for European, national or regional funding • promote a coherent territorial vision aligned with sustainability objectives The committee will also act as a facilitator for inter-municipal participatory processes when necessary and will draw on specialised technical teams from each council.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitisation or environmental recovery, as applicable.



Implement ation	Organisations/individuals responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed

Promotion of the MIA model: Viladecans City Council's innovation model to make local government a more proactive organisation		
Action plan	Name of the action	Promotion of the MIA model: Viladecans City Council's innovation model to make local government a more proactive organisation
	Description	This action aims to consolidate and develop the MIA model (Municipal Innovation Model), an internal tool designed to transform the organisational culture, processes and capacity for action of the municipal government, with the aim of making it a more agile, collaborative administration that is geared towards anticipating complex challenges. The MIA model enables the articulation of dynamics of continuous improvement, collective learning and experimentation within the City Council itself, with a focus on the social, environmental and territorial impact of public policies. This model is promoted as a



		strategic lever to strengthen the role of the City Council in the climate, digital and social transition. Lines of development of the model: • promotion of public innovation methodologies within municipal teams (design thinking, prototyping, agile evaluation, etc.) • revitalisation of internal learning communities and cross-cutting teams • creation of spaces for listening, co-creation and collaboration with citizens and local stakeholders • systematisation of improvement processes in service delivery, project management and data-based decision-making • promotion of a more open, proactive and results-oriented organisational culture
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Municipal management
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replace	Not applicable



	d, volume or type of fuel	
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed

Environmental education in schools with the incorporation of specific learning pathways in the school curriculum on climate change mitigation and adaptation		
Action plan	Name of the action	Environmental education in schools with the incorporation of specific learning lines in the school curriculum on climate change mitigation and adaptation
	Description	This action aims to systematically and structurally integrate climate change into school education in Viladecans, promoting content, activities and methodologies that enable students to understand the causes, impacts and solutions linked to climate mitigation and adaptation. The proposal aims to incorporate these topics across the board into the curricula of nursery, primary and secondary education, with the support of teachers and in collaboration with organisations specialising in environmental and climate education. The planned lines of action include: • designing teaching materials adapted to each educational stage • specific training for teaching staff on climate issues • carrying out service-learning projects related to local sustainability • organising field trips, workshops and practical activities in natural or urban environments • linking school content to real actions taken by the municipality in its ecological transition



		In addition, links between educational centres and local public policies will be strengthened, encouraging students to participate in reflection, evaluation and dissemination processes related to climate action in the municipality.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Others
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Equal Opportunities Policy Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed

Analysis of any current or future urban development projects in the city		
Action plan	Name of the action	Analysis of any current or future urban development project in the city
	Description	This action aims to establish a framework for the systematic evaluation of all urban



		development projects that are underway or planned in Viladecans, in order to ensure their alignment with the principles of sustainability, energy efficiency, adaptation to climate change and social cohesion. The analysis will apply to projects promoted by the City Council itself, as well as private or metropolitan developments with an impact on the municipality. It will make it possible to anticipate effects on the urban environment, mobility, energy consumption, biodiversity and the water cycle, and to define criteria for improvement before their approval or implementation. Planned lines of work: • creation of a municipal urban assessment tool or methodology with a climate, environmental and social focus • integration of indicators on emissions, energy efficiency, ecological connectivity, access to services and sustainable mobility • review of planning, urbanisation and building projects from a medium- and long-term impact perspective • coordination with other municipal departments and key actors in the territory • preparation of technical reports and binding or preferred recommendations This analysis process will be key to ensuring that each urban transformation contributes positively to municipal objectives of climate neutrality, urban health and territorial equity.
Reference to the impact pathway	Scope of issuance	Governance and enabling actions
	Systemic lever	Others
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/persons responsible for implementation	Territorial Planning Area



	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
	Renewable energy generated (if applicable)	Not applicable
Impacts and costs	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	87504.9

Monitoring of noise, air pollution and/or thermal conditions using smart sensors in public spaces.		
Action plan	Name of the action	Monitoring noise, air pollution and/or thermal conditions using smart sensors in public spaces.
	Description of the action	This action aims to deploy a network of environmental sensors in public spaces in Viladecans to measure key variables such as noise levels, air quality (NO₂, PM, ozone, etc.) and thermal conditions in real time. The system will provide information on the environmental status of different areas of the city, identify critical points and guide public policies on health, mobility, climate comfort and public space more accurately. The information collected will be integrated into digital urban management platforms and made accessible to citizens, promoting more transparent and data-driven governance. Planned lines of action: • installation of multi-sector sensors in strategic locations in public spaces



		(school areas, road networks, parks, dense or vulnerable environments) • connection of devices to digital platforms for real-time monitoring and analysis • creation of dynamic maps and alerts on adverse environmental conditions • use of data to assess the impact of urban and climate actions (low-emission zones, planting, changes in mobility, etc.) • public and educational dissemination of information to promote citizen co-responsibility
Reference to the impact pathway	Scope of emission	Governance and enabling actions
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Digital Transformation and Technological Innovation Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact



	Total costs and costs per unit of CO₂ eq	78789.17
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Actions: Waste and circular economy

Promotion of a project to channel groundwater connected to the Gavà-Viladecans wastewater treatment plant (WWTP) for non-potable consumption.		
Action plan	Name of action	Promotion of a project to channel groundwater connected to the Gavà-Viladecans wastewater treatment plant (WWTP) for non-potable use.
	Description	This action aims to develop a hydraulic infrastructure to channel and use the groundwater available in the municipality's subsoil, in coordination with the Gavà-Viladecans WWTP, for non-potable uses such as irrigation of green areas, street cleaning and washing of public spaces. The measure is intended as a structural response to the growing pressure on water resources in a context of recurrent drought and climate change, reducing the use of drinking water in urban services that do not require it and increasing the municipality's water self-sufficiency. Areas of action: • design and implementation of a system for the collection, channelling and distribution of groundwater • connection to the Gavà-Viladecans WWTP reclaimed water network to supplement the available flow • creation of recharging points for cleaning vehicles or irrigation trucks • possible extension of the network to agricultural, industrial or construction uses if conditions allow • implementation of quality and volume control and monitoring systems This project will also relieve pressure on the drinking water network, stabilise the



		maintenance of green areas and move towards a more circular and efficient urban water management model.
Reference to the impact pathway	Scope of emission	Circular economy, waste and hybrid cycle
	Systemic lever	Circular economy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Environment
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Not defined

Water saving programme in urban green spaces. Follow sustainable gardening criteria in renovation		
Action plan	Name of action	Water saving programme in urban green spaces. Follow sustainable gardening criteria during renovation.
	Description	This action aims to reduce water consumption in the maintenance of urban green spaces in Viladecans through the systematic application



		of sustainable gardening criteria in the design, renovation and management of green areas. The measure responds to the need to adapt urban green infrastructure to a context of increased water stress and climate change, ensuring its ecological, aesthetic and social functionality with a more efficient use of water. Planned lines of action: • gradual replacement of water-intensive species with native, Mediterranean or low-demand vegetation • design of flower beds and landscaping adapted to the local climate (xeriscaping) • implementation of efficient irrigation systems such as drip irrigation, moisture sensors and automated irrigation linked to weather forecasts • use of organic mulch and plant cover to conserve soil moisture • use of non-potable water (groundwater or reclaimed water) where possible, in coordination with other municipal projects The programme will also incorporate criteria of biodiversity, accessibility and multifunctionality, promoting resilient, economical urban greenery adapted to new environmental conditions.
Reference to the impact pathway	Scope of emission	Circular economy, waste and hybrid cycle
	Systemic lever	Circular economy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Planning area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory



	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Not defined

Development of initiatives to increase recycling and waste prevention in schools		
Action plan	Name of action	Development of initiatives to increase recycling and waste prevention in schools
	Description	This action aims to promote sustainable habits in schools in Viladecans by developing programmes and activities focused on waste prevention and increasing recycling rates. The goal is for schools to be exemplary spaces in responsible resource management and true agents of environmental transformation in their surroundings. The approach combines environmental education, student involvement and changes in everyday waste management practices within schools. Planned lines of action: • installation of selective waste collection systems in all classrooms, playgrounds and canteens • development of educational materials and awareness-raising campaigns aimed at students, teachers and families



		• design of service-learning projects linked to the circular economy and waste reduction • introduction of waste prevention strategies, such as the use of water bottles, reusable lunch boxes or school composting • collaboration with municipal cleaning and collection services to ensure the correct treatment of waste generated The initiatives will be adapted to each educational level and will be monitored and provided with technical support to ensure their proper implementation.
Reference to the impact pathway	Scope of emission	Circular economy, waste and hybrid cycle
	Systemic lever	Circular economy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public space
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed



Promotion of projects for the use of reclaimed water		
Action plan	Name of action	Promotion of projects for the use of reclaimed water
	Description	This action aims to promote more sustainable and efficient water management in Viladecans by using rainwater and promoting the use of reclaimed water in public buildings and municipal services. Action will be taken both in the design of new buildings and in re rovation processes, incorporating technical solutions that reduce the consumption of drinking water in non-essential uses. The action also includes the development of a pilot project to explore new uses for reclaimed water beyond those currently in place, contributing to the diversification of urban water sources in a context of increasing water stress. Planned lines of action: • integration of rainwater collection, storage and reuse systems in new and renovated public buildings • connection to existing or planned reclaimed water networks for uses such as irrigation, washing or sanitation • installation of filtration, distribution and quality control systems for non-potable water • development of a pilot test in collaboration with operators and technical bodies to test the viability of new uses for reclaimed water (e.g. street cleaning, cooling towers or industrial uses) • evaluation of results and proposal for scalability These actions will be integrated into the design and tendering criteria for public works and may serve as a reference for similar initiatives in the private sector.



Reference to the impact pathway	Scope of emission	Circular economy, waste and hybrid cycle
	Systemic lever	Circular economy
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Public space
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Not defined

Actions: Industry and product use

Accelerate competitiveness and the transformation of the region's business fabric through the deployment of services		
Action plan	Name of action	Accelerate competitiveness and the transformation of the region's business fabric through the deployment of services
	Description	This action aims to support the business fabric of Viladecans in its transition towards more sustainable production, management and consumption models through the deployment



		of specific services that promote competitiveness and the effective reduction of greenhouse gas emissions at the local level. The approach is based on aligning the economic transformation of the territory with climate neutrality objectives, supporting companies and the self-employed in the adoption of clean technologies, improving energy efficiency, sustainability-oriented digitalisation and the incorporation of circular economy practices. Planned lines of action: • energy and environmental diagnosis for SMEs and local businesses • technical support services for the implementation of energy efficiency solutions, self-consumption, process electrification and sustainable mobility • promotion of business or industrial estate energy communities • training and advisory programmes on decarbonisation and climate compliance • connection with grants, European funds or green financing lines for sustainable investments The action will be rolled out in collaboration with business associations, business incubators/ , technology centres and other players in the Viladecans economic ecosystem.
Reference to the impact pathway	Scope of issuance	Transformation and economic boost (industry, commerce and agriculture)
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Area of employment and companies
	Scale of action and target entities	Municipal



Impacts and costs	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	652304

Local industrial production based on circularity criteria		
Action plan	Name of action	Local industrial production based on circularity criteria
	Description	This action aims to transform the production model of the industrial fabric of Viladecans by promoting practices based on the circular economy. It proposes to accompany local companies in the transition from a linear model to production systems that are more efficient in their use of resources, generate less waste and have a lower environmental impact. The service will offer personalised technical advice to identify opportunities for circularity in production, distribution and consumption processes, with a particular focus on the reuse of materials, the recovery of by-products, waste reduction and improvements in waste management and traceability. Planned lines of action: • circular diagnostics in local industrial companies • identification of synergies between companies for the exchange of waste or resources (industrial symbiosis)



		• advice on redesigning processes, products and packaging to reduce environmental impact • connection with specialised waste suppliers and managers • support in applying for specific grants and subsidies for circular economy projects This action will directly contribute to reducing emissions associated with raw material extraction, transport and final waste treatment, while also generating economic savings and a competitive advantage for participating companies.
Reference to the impact pathway	Scope of emissions	Transformation and economic boost (industry, commerce and agriculture)
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Business and Innovation Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed



Promotion of the VERTEX event		
Action plan	Name of the action	Promotion of the VERTEX event
	Description	This action aims to consolidate VERTEX as a leading event in the metropolitan area that fosters dialogue, knowledge and collaboration between the business world, public administration and the innovation system, with the aim of accelerating the transformation of the productive fabric towards low-carbon models. VERTEX will position itself as a conference focused on urban and economic decarbonisation, with a special emphasis on technological, organisational and regulatory solutions that enable emissions to be reduced in key sectors such as industry, logistics, construction, mobility and services. Main lines of action: • programming of content focused on energy transition and business sustainability: presentations, round tables, technical workshops and case studies • active participation of local, metropolitan and international companies committed to climate neutrality • Generation of opportunities for public-private collaboration in innovation, green investment and circular economy projects • dissemination of good practices and scalable solutions applicable to the economic fabric of Viladecans • opening the event to the public and the educational community to promote a business culture focused on a sustainable future The VERTEX initiative is a strategic tool for aligning the municipal climate agenda with the sustainable economic transformation of the territory, promoting economic growth that is



		compatible with environmental limits and green employment opportunities.
Reference to the impact pathway	Scope of issuance	Economic transformation and promotion (industry, trade and agriculture)
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Business and Innovation Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	Not quantifiable
	Total costs and costs per unit of CO₂ eq	Completed



Actions: Social

Transformation of the citizen service model		
Action plan	Name of action	Transformation of the citizen service model
	Description	This action aims to revamp the Viladecans City Council's citizen service model to turn it into an active channel for supporting, informing and accompanying citizens in processes related to climate transition and the decarbonisation of the municipality. Beyond its traditional role of processing and consultation, the model will evolve towards a more proactive and specialised system that facilitates citizens' access to services, grants, advice and tools related to energy sustainability, clean mobility, efficient renovation, waste management and responsible consumption. Planned lines of action: • incorporation of staff trained in ecological and climate transition at in-person and telephone service points • creation of a citizen service point specialising in sustainability and decarbonisation • design of digital content and guided procedures related to self-consumption, energy subsidies, electric mobility and energy communities • support for individuals and groups in situations of energy vulnerability • integration of service channels with information campaigns, workshops or municipal services linked to ecological transition The model will be based on accessibility, personalised service and the activation of citizens as active agents in the sustainable transformation of the city.
Reference to the	Scope of implementation	Social



impact pathway	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Mayor's Office - Social Innovation and Relational Government Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	1844619.38

Promotion of the Digital Training Plan to ensure training and use of digital tools by all citizens.		
Action plan	Name of the action	Promotion of the Digital Training Plan to ensure training and use of digital tools for all citizens.
	Description	This action aims to guarantee equal access for all citizens of Viladecans to the digital skills necessary to function in an increasingly digitalised environment, while promoting the use of these tools as facilitators of sustainability and decarbonisation. The digital training plan not only seeks to reduce the digital divide, but also to empower the population to actively participate in



		processes such as home energy management, sustainable mobility, responsible consumption and interaction with public services that incorporate climate criteria. Planned lines of action: • design of training programmes tailored to different levels and groups (senior citizens, young people, families, unemployed people, etc.) • incorporation of content related to sustainability and energy transition in basic and advanced training • enabling public access points to digital tools with technical support • promotion of digital literacy campaigns in neighbourhoods with lower connectivity or access to devices • promoting the use of public and private applications that encourage sustainable habits (consumption measurement, mobility, recycling, paperless procedures, etc.) The plan will be developed in collaboration with educational centres, social organisations, libraries, technology companies and community agents.
Reference to the impact pathway	Scope of implementation	Social
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Viladecans City Foundation
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.



Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	142317.93

Promotion and consolidation of new stable collaborative environments with municipalities in the Delta		
Action plan	Name of action	Promotion and consolidation of new stable collaboration environments with municipalities in the Delta
	Description	This action aims to establish and consolidate areas of strategic cooperation between Viladecans and the other municipalities in the Llobregat Delta in order to promote a model of economic growth based on innovation, sustainability and the decarbonisation of the productive fabric. Inter-municipal collaboration will generate synergies and joint projects that strengthen the competitiveness of the territory, facilitate the attraction of funds and accelerate the transformation of key sectors towards more efficient, resilient models committed to climate neutrality. Planned lines of action: • creation of technical and political working groups focused on innovation, energy transition and the circular economy • promotion of shared flagship projects linked to industrial decarbonisation, sustainable mobility, resource management and urban regeneration



		• coordination of inter-municipal innovation hubs to activate SMEs, start-ups and technology centres with a focus on sustainability • coordination in attracting European, national or regional funding aimed at the green transformation of the territory • exchange of data, indicators and best practices for the planning and monitoring of joint climate actions The action will be carried out on the basis of shared governance, with an integrated metropolitan vision and a smart territorial specialisation approach.
Reference to the impact pathway	Scope of issuance	Social
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Area of employment and companies
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	256066.79



Promotion of regular work with entities and citizens not associated with the organisation from the perspective of social innovation		
Action plan	Name of the action	Promotion of regular work with entities and non-associated citizens from the perspective of social innovation
	Description	This action aims to strengthen mechanisms for social participation and involvement in Viladecans from a perspective of social innovation applied to major urban challenges, particularly climate neutrality. The aim is to promote ongoing, structured work with social, neighbourhood, cultural and educational organisations and with non-organised citizens in order to activate their role as key players in the ecological transformation of the municipality. The action is based on the approach promoted by Viladecans Town Council through instruments such as climate missions and other multi-level and multi-actor governance frameworks, which enable the coordination of efforts and facilitate spaces for shared responsibility around the challenge of decarbonisation. Planned lines of action: • creation of stable and accessible channels of communication with unorganised citizens, beyond formal participatory bodies • development of open social innovation processes that enable the co-creation of local solutions for emissions reduction and climate adaptation • promotion of collaboration networks between associations, educational centres, young people, businesses and professionals for shared climate initiatives • support for community projects that promote energy efficiency, sustainable mobility, local food and responsible consumption



		linking these processes to strategic instruments such as the Climate and Energy Plan () Viladecans Climate Neutral City Mission These dynamics will diversify participation, activate the collective intelligence of the territory and generate a solid social base for fair and inclusive climate change.
Reference to the impact pathway	Scope of emission	Social
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/individuals responsible for implementation	Mayor's Office - Social Innovation and Relational Government Service
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant local agents
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	No direct impact
	Total costs and costs per unit of CO₂ eq	159567.3



Improvement of school environments with a 360° educational perspective.		
Action plan	Name of action	Improvement of school environments with a 360° educational perspective.
	Description	This action aims to comprehensively intervene in school environments in Viladecans in order to create safer, healthier, more accessible and sustainable spaces for students, their families and the entire educational community. It is based on the 360° education approach, which understands learning as a process that transcends the classroom and connects with the city, the neighbourhood and the everyday environment. The intervention is particularly focused on traffic calming, improving public spaces and reducing emissions in areas where vulnerable groups (children, families dependent on cars, elderly people) converge, but also groups with high potential for social transformation through changing habits and generating a climate culture. Planned lines of action: • design of safe school environments with reduced motorised traffic, pedestrian access areas and cycle lanes • incorporation of natural elements such as trees, shade, rain gardens and permeable paving • promotion of active mobility (walking or cycling) through school routes and safe parking facilities • promotion of educational, recreational and cultural activities outside schools to strengthen the link between school and the environment • involvement of the educational community in the design, use and maintenance of the transformed school environment The action will have a cross-cutting approach, involving technical and educational areas, social services, mobility and en r the



		environment, and will be prioritised in schools located in areas with lower environmental quality or greater exposure to traffic.
Reference to the impact pathway	Scope of emission	Social
	Systemic lever	Other
	Result (according to module B-1.1)	Improved operational efficiency, process digitalisation or environmental recovery, as applicable.
Implementation	Organisations/persons responsible for implementation	Territorial Planning Area
	Scale of action and target entities	Municipal
	Actors involved	Technical departments of the City Council and relevant agents in the territory
	Comments on implementation	Included in the Urban Agenda. Executable within the 2023-2030 period.
Impacts and costs	Renewable energy generated (if applicable)	Not applicable
	Energy eliminated/replaced, volume or type of fuel	Not applicable
	Estimated GHG emissions reduction (total)	137,8 tonnes of CO ₂ /year (including 20 schools)
	Total costs and costs per unit of CO₂eq	1023505.09



B-2.3: GHG emissions forecast

To complement the qualitative and quantitative definition of the Climate Action Plan's action portfolio, the *NetZeroPlanner* tool was used to model a progressive GHG emissions reduction scenario between 2023 and 2030, aligned with Viladecans' climate neutrality targets.

This decarbonisation scenario envisages the phased implementation of structural measures in key emitting sectors, including those that are most difficult to decarbonise. This modelling exercise delivers an annual projection of net emissions from the 2023 baseline to the 2030 target year.



According to the projected decarbonisation scenario, a level of 37 ktCO₂e/year would be achieved in 2030, representing an 80% reduction compared to the base year.

This outcome indicates that, if the planned actions are fully implemented and current levels of ambition and funding are sustained, Viladecans could reach climate neutrality by 2030 in scopes 1 and 2—provided that residual emissions are offset through local carbon sinks or complementary strategies (see Section B-2.4).

Electricity emissions	Transport emissions	Building emissions	Waste emissions	Freight transport emissions	Emissions from other sectors
Scenario forecast 2030 7 kt/yr	Scenario forecast 2030 2 kt/yr	Scenario forecast 2030 4 kt/yr	Scenario forecast 2030 7 kt/yr	Scenario forecast 2030 0 kt/yr	Scenario forecast 2030 16 kt/yr
Change 2023 - 2030 -87%	Change 2023 - 2030 -86%	Change 2023 - 2030 -72%	Change 2023 - 2030 -26%	Change 2023 - 2030 -77%	Change 2023 - 2030 -81%

The projected decline reflects a steady decrease across all emission categories, with particularly sharp reductions in the electricity and transport sectors—both central to the plan's transformative measures. Accelerating progress in these sectors will be critical to maintaining the pace of emissions reduction required to meet the 2030 neutrality goal.



B-2.4: Summary of the strategy for residual emissions

Viladecans recognises that, even after the full implementation of the Climate Action Plan and the deployment of the measures envisaged in the six transformation levers, residual emissions that are difficult to eliminate completely in the short term will remain, especially in sectors such as freight transport, the most inefficient existing buildings and certain industrial and agricultural uses.

To address these residual emissions and meet the climate neutrality target by 2030, the municipality is proposing a strategy based on two complementary approaches:

A. Progressive and dynamic adjustment of the plan through the monitoring and evaluation system

The first track consists of activating a robust continuous monitoring and evaluation system to monitor the performance of the planned portfolio of actions and detect, in real time, any imbalances or gaps in the effective reduction of emissions. This system will make it possible to:

- Identify actions that need to be intensified or scaled up due to their low observed impact.
- Incorporate new actions or technologies that complement existing ones, including solutions not initially considered.
- Iteratively adjust decarbonisation scenarios and trajectories based on actual data obtained and emerging dynamics.

This logic of continuous improvement reinforces the adaptive planning approach that characterises the Viladecans Climate Mission and will maximise the mitigation potential of the set of local policies.

B. Local offsetting of residual emissions through natural carbon sinks

The second pathway is based on considering local carbon sinks, prioritising natural systems and nature-based solutions (NbS) implemented within the municipal area. This strategy includes:

- The restoration and protection of existing natural and semi-natural ecosystems, such as wetlands, agroforestry areas and riverbanks.
- The promotion of regenerative agricultural practices in active agricultural areas, within and around the Viladecans Agricultural Park, as part of *the AgroDeltaLab* project.
- The expansion of urban green infrastructure (green roofs and walls, renaturalisation of public space, ecological corridors), integrating biodiversity, health and carbon capture criteria.
- The development of a baseline of urban and peri-urban sinks, combining sensor data, aerial imagery and citizen science (such as the Co-Carbon project Tree



Measurement), to enable more accurate quantification of local CO₂ absorption capacity.

Currently, the following references located in the municipality, in different stages of maturity, can be cited:

- Naturalisation of the Plaza Saint Herblain, which removes all asphalt from the public space to leave permeable soil and a larger area for plant varieties, as an example of the type of public space reforms that are intended to be implemented progressively.
- Promote the restoration and conservation of high-value natural areas located within the municipal boundaries, mainly those included in the Natura 2000 network: the wetlands of La Murtra, El Remolar-Filipines, Can Sabadell and Reguerons; coastal pine forests; dune areas and beaches, as well as the forest areas of Sant Ramon, Mas Ratés, Can Trius, Can Preses and the Can Seguí forest.
- To draw up, approve and implement the Viladecans Naturalisation Plan for the revegetation of public spaces in the town through the creation of new urban green corridors, parks and gardens. This will encourage citizens to get in touch with nature, promote the regulation of the water cycle, CO₂ capture and oxygen production, the capture of polluting particles, temperature regulation and the conservation of biodiversity. It includes the drafting of the Sectoral Plan and the Guide for the drafting of projects that include green infrastructure in their approach. As for the projects that will result from the approval of the plan, the areas to be developed according to naturalisation criteria by 2030 will focus on: Avenida Can Palmer-Eix Torrent Can Preses (5,494 m²), green areas on the side of the C-32 converted into urban forest (35,772 m²), green areas in parks and squares without tree cover to be planted with trees (28,704 m²), Trece Roses square (2,285 m²), Saint Herblain square (3,422 m²), Calle Norte (950 m²), sides of the C-245 (950 m²), sides of the Sant Climent road (1,250 m²). Total naturalised urban space of approximately 78,827 m².

Currently, Viladecans does not explicitly contemplate the adoption of industrial carbon capture and storage technologies (such as BECCS or DAC), given the profile and scale of the municipality and its priority commitment to natural, participatory and territory-based solutions.

However, the possibility of exploring absorption technologies that could be viable, safe and appropriate for the urban and metropolitan context of Viladecans in future phases of the plan is left open, in coordination with supra-municipal actors and regulatory frameworks.

In summary, Viladecans proposes an inclusive, evolutionary and locally anchored climate neutrality strategy, where residual emissions are addressed both through continuous improvement of the plan and through the reinforcement of its natural and urban-agricultural sinks, strengthening local resilience and shared benefits.



MODULE B-3. Monitoring, evaluation and learning indicators

This module establishes the monitoring and evaluation framework that will enable Viladecans to track progress towards climate neutrality in 2030, coherently aligning the impact trajectories defined in the Action Plan with specific, measurable and results-oriented indicators. The impact logic outlined—from short-term systemic changes to long-term transformative results—requires a robust system of indicators that clearly reflects the evolution of each intervention and its contribution to reducing emissions and generating co-benefits.

The approach of this module is based on the need to directly connect the impact pathways described in Module B-1 with a set of indicators that aim to measure the real impact of the Climate Action Plan, evaluate its effectiveness over time, guide future decisions and incorporate relevant lessons learned into the urban ecosystem as a whole.

The selected indicators are derived directly from the proposal developed within the framework of *citiES 2030*, adapted by Viladecans through its active participation in this national platform. This proposal is aligned with the *NetZeroCities* approach, which promotes the creation of a common set of indicators for Mission Cities.

The panel combines climate impact indicators (GHG reduction, energy use, green space, etc.) with co-benefit indicators, which reflect the indirect effects of decarbonisation. Priority is given to indicators that:

- Are already available or easily measurable at the municipal level.
- Allow baselines (2023–2024) to be established against which progress can be measured.
- Can be clearly communicated to citizens and local stakeholders.

B-3.1: List of co-benefit indicators				
Scope	Co-benefit indicators	Current value	Target value	
			2027	2030
Health and environmental quality	1. PM2.5 concentration levels	12 µg/m ³ ⁽¹⁾	< 25 µg/m	< 20 µg/m
	2. PM10 concentration levels	19 µg/m ³ ⁽¹⁾	< 25 µg/m ³	< 20 µg/m ³



B-3.1: List of co-benefit indicators

Scope	Co-benefit indicators	Current value	Target value	
			2027	2030
	3. NO2 concentration levels	19 µg/m³ ⁽²⁾	< 25 µg/m³	< 10 µg/m³
	4. Population exposed to average day-evening-night noise levels (Lden) ≥ 55 dB	62.50 % ⁽²⁾	▽	▽
	5. Average maximum daily temperature	20,16 °C ⁽²⁾	=	=
	6. Average daily minimum temperature	12,16 °C ⁽²⁾	=	=
	7. Incidence of heat waves (number of heat waves in summer)	1 episode ⁽²⁾	=	=
	8. Green spaces	127,78 ha/100,000 inhabitants ⁽²⁾	Δ	Δ
Social inclusion and cultural impact	9. Energy consumption per household	pending	▽	▽
	10. Modal share of environmentally friendly modes of transport and public transport	pending	Δ	Δ



B-3.1: List of co-benefit indicators

Scope	Co-benefit indicators	Current value	Target value	
			2027	2030
Digitalisation and technology	11. Percentage of municipal buildings equipped with energy management systems	pending	Δ	Δ
Economy	12. GDP per capita	27.131,00 €/habitant ⁽¹⁾	Δ	Δ
Finance and investment	13. Budget allocated to climate action projects	pending	Δ	Δ
Resource efficiency	14. Percentage of municipal waste recycled	36,10% ⁽¹⁾	Δ	Δ
Biodiversity	15. Percentage of tree cover within the city	12,80% ⁽²⁾	30	> 30

⁽¹⁾ Data corresponding to 2023

⁽²⁾ Data corresponding to 2024 or 2025

B-3.2: Indicator metadata

To be developed in future iterations of the Climate Contract

The monitoring system will enable:

- Monitor progress on each of the plan's levers and detect deviations.
- Evaluate the effectiveness of actions according to technical and social criteria.
- Generate shared knowledge that feeds back into the design of future actions.



- Communicate results transparently, strengthening institutional trust and citizen involvement.

This system will be integrated with the Climate Mission's governance structure and the future Climate Investment Plan, allowing resources and strategies to be adjusted based on evidence.



PART C - ACHIEVING CLIMATE NEUTRALITY BY 2030

Part C of the Climate Action Plan outlines the enabling conditions required to operationalise the action portfolios defined in Part B and to address the challenges and opportunities identified in Part A.

It is structured around three key modules. Module C-1 focuses on organisational and governance innovations that ensure effective, cross-cutting, and multi-actor coordination. Module C-2 introduces social innovation measures and engagement tools to strengthen citizen and stakeholder involvement in the climate transition. Module C-3 defines the financial strategies necessary to mobilise both public and private resources, providing the fiscal architecture to support the full implementation of the Climate Mission.

MODULE C-1. Innovation interventions in organisation and governance

Achieving climate neutrality by 2030 means that Viladecans and other cities committed to this goal must not only transform their urban, energy and economic systems, but also **ambitiously reformulate their institutional architecture and governance models**. The city's climate governance needs to move from a reactive approach to emerging problems to a proactive, leadership-driven approach to shaping the desired future, leveraging the capacities of actors across the city, other municipalities, and different levels of governance.

In this context, **Viladecans has already built a solid organisational foundation** through the Viladecans 2030-2040 Strategy, the Local Urban Agenda and, in particular, the Viladecans 2030 Climate Mission, which act as catalysts for organisational change.

At the heart of this organisational and governance model is the City Council's Open Innovation Model (MIA), a nationally award-winning system that enables city projects to be structured and piloted through interdepartmental steering committees and working groups, with a high level of cross-cutting coordination, strategic alignment and a focus on results. The OIM operates as an interface between strategic planning, public policy implementation and institutional learning and has been key to activating more than 20 flagship projects linked to the ecological transition.

At the same time, a climate governance system based on the quadruple helix has been consolidated, generating a culture of collaboration geared towards complex urban challenges, such as the Climate Emergency Board and the *Alia't* Community.

These structures have proven **effective in activating flagship projects, encouraging the participation of the quadruple helix and linking strategic planning with concrete action**.

However, the city is fully aware that the speed and depth of change required by the climate crisis call for a progressive evolution focused on the continuous and incremental improvement of the organisational and co-governance model. There is a firm commitment to the systematic exploration, testing and institutionalisation of these and new forms of governance, which are essential for driving collective action.



The following table lists a selection of key actions already underway or planned, which also include proposals for improvement to move towards systemic institutional transformation:



C.1.1: Organisational and governance interventions

Name of action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Viladecans 2030-2040 Strategy and 2030 Urban Agenda	Strategic planning framework for the city based on a mission-oriented approach.	Presidency and City 2030. 2030 Strategy, Innovation and Institutional Networks Service. Viladecans City Council.	All municipal areas City Social Council Mission Alliance	Multi-level governance. Policy alignment. Breaking down internal silos.	Political-technical alignment.
Open Innovation Model (OIM)	Internal governance system of the City Council based on interdepartmental steering committees to promote transformative projects across the board, with a results-oriented methodology.	Presidency and City 2030. 2030 Strategy, Innovation and Institutional Networks Service. Viladecans City Council.	All municipal areas. OIM steering committees	Effective coordination of climate projects. Breaking down institutional silos. Creation of an innovative culture within the administration.	Greater organisational efficiency.



C.1.1: Organisational and governance interventions

Name of action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Mission of climate neutrality by 2030	Partnership system, within the quadruple helix that currently includes 30 entities from the mission's ecosystem that have signed a commitment to join and are working towards the common challenge.	Social sustainability and citizen services. Public space and sustainable mobility. Viladecans City Council. Jordi Mazón, 4th Deputy Mayor, Mobility, Cleaning and Waste Collection, Coexistence and Civility, Promotion of Science and Scientific Dissemination, and pilot of the Climate Mission – Viladecans 2030 Office of the Future of the City (City of Viladecans Foundation) strategic technical support.	All agents of the quadruple helix.	Joint responsibility.	



C.1.1: Organisational and governance interventions

Name of action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Alia't Community and participatory climate governance	Collaborative network of more than 60 organisations from the quadruple helix that co-create, implement and monitor climate actions aligned with the Viladecans 2030 Mission.	Office for the Future of the City (Viladecans City Foundation) provides strategic technical support and community managers.	Citizenship. Businesses. Educational centres. Public administration.	Joint responsibility and legitimacy in local climate action	Active citizen participation. Social cohesion.
Citizens' Climate Roundtable	Coordination body for the Viladecans Climate Pact, made up of around 20 people representing local entities from different fields and citizens in their personal capacity	Social sustainability and citizen services. Public space and sustainable mobility. Viladecans City Council.	Citizenship. Local entities. Public administration	Promotion of the adhesion of local agents and citizens to the Pact. Promotion of specific local actions in response to the climate emergency.	Active citizen participation. Social cohesion.



C.1.1: Organisational and governance interventions

Name of action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Green budgets and climate-financial alignment	Progressive development of green budgeting and climate labelling tools to align municipal financial resources with climate neutrality objectives.	Presidency and City 2030. Internal government and municipal resource management. Viladecans City Council.	Municipal economic and financial areas, Treasury, political bodies	Efficient allocation of resources for climate action. Traceability	Budget transparency. Accountability
Smart City platform and urban climate data	Development of the municipal digital platform to integrate environmental, mobility and energy data and support climate-smart decision-making.	Presidency and City 2030. Internal government and municipal resource management. Digital innovation and data governance services. Viladecans City Council.	Technical areas of the City Council. Technological and academic partners	Optimisation of urban services. Real-time climate monitoring	Greater urban resilience. Data-driven governance.



C.1.1: Organisational and governance interventions

Name of action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Internal capacity plan for ecological transition	Internal training programme for municipal teams in climate planning, green economy, fund management and multilevel governance.	Social sustainability and citizen services. Public space and sustainable mobility. Viladecans City Council.	Municipal technical staff. Training centres. Collaborative networks	Strengthening technical capacities to lead climate transformation	Professionalisation and motivation of public staff. Attracting talent



C-1.2: Description of organisational and governance interventions

Viladecans' climate agenda is approached from a **mission-based perspective**, where climate neutrality by 2030 is not just a sectoral objective, but the cornerstone of local public policy. This vision is integrated into the main instruments and tools of the city's strategic framework, with the aim of aligning all municipal departments and local stakeholders with the Climate Mission.

In this regard, the City Council has promoted organisational mechanisms and management tools that enable strategic planning to be linked to effective action and connect institutional, social, economic and scientific actors around a common agenda. The city is firmly committed to maintaining and accelerating these mechanisms as levers for the transformation envisaged for 2030.

Furthermore, Viladecans recognises the need to evolve towards a more agile and learning-oriented institutional structure, capable of responding to climate uncertainty and changing scenarios through iterative cycles of assessment, adaptation and action.

In terms of **internal governance**, the MIA model operates through interdepartmental steering committees that act as hubs for driving forward flagship projects aligned with climate objectives. It was precisely the Public Space Steering Committee that came up with the city's climate neutrality objective. This model promotes cross-cutting approaches and breaks down silo dynamics within the administration.

Work is currently underway to improve its coordination capacity through the deployment of interdisciplinary workspaces, the digitalisation of key processes and the strengthening of a mission-oriented organisational culture. In fact, the MIA model, created to promote a culture of innovation within the organisation, is the main driving force behind Viladecans' systemic and mission-oriented approach, known as '*breaking silos*'.

Externally, a collaborative governance structure based on the **quadruple helix** (public sector, private sector, academia and civil society) has been consolidated through the *Alia't* Community. In addition, there are specific spaces such as the Climate Emergency Roundtable, which guarantees structured citizen participation in decision-making.

As an evolution of these spaces, there are plans to establish anticipatory and experimental governance mechanisms that will allow public policies to be tested in **controlled environments** (*urban sandboxes*), facilitate risk management, and generate collective intelligence in real time.

For both internal and external governance structures, there are plans to strengthen existing spaces with new monitoring tools, indicators and shared data platforms, with a clear commitment to moving towards data-driven, inclusive, reflective and constantly adaptable governance.



In terms of **primary responsibilities for climate action**, there are different municipal departments with overlapping powers, despite the fact that the strategic model implemented in the city reflects a clear desire to break down the departmental silos that usually constitute a barrier to systemic transformation.

- Internal government and municipal resource management, through the 2030 - 2040 Strategy Service and institutional networks, which is responsible for promoting and implementing the Viladecans 2030-2040 Strategy and the Urban Agenda.
- Environment and Sustainability Department, as the main department responsible for promoting and coordinating municipal environmental action.
- Territorial Planning Department, with the application of energy efficiency and decarbonisation criteria in buildings and infrastructure.
- The Public Space and Sustainable Mobility Department, which focuses on reducing urban mobility emissions, efficient management of public space, urban planning, etc.

Key internal capacities (dynamic organisational capacities) are also being defined to sustain the leadership of the mission, including knowledge management, cross-sectoral collaboration, intermediation with external actors and the piloting of experimental policies.

In terms of mechanisms to **involve relevant parties and connect systems** linked to emission sources, the City Council has established a participatory governance system focused on:

- The Citizen Climate Board, with more than 300 members (citizens, associations, companies, educational centres).
- The *Alia't* Community, as a structured platform of organisations allied to the Climate Mission, with signed commitments and specific roles in demonstration projects.
- Sectoral channels such as technical roundtables for specific areas (energy, mobility, waste, agriculture, etc.).

This system is being consolidated through more stable collaboration frameworks, with clearly defined roles, commitments and shared metrics to assess the degree of involvement and real contribution to the neutrality objectives. In addition, work is being done to strengthen the traceability of participation through digital tools, training and feedback processes.

In terms of **citizen involvement**, Viladecans has opted for active, inclusive and two-way communication. Through campaigns, training in schools, citizen science actions (such as the *Co-Carbon Tree Measurement* project) and public events such as the *Alia't* Climate *Vermuts* (meetings), the aim is to translate technical objectives into understandable everyday impacts and reinforce the sense of belonging.



The role of citizens is not only reactive, but also proactive, through the co-creation of pilot projects, voluntary adherence to commitments and direct participation in policy evaluation.

The governance of the Climate Mission has been designed to directly address the **systemic barriers** identified in module A-3: institutional fragmentation, limited technical capacity, challenges in multi-stakeholder coordination, inadequate funding, and weak citizen engagement.

The responses to these barriers are articulated through:

- Technical training and internal professionalisation.
- Budget alignment (green budgets).
- Institutional mainstreaming (MIA model).
- Structured participation (Alia't and Climate Table).
- Mobilisation of external resources (UIA projects, PRTR, *Horizon Europe*).
- Generation of enabling organisational capacities, such as open innovation, radical collaboration, institutional intermediation and collective learning.

The impact pathways of module B-1 are designed taking into account these support frameworks, with the conviction that, without an adequate institutional architecture, real transformation cannot be achieved.

This proposal, which is in line with the *modus operandi* that has been promoted recently, aims to transform Viladecans' institutional architecture into a genuine engine of climate transition, capable of leading urban transformation processes from the public sector, activating robust alliances and generating citizen trust.

The approach adopted recognises that it is not enough to scale up what already works, but that a deliberate redesign of institutional capacities is required, incorporating a logic of mission, experimental governance and constant adaptation to change.

It is not just a question of adapting what already exists, but of moving towards a climate-competent administration that acts as a benchmark for other medium-sized cities in Europe.



MODULE C-2. Social and other innovation actions

The transition to climate neutrality cannot be driven solely by technical or institutional frameworks. It also requires a **cultural, social and relational transformation**, where people and communities become active agents of change.

With this conviction, Viladecans positions social innovation and structured citizen engagement as key pillars of its Climate Mission 2030.

Beyond existing spaces, such as the aforementioned Citizen Climate Roundtable, the *Alia't* Community and the MIA model of public innovation, new social innovation strategies and mechanisms are being consolidated with the aim of:

- To accelerate climate action at both local and neighbourhood levels.
- Empower groups and individuals to actively contribute to solutions.
- To establish living laboratories for climate experimentation involving citizens, civil society, businesses, and public administration.

This approach is articulated through three main areas of intervention:

Ciudadanía: participación activa y prototipado social

Ecosistema productivo y tejido innovador

Academia y generación de conocimiento local

Together, the actions included in this module constitute the social innovation system of Viladecans' Climate Mission 2030: a living, open, experimental, and results-oriented ecosystem that connects shared values, local knowledge and citizen action to accelerate the ecological transition in a fair and effective manner.

They include both social innovations promoted from the territory and non-technological enabling mechanisms aimed at activating new forms of relationship, behaviour, community organisation and collaboration.

These interventions are key to reducing structural barriers, empowering vulnerable groups, strengthening the social fabric and expanding the city's capacity to experiment, learn and scale up fair and effective solutions.



C.2.1: Social innovation and other interventions

Name of the action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Mission of climate neutrality by 2030	System of alliances, within the quadruple helix that currently includes 30 entities from the mission's ecosystem that have signed a commitment to join and are working towards the common challenge.	Viladecans Foundation / Office of the Future	All agents of the quadruple helix (including organised citizens)	Joint responsibility.	



C.2.1: Social innovation and other interventions

Name of the action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Citizens' Climate Emergency Roundtable	Participatory body made up of citizens, associations, companies and educational centres, with the function of monitoring, evaluating and proposing climate policies. It includes a Youth Board for educational involvement.	Viladecans Foundation	Citizens, associations, educational centres, local companies	Co-creation and direct monitoring of local climate policies.	Civic education, generational equity, democratic participation



C.2.1: Social innovation and other interventions

Name of the action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Alia't participatory activities programme	Series of participatory events and meetings (such as Climate Vermouths and Afternoons) designed to strengthen ties, share knowledge and promote shared responsibility in the Climate Mission.	Viladecans Foundation / Alia't Community	Local entities, citizens, companies, partner organisations	Citizen mobilisation, social ownership of the Climate Mission	Social capital, community cohesion, institutional trust



C.2.1: Social innovation and other interventions					
Name of the action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Co-Carbon Tree Measurement Laboratory	Citizen science project involving schoolchildren and residents in measuring the carbon captured by urban trees, to raise environmental awareness and generate local data.	UPC – Viladecans City Council	Educational centres, municipal technicians, researchers	Better understanding of the role of urban nature as a sink.	Active learning, connection with nature, open data
AgroDeltaLab Project	Agricultural innovation initiative linked to the UPC, promoting sustainable practices, regenerative agriculture and carbon sinks in the Viladecans Agricultural Park.	UPC / Viladecans City Council	Researchers, farmers, start-ups, technology centres	Transforming the agricultural model towards low-carbon practices	Food sovereignty, green jobs, soil health and biodiversity



C.2.1: Social innovation and other interventions

Name of the action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Development of local energy communities	Citizen initiatives for shared self-consumption and the creation of energy communities with technical and regulatory support from the City Council, within the framework of the Vilawatt project.	Vilawatt / Viladecans City Council / Local community	Households, SMEs, City Council, local installers, cooperatives	Emissions reduction, energy empowerment and social cohesion	Energy poverty, local economy, shared energy culture



C.2.1: Social innovation and other interventions

Name of the action	Description	Person and entity/body responsible	Actors involved	Impact	Co-benefits
Hackathons	Events where social agents get involved to work on technological and innovative solutions to challenges proposed by the organisation around a specific theme, always from a fun and collaborative learning perspective and with a competitive edge.	City council / Office of the Future	Citizens, associations, educational centres, local businesses	Co-creation of innovative technological solutions	Participation; Active learning; Innovation

C-2.2: Description of social and other innovation actions

Viladecans has promoted a range of social innovation initiatives to tackle systemic **barriers** such as the disconnect between citizens and the administration, actor fragmentation, limited capacity to scale local solutions, and the underrepresentation of vulnerable groups in the climate transition. Among the main innovations are:

- The Citizen Climate Roundtable, which enables structured and deliberative citizen participation in the monitoring of climate policies, also incorporating a Youth Roundtable to ensure an intergenerational approach.



- The *Alia't* community, which acts as a stable ecosystem for multi-stakeholder collaboration, coordinating demonstration projects around the levers for transformation identified in the Climate Mission.
- The *AgroDeltaLab* project, an agricultural living lab in the Viladecans agricultural park that applies regenerative agriculture practices and sustainable technologies, addressing land use as a carbon sink.
- The neighbourhood energy rehabilitation pilot through the *Vilawatt* programme, which includes neighbourhood participation mechanisms, citizen training, access to technical services, climate microfinance and a local currency. Also within the framework of *Vilawatt*, local energy communities are promoted, encouraging shared self-consumption, energy co-responsibility and citizen sovereignty over resources.
- The *Co-Carbon Tree* Measurement citizen science laboratory, where schoolchildren and residents collaborate with experts to measure the carbon captured by urban trees, promoting environmental awareness through direct experience.
- Climate and social innovation *hackathons*, collaborative events where different social agents come together to propose creative, technological or organisational solutions to the municipality's climate challenges, combining learning, playful competition and collective intelligence.

These experiences help to activate social capacities, build institutional trust and foster collective learning — factors identified by *NetZeroCities* as essential for systemic transformation at the urban level.

The interventions mentioned are not limited to informing or consulting citizens, but **promote their direct involvement in the design, implementation and evaluation of climate solutions**. This approach makes it easier for citizens not only to adhere to the Climate Mission, but also to feel that it is their own, generating an emotional and collective bond with the 2030 goal.

One of the guiding principles of the Viladecans Climate Mission is to ensure a just ecological transition. In this regard, social innovation actions are designed with a **focus on equity and inclusion**. These strategies make it possible to reduce barriers to access, representation and agency, especially for young people, people in energy poverty and neighbourhoods with historically lower access to services and participation.

Viladecans is working to consolidate a social innovation ecosystem that is **scalable, transferable and sustainable** over time. Some keys to ensuring its long-term impact are:

- Progressive institutionalisation: several of the experiences are already integrated into permanent structures such as the Urban Agenda or the MIA



model. The *Alia't* Community is also evolving towards a stable network with specific functions within climate implementation.

- Linkage with structural policies: all actions are aligned with the Climate Action Plan, the Urban Agenda and the 2030 Strategy, ensuring coherence, financing and long-term continuity.
- Iterative evaluation and collective learning: a culture of continuous improvement is promoted, documenting lessons learned and using both technical and social indicators to evaluate the real impact.
- Multi-level coordination and city networks: Viladecans is part of networks such as *NetZeroCities*, *citiES 2030*, URBACT and the Innpulso Network, which allows it to feed back its innovation processes with European best practices and scale up its achievements abroad.

In addition, the generation of mixed public-community financing models is being explored to ensure the viability of projects beyond the annual budget cycle, as proposed in the Climate Investment Plan.



MODULE C-3. Financing the share portfolio

As part of Viladecans' climate planning process and in line with the principles of the European Climate Mission and the *NetZeroCities* framework, an initial economic modelling exercise has been carried out to lay the foundations for the city's future Climate Investment Plan.

This section summarises the preliminary results of the economic analysis associated with the sectoral ambitions set out in the Climate Action Plan.

For each sector and subsector, Viladecans has set a 2030 ambition consistent with its climate neutrality objective, as previously outlined in modules B and reflected in Table C-3.1.

Based on these ambitions, the climate and economic impact of each course of action has been estimated, including:

- GHG emissions reduction (in ktCO₂e)
- Net operational savings (in million euros – Net Present Value 2020–2050)
- Monetised co-benefits associated with health, mobility, air quality, etc. (also in NPV 2020–2050)

The use of the 2020–2050 time horizon allows for the evaluation of not only the initial implementation costs, but also the economic and social returns accumulated over time. This long-term perspective is key to demonstrating the economic viability of the climate transition and facilitating strategic investment decisions.

The estimates obtained provide an initial approximation of the return on investment (ROI) of the selected strategies, identifying those with the highest economic profitability, climate impact and social value for the city and its residents. This analysis, although still partial, provides useful initial evidence to guide the prioritisation of actions and the design of public, private or community financing mechanisms.

In the case of Viladecans, the model applied also allows for an initial monetisation of some relevant co-benefits, especially in sectors such as:

- Transport
 - Improved air quality and public health
 - Reduction of urban noise
 - Reduced accident rates and improved road safety
 - Promotion of active mobility (walking and cycling)



- Building
 - Reduction of energy poverty and improvement of thermal comfort
 - Reduced local emissions and improved indoor air quality
- Energy and waste
 - Improving efficiency, reducing diffuse emissions and recovering resources

In the current phase, the model has focused on the four key sectors prioritised in the Viladecans Climate Mission: energy, building, mobility and land use. Other strategic sectors such as consumption, digitalisation and urban logistics remain to be integrated, as well as the structural and cross-cutting costs linked to governance, training, innovation and awareness-raising.

In future iterations of the Climate Contract and Action Plan, the following is planned:

- Refining and expanding the economic model, incorporating more sectors, subsectors and structural costs.
- Advancing the documented quantification of co-benefits, integrating scientific sources and local data.
- Designing the complete Climate Investment Plan (Annex II), with budget details for each action, estimated source of funding and associated timetable.

This work will be essential not only to optimise the use of public resources, but also to mobilise private investment, activate innovative local financing mechanisms and reinforce the legitimacy of the process among citizens and stakeholders.

In short, economic analysis is a central component of the city climate contract, as it translates ambition into terms of feasibility and financial justice and establishes the conditions for a realistic, sustainable and equitable ecological transition.



Outlook and next steps

This Climate Action Plan provides a solid foundation for moving collectively towards the goal of climate neutrality in Viladecans by 2030.

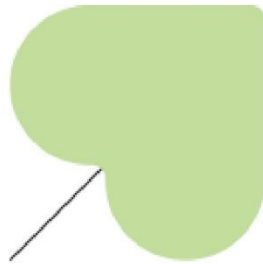
However, this plan is not a closed document, but rather a living, evolving and adaptable instrument that must be nourished by continuous learning, institutional innovation and the active participation of all stakeholders.

As part of the City Climate Contract and the urban mission approach, a roadmap has been defined for the **review, expansion and improvement of the plan over the next two years**. This process will be iterative, participatory and results-oriented, with the following main lines of work:

- Operational definition of transformative projects: the initiatives included in the plan will be detailed, defining their scope, timetable, estimated budget, stakeholders and funding channels to facilitate their implementation and prioritisation.
- Strengthening municipal cross-cutting action and the MIA model: collaboration between areas of the City Council will be intensified through the MIA model, in order to integrate the mission logic into all departments and ensure coordinated and effective implementation.
- Consolidation of local actors' commitments: a phase of formal adherence to the Climate Contract will be promoted through the signing of specific letters of commitment by public, private, social and academic entities, reinforcing shared responsibility for climate action. This process will be linked to the Viladecans Climate Mission.
- Implementation of the monitoring, evaluation and learning system: the proposed system will be implemented, accompanied by training and guidance for the actors involved, ensuring the quality of the data and the usefulness of the analyses generated.
 - Collection and analysis of baselines: priority will be given to collecting reference data on the defined indicators, particularly emissions, sink capacity, investment and citizen participation, as a starting point for continuous monitoring.
 - Assessment of progress towards climate neutrality: based on the data collected, the actual progress made in the different dimensions of the plan will be analysed and the effectiveness of the strategies deployed will be assessed in relation to the emission reduction and systemic transformation targets.
- First comprehensive review of the Action Plan and Climate Contract (2027): based on the mid-term evaluation, a strategic review of the Action Plan and Climate Contract will be carried out, incorporating lessons learned, adjusting targets if necessary and updating priorities.



With these steps, Viladecans reaffirms its commitment to ambitious, fair and collaborative climate action and consolidates its role as a pioneering city in the ecological transition at European level. The process does not end here: on the contrary, this is only the beginning of a decade of transformative and co-responsible action.



ANNEX 2:
*Climate Neutrality
Investment Plan*



PART A - CURRENT STATUS OF CLIMATE INVESTMENT

Part A forms the structural foundation of the Climate Neutrality Investment Plan by providing a comprehensive assessment of the city's current financial landscape in relation to climate action.

It consists of three modules. Module A-1 outlines the baseline status of climate-related financing in Viladecans. Module A-2 critically evaluates existing financial policies and instruments in place to support the transition towards climate neutrality. Module A-3 identifies the primary financial barriers that may hinder progress, offering insights essential for shaping future investment strategies.

MODULE A-1. Existing financing for climate action

Currently, **Viladecans lacks a formal climate budgeting system or systematic mechanisms** to label and track climate investments within the municipal budget. In fact, climate budgeting (or green budgeting, in more general terms) is a relatively new practice in the public sphere, at least for the time being, despite its role as a catalyst for the transition to carbon-neutral economies and societies.

There are also no detailed calculations available in Viladecans regarding the proportion of the total municipal budget allocated to climate action, although preliminary mapping and categorisation efforts have been made during the development of the City's Climate Contract.

Despite these initial limitations, Viladecans maintains a firm institutional commitment to move decisively in this direction. The aim is to consolidate a **budgetary system** in the coming years **that will enable public policy and financial operations to be aligned with the objectives of climate neutrality and a just transition**. In this regard, Viladecans City Council is producing a Guide to green budgeting in medium-sized towns. The aim of this work is to design a model to be followed by the Town Council when drawing up its annual climate-related budgets.

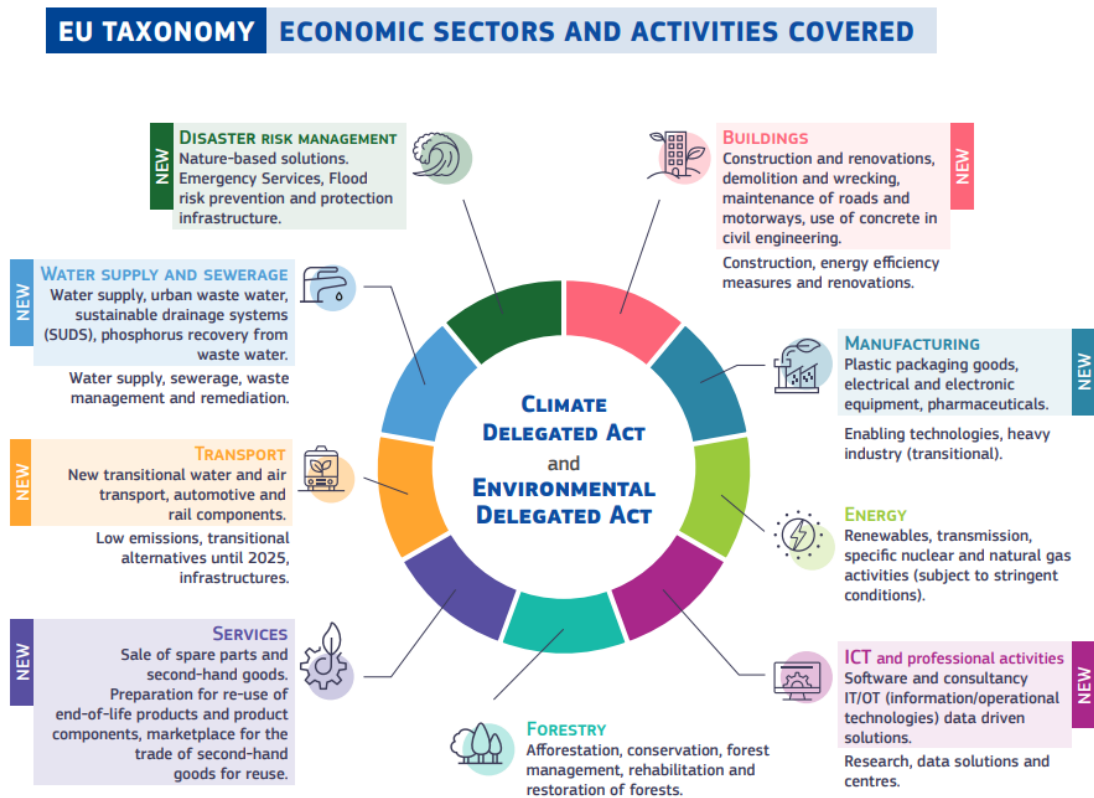
At present, in order to prepare this document and given the initial limitations, it has been decided to carry out a **cross-cutting internal consultation** exercise, aimed at the various municipal services involved in climate policies.

A municipal budget estimate has been made for expenditure, classified by programme for the current expenditure chapters (I, II, and IV of the Spanish municipal budget classification), excluding the investment chapters (VI and VII). A more detailed—though still partial—survey was conducted for investment chapters due to time constraints.

Through this process, information has been gathered on projects implemented in recent years with a potential climate impact, including their total amount and source of funding (own or external). As no standardised classification protocol currently exists for classifying these investments, the data should be considered approximate and subject to standardisation adjustments in the future.



To enhance the reliability of the analysis, the European Union Taxonomy was applied, as a guideline and to the extent possible. The Green Taxonomy is a classification scheme that clearly identifies which activities can be considered "sustainable" or "green" from a climate and environmental point of view. This system is regulated by [Delegated Regulation 2021/2139](#), which supplements the former [Delegated Regulation 2020/852](#).



The Green Taxonomy applies to economic activities and assets, so its translation to the local finance sector is not standardised. However, its application logic provides for a first step of eligibility analysis (an activity is considered eligible if it is included in one of the lists of activities in the delegated acts of the Taxonomy and complies with the description of the activity) followed by an alignment analysis (an activity is aligned if it meets the requirements of substantial contribution to environmental objectives, the *Do No Significant Harm* -DNSH- criteria and with the minimum guarantees).

In this case, only a simplified eligibility analysis has been carried out with regard to the EU objectives, in particular those directly linked to climate action. For greater granularity, a list of sectors from the Delegated Regulations of the Taxonomy is presented below, classified according to climate objectives:

- Climate change mitigation (avoiding/reducing greenhouse gas emissions or increasing greenhouse gas removal):



- Building and construction: this sector is key to mitigation, as it accounts for a large share of energy consumption and emissions (heating, cooling, materials). It also contributes to adaptation through resilient infrastructure, bioclimatic design and green roofs.
- Mobility and transport: highly relevant for mitigation, especially through electrification, the use of biofuels or the promotion of public and active transport. Adaptation is addressed through resilient infrastructure against extreme events.
- Energy: a priority sector for mitigation, promoting renewable energies, network efficiency, etc. It can also contribute to adaptation by diversifying and decentralising energy generation.
- Manufacturing industry: related to mitigation, especially in low-carbon industrial processes, clean technologies and sustainable materials. Some industrial activities may be "transitional" if they meet strict improvement conditions.
- Circular economy, waste and health: contributes mainly to mitigation, through circular business models, product reuse and waste reduction. It can also have positive impacts on economic and social resilience.
- Climate change adaptation (reducing or preventing adverse impacts on the current or expected future climate, or the risks of such adverse impacts):
 - Water supply and sanitation: essential for adaptation, as it manages water resources in the face of droughts or floods. It also contributes to mitigation through energy efficiency in the water cycle and resource recovery.
 - Disaster risk management: directly related to climate adaptation. Includes nature-based solutions, flood prevention infrastructure and emergency services. Improves the resilience of the territory.
 - Ecosystem renaturalisation and restoration: relevant for adaptation, as it increases ecological and urban resilience. It includes nature-based solutions, parks, trees, green corridors, renaturalisation, etc. Mitigation (carbon sinks) can also have an impact. It also includes awareness-raising activities.
 - Digitalisation and knowledge: these support both mitigation and adaptation through digital tools for monitoring emissions, managing resources or improving decision-making (smart cities, energy efficiency, climate planning), knowledge management or research, development and innovation.

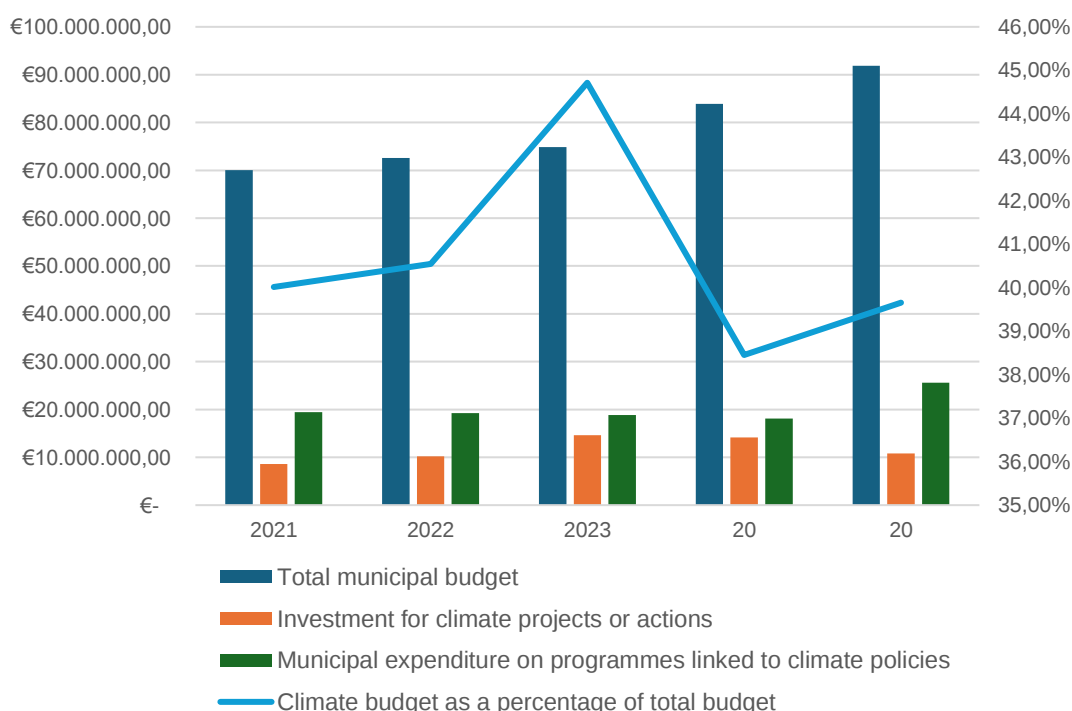
In summary, municipal projects with a clear climate component (projects that are eligible according to the Taxonomy) have been selected. With the information available, it has not been possible to break down projects that include mixed components and, therefore, the directly attributable climate impact has not been differentiated.

Table A-1.1.a provides an **initial analysis of Viladecans' recent climate budget**, with the aim of identifying the current level of investment and operating expenditure with a climate impact. This table shows the total budget items linked to investment expenditure (chapters 6 and 7) as well as current expenditure, as broken down in Table A-1.1.b.



The data obtained show a growing trend in municipal budget allocation to climate-impacting actions and projects, although there are some annual fluctuations. This increase reflects a sustained effort by the City Council to align its public investment with the climate neutrality targets for 2030, despite not yet having a structured green budgeting system in place.

A-1.1.a: Historical municipal budget and budget for climate action					
	2021	2022	2023	2024	2025
Total municipal budget (€)	70.072.119,00	72.617.130,00	74.885.800,00	83.907.051,00	91.848.803,00
Investment in climate action or projects or measures (€)	8.581.289,82	10.228.039,54	14.653.664,25	14.150.018,12	10.822.035,87
Municipal expenditure on programmes linked to climate policies (€)	19.461.582,90	19.215.675,84	18.830.623,86	18.115.317,23	25.602.786,88
% of municipal budget for climate actions and projects	12,25%	14,08%	19,57%	16,86%	11,78%





At the methodological level, some considerations should be noted, which will be key in future iterations of the Climate Contract.

The analysis has focused on the consolidated municipal budget, as finally approved (not as executed). The budgets of public or publicly owned companies have been included, but have not been differentiated, as there is not yet a common methodology for their visibility in this analysis.

In addition, current expenditure data for the last few financial years has been included. With regard to expenditure, Table A-1.1.b provides an initial approximation of the analysis of the expenditure item, classified by programme for the current expenditure chapters (I, II and IV), excluding the investment chapters (VI and VII).

A-1.1.a.: Municipal expenditure by programmes linked to climate policies in current expenditure³					
Sectors Green Taxonomy	2021	2022	2023	2024	2025
Water supply and sanitation	452.106,00	415.100,00	415.100,00	515.000,00	425.050,00
Sewerage	452.106,00	415.100,00	415.100,00	515.000,00	425.050,00
Digitalisation and knowledge	370.716,00	334.356,00	390.964,00	405.432,00	627.617,00
Knowledge management	322.716,00	324.356,00	380.964,00	395.432,00	617.617,00
Research, development and innovation	48.000,00	10.000,00	10.000,00	10.000,00	10.000,00
Circular economy, waste and health	6.984.138,30	7.240.249,39	7.453.868,41	8.482.069,94	11.199.453,79
Street cleaning	3.238.250,00	3.258.350,00	3.453.922,00	4.208.612,00	5.188.426,00
Public health protection	440.051,30	620.862,39	582.856,41	592.873,94	689.198,79
Waste collection, management and treatment	3.305.837,00	3.361.037,00	3.417.090,00	3.680.584,00	5.321.829,00
Building and construction	432.484,00	482.022,00	398.997,00	400.000,00	502.200,00
Conservation and restoration of the building	432.484,00	482.022,00	398.997,00	400.000,00	502.200,00
Energy	1.207.301,00	177.000,00	206.806,00	108.993,00	321.500,00
Energy	1.207.301,00	177.000,00	206.806,00	108.993,00	321.500,00

³ Viladecans City Council. (n.d.). *Municipal budgets, classification by programmes*. Viladecans Electronic Portal. <https://www.seu-e.cat/ca/web/viladecans/govern-obert-i-transparencia/gestio-economica/pressupost/pressupost/despeses-per-programa> (accessed on 28 June 2025)



A-1.1.a.: Municipal expenditure by programmes linked to climate policies in current expenditure³					
Sectors Green Taxonomy	2021	2022	2023	2024	2025
Mobility and transport	2.113.583,07	1.627.552,37	1.480.476,41	1.612.393,59	1.436.022,45
Urban mobility	916.703,07	430.672,37	349.699,41	353.997,59	433.372,45
Other passenger transport	398.960,00	398.960,00	108.119,00	216.238,00	216.238,00
Passenger transport	797.920,00	797.920,00	1.022.658,00	1.042.158,00	786.412,00
Renaturalisation and restoration of ecosystems	7.901.254,53	8.939.396,08	8.484.412,04	10.268.332,70	11.072.943,64
General environmental administration	490.422,63	457.476,49	520.110,91	557.690,42	610.279,33
Agriculture, livestock and fishing	73.175,00	73.075,00	73.075,00	73.075,00	73.075,00
Environment	3.914.039,76	4.221.704,54	4.017.967,02	4.924.126,85	5.321.432,32
Parks and gardens	3.057.077,14	3.361.316,05	3.121.453,11	4.019.432,43	4.354.148,99
Protection against light and air pollution in urban areas	No data	402.912,00	375.403,00	347.004,00	357.004,00
Environmental protection and improvement	366.540,00	422.912,00	376.403,00	347.004,00	357.004,00
Grand total	19.461.582,90	18.594.813,45	18.830.623,86	21.792.221,23	25.584.786,88

As already mentioned, due to current methodological limitations, the figures referring to "climate action" should be understood as approximate estimates. However, progress is expected in this direction in future iterations of the Plan, especially in relation to consortia such as Vilawatt and other actors in the local public-community ecosystem.

On another note, Table A-1.2 presents an estimate of the historical budget allocation of the Viladecans City Council to climate action projects, organised by key emitting sectors and types of intervention. This breakdown allows for the visualisation of the investment effort from a sectoral perspective and the alignment of budget items with the decarbonisation priorities defined in the Climate Action Plan.

The data shows that the cumulative budget allocation for the waste sector is clearly the most significant, followed by urban regeneration and energy systems, revealing a certain imbalance in climate investment at the sectoral level.



A-1.2: Source of investment

(Non-exhaustive approximation of investment for climate projects or actions by sector of taxonomy and project type)

Sectors Taxonomy (% of municipal budget) / Project type	Budget allocation for climate action				
	2021	2022	2023	2024	2025
Digitalisation and knowledge	0,00 0,00%	13.979,49 0,02%	0,00 0,00%	172.341,80 0,21%	0,00 0,00%
Digital Twin	0,00	0,00	0,00	162.953,12	0,00
Sensors	0,00	13.979,49	0,00	9.388,68	0,00
Circular economy, waste and health	6.473.935,94 9,24%	6.088.098,59 8,38%	6.648.895,21 8,88%	7.719.507,36 9,20%	2.967.173,89 3,23%
Street cleaning and waste	6.473.935,94	6.088.098,59	6.648.895,21	7.719.507,36	2.967.173,89
Viladecans repairs	0,00	0,00	0,00	0,00	0,00
Building, construction and urban development	11.247,00 0,02%	2.387.186,75 3,29%	6.954.517,00 9,29%	3.978.005,39 4,74%	6.918.534,30 7,53%
Lighting	0,00	350.000,00	128.000,00	8.100,00	0,00
Sports buildings (renovation)	11.247,00	22.186,75	17.517,00	72.905,39	253.557,55
Municipal buildings (renovation)	0,00	2.000.000,00	0,00	3.580.000,00	1.920.000,00
Schools (renovation)	0,00	15.000,00	9.000,00	7.000,00	24.000,00
Climate-friendly urban development projects	0,00	0,00	6.800.000,00	310.000,00	4.720.976,75
Energy	1.603.911,00 2,29%	1.398.840,93 1,93%	197.024,00 0,26%	218.678,79 0,26%	174.384,00 0,19%
Photovoltaic	0,00	1.211.052,93	0,00	21.654,79	0,00
Vilawatt	1.603.911,00	187.788,00	197.024,00	197.024,00	174.384,00
Mobility and transport	429.579,20 0,61%	277.317,10 0,38%	573.293,83 0,77%	1.700.098,88 2,03%	245.720,00 0,27%
AMB-bici (metropolitan bike-sharing system)	0,00	0,00	196.000,00	196.000,00	196.000,00
Secure bike parking	0,00	0,00	0,00	516.800,00	0,00



A-1.2: Source of investment					
(Non-exhaustive approximation of investment for climate projects or actions by sector of taxonomy and project type)					
Sectors Taxonomy (% of municipal budget) / Project type	Budget allocation for climate action				
	2021	2022	2023	2024	2025
Bicycle lanes	314.000,00	0,00	0,00	280.000,00	43.720,00
Electric vehicle fleet	115.579,20	0,00	0,00	0,00	0,00
Electric vehicle fleet	0,00	264.317,10	226.951,33	167.407,41	0,00
Mobility Portal	0,00	0,00	150.342,50	0,00	0,00
Electric vehicle charging points	0,00	0,00	0,00	130.000,00	6.000,00
Som Mobilitat (shared mobility service)	0,00	13.000,00	0,00	0,00	0,00
Low Emission Zone	0,00	0,00	0,00	409.891,47	0,00
Renaturalisation and restoration of ecosystems	62.616,68 0,09%	62.616,68 0,09%	279.934,21 0,37%	361.385,90 0,43%	516.223,68 0,56%
Bee Happy	62.616,68	62.616,68	62.616,68	0,00	0,00
Eco-friendly corridors and connectors Can Sabadell	0,00	0,00	0,00	0,00	19.887,12
Drainage Remolar, Sant Climent and Murtra	0,00	0,00	45.015,75	49.848,57	55.791,89
Plana del Delta road network	0,00	0,00	11.102,41	0,00	0,00
Murtra Nature Network	0,00	0,00	140.291,57	170.927,76	241.273,45
Remote irrigation management	0,00	0,00	9.638,86	0,00	9.890,08
Viu Verd Programme (Viladecans renaturalisation project)	0,00	0,00	0,00	110.200,39	5.005,96
Dune area	0,00	0,00	11.268,94	30.409,18	184.375,18
Total	8.581.289,82	10.228.039,54	14.653.664,25	14.150.018,12	10.822.035,87



During this first year, various operational barriers were identified, such as the lack of traceability between budget programmes and climate objectives, and the poor integration of climate criteria into financial planning and/or quantification systems. Furthermore, the method used to collect information does not assess the final contribution to climate objectives (quantification of the impact of expenditure in terms of GHG emissions or other specific indicators related to adaptation).

In this regard, it is worth noting that, as mentioned above, Viladecans is currently developing a **Guide for the implementation of green budgets in medium-sized cities**.

Green budgeting refers to the use of budgetary tools and policies to support environmental and climate objectives. It is an approach that governments can use to integrate climate and environmental actions into budgetary decisions and broader policy-making, as well as to monitor progress towards their environmental and climate objectives, a central objective of the Paris Agreement.

This guide aims to establish a common reference framework for incorporating environmental criteria into municipal economic management, not only within local government, but also, and more importantly, across the entire urban ecosystem, including guidelines for the different sectors of the quadruple helix. As mentioned above, the Guide is aimed at medium-sized cities, although Viladecans, as the promoter of the document, is firmly committed to adopting it as a standard working approach, which will enable a more systematic methodology aligned with international standards to be applied in the future.

In addition, it is worth mentioning the implementation of the Viladecans Urban Agenda, which represents another important step towards greater alignment between the budget and climate action. It sets as a specific objective the link between budget planning and the fulfilment of the municipality's strategic objectives, including the Spanish Urban Agenda and the Sustainable Development Goals. This approach takes the form of a priority action that seeks to link spending programmes with the objectives and actions of the city's strategic framework. In line with this logic, the Urban Agenda actions linked to the ecological transition already include a detailed estimate of the budget required for each phase, as well as a forecast of public resources and external co-financing.

On the other hand, Viladecans has participated in public-private partnerships (PPPs), with the **Vilawatt Consortium** being the most notable example.

This is a consortium aimed at promoting the local energy transition, which includes the Viladecans City Council (65%) and the Barcelona Metropolitan Area (15%), together with private and community actors: specifically, an association of local merchants and businesspeople (10%) and a citizen association for energy transition (10%).

Thanks to this collaborative model, Vilawatt has become an innovative municipal tool for participatory energy governance, involving the private sector and citizens in a common project. The project is fully operational and expanding, having moved from the pilot phase to stable implementation, with prospects for growth thanks to institutional support and the interest it has generated beyond the municipality.



Outside Vilawatt, no other large-scale PPPs have been developed in recent years, at least not with the same visibility or impact. The collaborations with the private sector that have been carried out tend to be ad hoc and geared towards specific needs. Although there is no explicit political obstacle to private participation, PPPs require a complex process of consultation and legal alignment that can hinder their widespread implementation, although the Vilawatt example of good practice represents a clear step forward in the establishment of innovative public-private partnerships.

In summary, based on the above background and building on the progress made in developing this Climate Investment Plan, **Viladecans is committed to continuing to move decisively towards more accurate and transparent traceability of climate-impact investments**, so that the steps taken can be refined in future updates through the application of more systematic climate budgeting and financial monitoring tools, ensuring that existing budgetary procedures and tools are adjusted to integrate this approach. Specifically, the new green budget guide (manual), which will be finalised in autumn 2025, will provide guidelines for achieving this commitment.



MODULE A-2. Strategic financial policy assessment

The ability to finance the climate transition does not depend solely on the current volume of investment, but also on the municipality's revenue structure, its fiscal and regulatory leeway, and its ability to mobilise external capital. This module provides an initial analysis of these variables in Viladecans, with the aim of informing future decisions on the prioritisation, scalability and sustainability of the Climate Investment Plan.

Table A-2.1 shows the **municipal revenue structure** of Viladecans, broken down by broad accounting categories. This information makes it possible to identify the municipality's structural financial capacity to undertake climate investments and assess the degree of dependence on external sources in relation to its own revenue.

The data correspond to the most recent consolidated municipal budget (2025) that has been definitively approved and include both ordinary (current) revenue and extraordinary sources of financing (capital, financial assets or liabilities). It therefore includes the City Council's own revenue (such as taxes, fees or property income) and contributions from third parties from other public administrations or external entities (included in the categories of current transfers, capital transfers and financial liabilities).

It can be seen that the revenue structure presents a balanced combination of own revenue (around 60% of the total budget) and contributions from other public administrations, as well as any loans or long-term financial operations. This profile indicates **significant financial autonomy**, although there is **still a significant dependence on resources from other administrations**.

In terms of climate action, this composition suggests that Viladecans has room for manoeuvre to prioritise the ecological transition within its fiscal and tariff policy, while continuing to take advantage of supra-municipal co-financing mechanisms.



A-2.1: List of types of revenue of the City Council

Revenue category	City revenue	% of the City Council budget
Direct taxes	38.084.320,00 €	41,5%
Indirect taxes	2.470.000,00 €	2,7%
Fees and other income	13.147.347,00 €	14,3%
Current transfers	32.675.674,00 €	35,6%
Capital income	1.326.276,00 €	1,4%
Capital transfers	2.144.586,00 €	2,3%
Financial assets	600,00 €	0,0%
Financial liabilities	2.000.000,00 €	2,2%

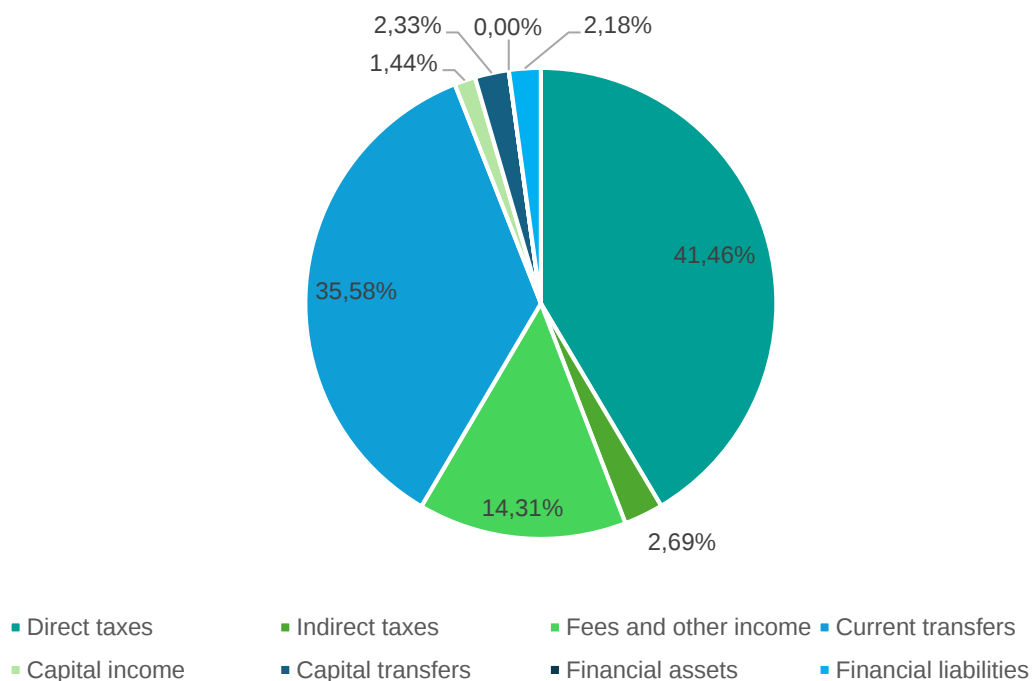




Table A-2.2 presents an initial classification of the main sources of capital available or potentially mobilisable by Viladecans City Council to achieve its climate neutrality objectives. Four main categories of sources are distinguished (traditional sources of capital, European funds, subsidies from other administrations and other financial instruments).

This categorisation allows us to visualise the diversity of available sources and to establish an initial approximation of the current and potential degree of dependence on each source.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Traditional sources of capital			
Tax	40.554.320,00 €	Public	Includes tax revenue (property tax, business tax, vehicle tax, etc.), which is generally allocated to current expenditure. Their direct use to finance structural climate investment is limited, unless they are reoriented or complemented by green taxation.
Public fees and prices	13.147.347,00 €	Public	Includes revenue associated with municipal services (water, waste or mobility, etc.), some of which have a climate impact. However, they are not currently designed with environmental incentive or penalty criteria, which limits their transformative potential.
Property income	1.326.276,00 €	Public	These come from rents, concessions or the exploitation of municipal assets. Could be allocated to green investment if strategically targeted, but the volume is low and depends on pre-existing assets.
Current transfers	32.675.674,00 €	Public	Allocated to current expenditure (public services, personnel, etc.). They can free up own resources for investment, but do not directly finance infrastructure or structural transformations.
Capital transfers	2.144.586,00 €	Public	These are grants for specific projects (mobility, rehabilitation, energy, etc.). They are highly aligned with climate action, although subject to calls for proposals and the availability of funds.
Financial	600,00 €	Public	There is moderate borrowing capacity. This can be key for structural projects with climate and social returns, although its use is regulated and requires multi-year planning.
Financial liabilities	2.000.000,00 €	Public	



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
European funds			
European Regional Development Fund (ERDF)	To be estimated	Public and private	These funds aim to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions. The ERDF, with a budget of €226.05 billion for the period 2021-2027, is implemented through shared management. The ERDF finances programmes such as: Innovative Urban Actions (UIA), URBACT, and the INTERREG EUROPE programme. In fact, Viladecans has benefited from this fund, as detailed below.
ERDF for photovoltaic installations in municipal buildings (IDAE) 2021	661.604,79 €	Public	Viladecans has received funding through the national aid programme for renewable installations managed by the IDAE, charged to the ERDF (2014–2020), aimed at promoting energy self-consumption with photovoltaic solar energy in municipal buildings (942 kW peak).
Vilawatt UTM (URBACT – UIA Transfer mechanism pilots, 2021)	109.455,50 €	Public	Project to transfer the Vilawatt experience to three European cities (Trikala, Seraing, Nagykanisza). This project has consolidated an innovative model of local energy governance, integrating financial instruments, citizenship and energy efficiency. Viladecans' participation has resulted in resources to strengthen the local energy agency, promote the energy transition and improve institutional capacity to implement climate neutrality solutions through a collaborative approach.
PUMA, Planning Urban Mobility Actions (URBACT – 1 st call planning actions, 2021-2027)	83.800,00 €	Audience	PUMA is a pilot action funded by the URBACT IV programme (2021-2027), focused on supporting European cities in integrated and sustainable urban mobility planning. It provides financial support, technical assistance and access to European networks to co-design actions with multiple stakeholders. Although it does not directly finance infrastructure, it acts as a catalyst for future investments.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Next Generation	7.866.531,96 €	Audience	The programme supports investment projects that contribute to a green, digital and resilient recovery of the economy. It is implemented through shared management and funding is disbursed in the form of grants, contracts and financial instruments. As this is a source of funding structured in a multi-level deployment, more details on the projects funded in Viladecans under this programme are provided in the section on state and regional sources.
European Urban Initiative (EU)	120.000,00 €	Public	EUI – European Urban Initiative (2023–2026) is an initiative, successor to the UIA (Urban Innovative Actions) programme, which funds transformative and replicable solutions to complex urban challenges, with a particular focus on green transition, social cohesion and climate resilience. It provides direct funding through the ERDF and strengthens local institutional capacity through technical assistance and impact assessment. Viladecans is participating as a partner city in the "Greening Without Borders" project, which seeks to develop a trans-municipal green infrastructure model, combining ecological restoration, citizen participation and territorial planning to strengthen climate resilience in urban and peri-urban environments.



A-2.2: List of capital sources for achieving climate neutrality

Type	Rank	Level	Description
Cash prizes (e.g. Green Leaf, European Commission)	200.000,00 €	Audience	Viladecans has been awarded the European Green Leaf Award 2025, given by the European Commission to cities with fewer than 100,000 inhabitants for their exemplary commitment to environmental sustainability, urban innovation and citizen participation. In addition to institutional recognition, the award included a direct financial grant to strengthen local projects aligned with the principles of the European Green Deal. Such distinctions raise the city's profile in European networks and can facilitate access to other sources of competitive funding. Although this award is not renewable, it serves as a reference for future applications to similar programmes (Green Capital, LIFE, EUI), especially if Viladecans continues to promote innovative and exemplary climate projects.
EIT Urban Mobility	28.863,00 €	Audience	EIT Urban Mobility is an initiative of the European Institute of Innovation and Technology (EIT) aimed at transforming urban mobility towards sustainable, inclusive and innovative systems. EIT Urban Mobility provides both partial funding and access to European networks, training and knowledge transfer, strengthening the local climate innovation ecosystem in mobility. Viladecans participated in the 2024 call, which enabled the development and implementation of innovative solutions to promote active and sustainable mobility in the school environment.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
NetZeroCities (Twinning Programme Cohort 1)	- (technical resource)	Audience	Viladecans was selected as a twin city in Cohort 1 of the NetZeroCities Twinning Programme (2023–2024). This programme is part of the Mission's support framework. Through the Programme, Viladecans has worked alongside the city of Limassol to exchange good practices, methodologies and tools applied to urban climate transition, particularly in governance, participation and planning. Although it does not involve direct funding, this support has strengthened local capacities and facilitated the design of projects aligned with European climate neutrality standards.
Horizon Europe	Possible source of capital in the future	Public-private	<i>EU framework programme for research and innovation, implemented directly by the EC or through funding bodies, providing funding in the form of grants, prizes, procurement and financial instruments.</i> <i>At present, Viladecans has not accessed this source of capital.</i>
Connecting Europe Facility (CEF)	Possible future source of capital	Public-private	<i>With a budget of €20.71 billion for the period 2021-2027, it contributes to the objectives of the European Green Deal by supporting the green and digital transitions related to trans-European networks. It is implemented under the direct management of executive agencies through a combination of grants, procurement and financial instruments.</i> <i>At present, Viladecans has not accessed this source of capital.</i>



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
InvestEU	Possible source of capital in the future	Public-private	The InvestEU programme, with a budget of €10.28 billion, is expected to mobilise at least €372 billion in additional investment between 2021 and 2027. No information is available to quantify the investment for the period up to 2030, which is when Viladecans is expected to benefit. The funds are allocated under indirect management through the European Investment Bank and other implementing partners. The programme can provide financing in the form of grants and loans. At present, Viladecans has not accessed this source of capital.
Grants from the State, the Autonomous Community or other supra-municipal administrations			
From the Spanish Government	Pending	Public	They provide funds for climate action in energy, mobility and public spaces. These are essential, but require technical and administrative capacity to access and implement. In addition to the PRTR (see next row), the Spanish Government offers grants and public aid through ministries, state agencies and related entities, with funding lines for urban sustainability, energy efficiency, the environment, mobility and climate innovation. These grants do not depend on extraordinary European funds, but on ordinary budgets or structural funds. They may include programmes from MITECO, MITMA, IDAE, Fundación Biodiversidad, CDTI or ENISA, among others. Although Viladecans has not recently accessed these grants beyond the PRTR, they are considered a strategic source to be explored for financing complementary climate projects in areas such as transport, waste management, water or urban innovation.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Recovery, Transformation and Resilience Plan (PRTR – Next Generation Funds)	9.052.578,93 €	Public	The PRTR is the Spanish instrument for implementing the Recovery and Resilience Facility (MRR), which is part of Next Generation EU. These investments contribute directly to the municipality's climate change mitigation and green modernisation objectives. The PRTR has provided a key opportunity to finance structural projects in the city between 2021 and 2026. Viladecans has accessed various PRTR funding lines at the state level: •MITMA: pilot projects for local action plans under the Spanish Urban Agenda (preparation of the Viladecans Urban Agenda), implementation of ZBE (traffic calming, improved accessibility, creation of cycle lanes, regulated parking areas, digitalisation of transport and improved access to the municipal library) and renovation of public buildings (Àngela Roca school, EOI school, Can Xic library, Can Modolell). •Biodiversity Foundation: implementation of the Viladecans 3-30-300 project.
From the Government of Catalonia	Pending	Public	The Government of Catalonia, through agencies such as ICAEN, ACA, INCASÒL, and the Department of Climate Action, has various subsidy lines aimed at energy transition, urban rehabilitation, climate adaptation, and the circular economy. These grants can finance actions in energy efficiency, self-consumption, sustainable mobility, water management, urban renaturalisation, and territorial resilience. Although Viladecans has not yet accessed many of these calls outside the Next Generation framework, this is a strategic source of public capital to be considered for future projects included in the Climate Action Plan and the Investment Plan, especially in the context of a fair and territorially balanced transition.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
MOVES Programme	36.000,00 €	Audience	The MOVES Programme, financed with PRTR funds and managed in Catalonia by the Catalan Energy Institute (ICAEN), supports the acquisition of electric vehicles and the installation of charging infrastructure. The MOVES programme has been an important source of climate finance in the 2021–2024 period and, with adjustments, is expected to continue as a tool to support the electrification of transport within the framework of national and regional policies towards 2030. Viladecans has joined this programme to promote the progressive electrification of its municipal fleet, in line with its climate neutrality objectives.
From the Barcelona Provincial Council	Pending	Public	The DIBA offers a structured catalogue of services and grants aimed at municipalities to support the design, financing and implementation of public policies, many of them related to urban sustainability and climate action. In addition to specific grants (see following rows), it provides specialised technical assistance, co-financing for local actions and support in submitting projects to European funds. Through programmes such as the Services Catalogue, the PAM/POS and specific lines for climate resilience, energy and urban planning, DIBA acts as a key agent in facilitating the green and just transition in municipalities such as Viladecans. Although some of these resources are non-monetary, they have equivalent economic value and can be considered as enabling capital in the Investment Plan.
Photovoltaic installations (2021-23)	825.744,21 €	Public	As part of its policy to support the local energy transition, DIBA co-financed Viladecans between 2021 and 2023 in the installation of photovoltaic systems for self-consumption in municipal buildings.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Rambla Modolell (phase 2) 2024	874.650,00 €	Public	The DIBA has partially financed the urbanisation works on Rambla Modolell (phases 1 and 2) in Viladecans, as part of its strategy to improve public spaces, sustainable mobility and adaptation to climate change. The project includes pedestrianisation, improved vegetation and urbanisation.
Rambla Modolell (phase 1) 2023	200.524,00 €	Public	
From the Barcelona Metropolitan Area	421.000,00 €	Public	The AMB acts as a supra-municipal administration in the Viladecans area and offers various forms of financial, technical and operational support to municipalities in the metropolitan area, within the scope of its powers in the areas of mobility, urban planning, the environment, energy and waste. In addition to specific subsidies for infrastructure (see following rows), the AMB promotes strategic plans and resources for sustainable waste management, the promotion of energy self-consumption, urban renaturalisation, sustainable urban planning and the coordination of climate change policies. This support can take the form of direct subsidies, shared investments, technical services or delegated management, making the AMB a key player in the implementation of the Viladecans Climate Investment Plan.
Electric vehicle charging stations	- (direct installation)	Public	As part of its metropolitan strategy for sustainable mobility and energy transition, the AMB has installed public electric vehicle charging points in Viladecans, integrated into the metropolitan electromobility infrastructure network.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Subsidy for cycle lane on C-245	806.112,00 €	Public	As part of its sustainable and active mobility policy, the AMB has partially funded the new interurban cycle lane on the C-245 road, which connects Viladecans with other metropolitan municipalities. This action is part of the metropolitan project to transform the C-245, which will turn this road into a more sustainable, accessible and safer multimodal corridor.
Subsidy for improving beach access	123.500,00 €	Public	As part of its responsibilities for metropolitan coastal management and climate adaptation, the AMB has awarded Viladecans a grant to improve access to and refurbish urban beaches. This action is linked to the objectives of climate change adaptation in coastal areas, as it improves the resilience of the seafront, facilitates sustainable mobility (pedestrian, cyclist and accessible) and reinforces the environmental integration of the natural spaces of the Llobregat delta. The investment also fulfils a social function by ensuring equitable access to public spaces vulnerable to climate change and represents a direct urban improvement measure compatible with the metropolitan green infrastructure strategy.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Other financial instruments			
Green taxation	264.650,26 € (total rebates) IBI: 171.847,18 € Vehicle tax: 74.107,08 € ICIO: 18.696,00 € Data for 2025 according to <i>the Report on expected tax benefits</i>	Public-private	Includes rebates on certain taxes based on sustainability criteria. In the case of Viladecans, there are currently rebates on IBI and ICIO for energy efficiency, and on IVTM based on engine type and fuel. Encourages private investment in energy efficiency or self-consumption. Very relevant for mobilising climate action (can be distributed, in part, through grants, loans or subsidies) to support sustainable practices, but are not yet quantified as part of the municipal climate budget.
Vilawatt Consortium / Vilawatt ecosystem	4.200.000 € (UIA-Urbact-Feder project) + 1.100.000 € from the city council as additional resources for the project + 812.625 € (Vilawatt Bonds 2021-2025)	Public-private	This is a hybrid financial instrument (combining public investment, public-community management and citizen participation) that has served as a vehicle for attracting and channelling climate finance (it has managed UIA funds, can attract future resources, and promotes self-consumption, renovation projects, etc.) and articulates a local financial ecosystem (through the Vilawatt currency, collective energy contracts and subsidies for households). It is an example of how municipalities can create stable structures to finance the energy transition beyond the ordinary budget, with high potential for replication and scaling up.



A-2.2: List of capital sources for achieving climate neutrality			
Type	Rank	Level	Description
Debt	1.734.949 €, (1.89% of the municipal budget)	Public-private	Currently (2025), Viladecans maintains a moderate level of debt, within the legal limits established for local governments in Spain. This means that the City Council still has some financial capacity to increase its investment, especially if it is directed towards projects with a high climate impact and social return. However, the use of this capacity must be assessed with caution, given the increasing rigidity of the local fiscal framework and existing financial commitments.
Crowdfunding	Possible source of capital in the future	Private	<i>Crowdfunding involves an open call, mainly via the Internet, for the provision of financial resources by individuals and/or entities. This "collective loan" can take the form of a donation or in exchange for some kind of reward and/or right. It is often used in smaller-scale projects, where the social or local value of the project is important, as well as generating a sense of ownership among citizens and the neighbourhood.</i>
Energy saving contracts (ESCs)	Possible source of future capital	Private	<i>A financing mechanism whereby an energy service company (ESCO) finances and implements energy efficiency improvements in municipal facilities (such as lighting, public buildings or air conditioning) and recovers its investment from the energy savings generated. It does not require any initial investment from the local council and may include a savings guarantee. This model makes it possible to mobilise private capital and reduce emissions without increasing public debt.</i>



In this initial phase, Viladecans does not yet have a systematic tool to calculate the maximum potential for capital mobilisation by source. However, conservatively speaking, it can be stated that:

- The margin for growth in own revenue is limited without regulatory reforms to modify rates or introduce green taxation at the local level.
- So far, Viladecans has demonstrated its ability to access competitive external financing. However, the mobilisation of external capital continues to face institutional and operational barriers and requires the progressive strengthening of internal capacities in financial design, fundraising and long-term project management.
- Debt could be increased for strategic climate projects, provided that it is accompanied by operational guarantees, estimable returns and technical feasibility.

The diversification and strategic structuring of these sources will be key to ensuring the economic viability of the Climate Action Plan and the achievement of climate neutrality by 2030.



MODULE A-3. Understanding the financial barriers that prevent the proper allocation of capital

Table A-3.1 provides an initial qualitative analysis of the **financial barriers that currently hindering or limitin the mobilisation of climate investments** in Viladecans. This identification these barriers is essential to understand the structural, operational or contextual obstacles faced by the municipality in its efforts to accelerate the transition to climate neutrality. It also makes it possible to anticipate the risks that may slow down climate investment and guide the design of enabling strategies and mitigation mechanisms, which are set out in the subsequent modules of this annex.

The barriers are classified into different categories (institutional, operational, market, regulatory or technical) and include both internal factors within the City Council itself and external conditions in the regulatory and financial environment.



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of capacity and human resources	Human resources and capacities	Lack of personnel specialised in attracting funding and implementing new forms of financing at the municipal and public-private levels. The lack of staff training and dedicated human resources leads to difficulties in managing and absorbing funds or new sources of financing that could be exploited.	Local administration Regional administration State administration
Lack of awareness of existing funding sources and options	Lack of awareness and complexity	Confusion and lack of understanding of all existing programmes at European, national and regional level, as well as national and regional funds and opportunities in the private sector. It is often unclear which options should be explored or which may have the greatest potential once developed.	Local administration Regional administration State administration European Commission



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Complex application or implementation process	Lack of awareness and complexity Human resources and capabilities	Most funds or innovative financing solutions require a complex implementation or application process, which takes time and initial resources. Combined with the large number of existing sources and options, this can lead to paralysis due to not knowing where to allocate the necessary resources to develop or attract new sources.	Local administration Regional administration State administration European Commission



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of mutual trust, understanding and governance between public and private actors to establish stable, large-scale public-private models	Public-private collaboration	Current decarbonisation projects are highly dependent on public subsidies and European funds. To ensure that transformations will not stop when European funds run out, it is necessary to develop policies and trusted partnerships that encourage private investment in decarbonisation projects. Many investment opportunities will be structured with combined capital, either because of the return profile (too low or too long-term) or because of the administration's desire to have influence over the investment. However, for these models to be viable and able to respond quickly to investment needs, there must be transparent governance with clearly delineated responsibilities among those involved.	Local government Regional government State administration Private entities



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Budget prioritisation and competition between services	Intra-municipal governance and collaboration	Cities such as Viladecans often have to choose between spending on day-to-day operations and basic city services, and investing in the sustainable transformation of the city, which can mean longer-term projects with less visible results for citizens. In addition, the budget is divided between services and departments, which can generate internal competition and prevent mutual understanding and transparency regarding the city's budgetary needs and priorities.	Local administration
Lack of collaboration and involvement of the private financial sector	Public-private partnership	Dependence on public subsidies means that the private sector and private owners (of homes, land, vehicles) often do not have a strong culture of investing and financing sustainability projects. In addition, the City Council also lacks the necessary knowledge to promote and facilitate such private financing or to propose its own projects that are "financeable" by banks or other private entities.	Local administration Private sector Individuals



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of collaboration with the City Council's finance department	Intra-municipal governance and collaboration Human resources and capabilities	The department and specialists in finance, taxation and economics at the City Council are not involved in the day-to-day running of the Climate Mission or other initiatives that require systemic innovation, ambitious and novel forms of financing, etc. This can lead to misunderstandings and a lack of understanding between the teams involved in the Climate Mission and the finance departments.	Local administration
Siloed search for funding	Intra-municipal governance and collaboration	Viladecans has a large number of projects related to sustainability and climate neutrality, many of them small in size, scattered across different municipal departments and services. Uncoordinated work can lead to missed synergies, funding sources or opportunities. Work focused on the Climate Mission can improve this situation.	Local administration



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Difficulty combining different funding sources	Human resources and capabilities	It is often difficult to combine different existing funding sources for the same project (private investment, Next Generation funds, Horizon Europe projects, etc.). Enabling internal mechanisms, partnerships with the private sector and municipal human resources to take charge of this coordination could facilitate the combination of different sources, making projects that are not currently feasible a reality.	Local administration
Legislative and regulatory constraints	Legislation and regulation	In some cases, national or regional legislation prevents or hinders the implementation of certain innovative financing mechanisms. In addition, regulatory or administrative restrictions may prevent or hinder local councils from taking on debt, approving multi-year projects or implementing other innovative financing mechanisms.	Local government Regional administration State administration European Commission



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of alignment between local needs and European or national programmes	Collaboration with other administrations	Sometimes, local needs are not fully taken into account when designing European or national programmes. One example is the lack of funding programmes for hiring municipal staff to manage the projects to be financed. Another example is the little importance usually given to implementing communication campaigns at the local level to encourage citizen participation and other stakeholders in the projects to be developed.	Local administration Regional administration State administration European Commission



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of policies that oblige the private sector to finance climate neutrality	Legislation regulation and Public-private collaboration	Beyond seeking the collaboration and involvement of all stakeholders, the urgency and ambition of the Climate Mission and, in general, the decarbonisation of the European continent requires the implementation of mechanisms and policies that oblige those companies and entities with the greatest power, resources and responsibility to bear the costs of the transformations necessary to move towards sustainability. This involves developing legislation at European, national and regional level that prioritises the ecological and just transition over corporate profit and the constant growth of production, consumption and economic benefits.	Local government Regional administration State administration European Commission Private sector Individuals



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of policies that oblige the private sector and property owners to finance the transition and change their habits in an ambitious and urgent manner	Legislation regulation and Public-private partnership	A green and fair transition requires the involvement of the whole of society. This involvement can range from an individual changing the way they travel to work, to a software company implementing a teleworking policy for its employees, or a construction company financing community energy projects with part of its profits. Beyond voluntary involvement and collaboration, the urgency of the fight against climate change requires the implementation of green policies and taxation that encourage changes in habits and investment, both private and public, in the ecological and just transition.	Local government Regional administration State administration European Commission Private sector Individuals



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Lack of "fundable" projects	Public-private partnership Human resources and capabilities	Both the public administration and the private sector need to work more closely together to define "financeable" projects that meet the needs and priorities of the public sector while providing benefits and economic security to the private sector. This requires, among other things, collecting and analysing data, developing high-quality technical projects, projecting cost and revenue scenarios, and minimising risks. It is important to note that, in order to achieve climate neutrality, funding must not be limited to projects owned solely by municipalities, but must also reach homeowners, energy communities, responsible consumption groups and sustainable mobility cooperatives, to name a few examples. This is where the private sector must innovate in order to be able to offer financing solutions in areas and projects other than the traditional ones.	Local government Regional administration Private sector Individuals



A-3.1: List of financial barriers

Barrier	Type of barrier	Description	Sectors and actors involved
Measurement and promotion of co-benefits	Lack of awareness and complexity Public-private partnership Collaboration with other administrations	One of the shortcomings of "fundable" projects for the decarbonisation of cities is the ability to measure and assess their co-benefits so that they can be understood and accepted by the parties involved. In other words, having metrics for the non-financial returns that can be achieved with the project and ensuring that these metrics are accepted by the beneficiaries, thus facilitating their involvement in the project. For example, measuring the impact on health improvements that a Low Emission Zone in the city can bring about and ensuring that the health sector supports and/or finances the initiative because of the economic savings that can be achieved through the reduction of respiratory diseases, premature deaths, etc. The same applies to possible co-benefits that may benefit certain companies (job creation, attraction of investment, etc.) or individuals (improved quality of life, energy savings, etc.).	Local government Regional administration State administration Private sector Individuals



In general, the barriers identified coincide with the challenges common to many European cities and highlight the need for an enabling and cross-cutting approach to overcome them. Overcoming these barriers is not the sole responsibility of Viladecans, but requires coordinated responses between different levels of government, regulatory adaptation, strengthening of local capacities and the deployment of innovative financial instruments tailored to the context of medium-sized cities.



PART B - INVESTMENT PATHWAYS TOWARDS CLIMATE NEUTRALITY BY 2030

Part B outlines the financial planning required to implement the Climate Action Plan effectively. It provides cost estimates for climate measures, identifies existing and potential funding sources, and highlights any financial shortfalls. The aim is to align resources with investment needs while introducing tools for economic monitoring.

This section includes three modules: Module B-1 estimates the costs of key climate actions and projects; Module B-2 proposes a capital investment strategy to cover these costs; and Module B-3 defines financial indicators to monitor progress and evaluate performance.

MODULE B-1. Cost scenarios for climate neutrality

Table B-1.1 provides an estimate of the sectoral costs associated with the implementation of the Viladecans Climate Action Plan, disaggregated by key GHG emitting sectors. The aim of this table is to provide a preliminary overview of the investment effort required to achieve climate neutrality by 2030, according to the actions planned in the portfolio of transformative projects.

The sectors considered correspond to the structure defined in the city's Action Plan (mobility, energy, building, waste, biodiversity and economic activity), and the values reflect the estimated additional investment costs compared to a business-as-usual (BAU) scenario. These costs include not only construction or infrastructure, but also planning, digitalisation, participation and capacity-building actions when directly linked to sectoral implementation.

The figures presented have been calculated using the NetZeroPlanner tool.

This table therefore represents a starting point for guiding investment planning, identifying financing needs and prioritising those actions with the greatest transformative impact and climate return.



B-1.1: Sectoral costs						
Area/Sector	Action/Indicator	Investment / CAPEX	Operating costs / OPEX	Emissions reduction	NPV MEUR Investment Expense per kton CO2e Reduction	Indirect impacts (co-benefits)
Transport	<i>Reduced motorised passenger transportation need</i>	€ -	€ 58	5	€ -	€ 16
	<i>Shift to public and non-motorised transport</i>	€ (2)	€ 6	3	€ 0,96	€ 25
	<i>Increased carpooling</i>	€ (0)	€ 5	1	€ 0,00	€ 2
	<i>Electrification of cars + motorcycles</i>	€ (7)	€ 1	1	€ 5,69	€ 1
	<i>Electrification of buses</i>	€ (9)	€ 1	2	€ 3,57	€ 5
	<i>Optimised logistics</i>	€ -	€ 15	1	€ -	€ 2
	<i>Electrification of trucks</i>	€ (13)	€ (0)	1	€ 23,96	€ 1
Buildings & Heating	<i>Building renovations (envelope)</i>	€ (53)	€ 5	0	€ 126,60	€ 0
	<i>New energy-efficient buildings</i>	€ (3)	€ 1	0	€ 29,54	€ 0
	<i>Decarbonising heating generation</i>	€ (16)	€ 15	12	€ 1,35	€ 8
Electricity	<i>Efficient lighting & appliances</i>	€ (72)	€ 167	11	€ 6,26	€ 1
	<i>Decarbonising electricity generation</i>	€ (30)	€ 68	39	€ 0,79	€ 3
Waste	<i>Increased waste recycling</i>	€ -	€ 1	2	€ -	€ 3
Total		€ (206)	€ 343	78	€ 2,63	€ 66

Note: negative numbers represent cash outflows (investment/cost) and positive numbers represent cash inflows (savings/co-benefits).

The following table presents a selection of capital-intensive projects included in Viladecans' climate action portfolio. These are interventions that require high levels of public and/or private investment due to their scale, technical complexity, or structural nature, and are instrumental in the deep decarbonisation of strategic sectors such as energy, mobility, urban regeneration and the circular economy.



The projects considered in this table generally meet several of the following criteria:

- Estimated investment of more than €1 million.
- Significant impact on reducing GHG emissions.
- Capacity to generate multiplier effects (co-benefits, job creation, resilience).
- Demonstration potential and scalability at the urban level.
- Requirement to blend multiple funding sources (municipal, supra-municipal, European, private or community).

This analysis highlights major projects that require a differentiated financial strategy, whether due to their dependence on external funding, the complexity of their capital structure, or their need to generate multi-stakeholder partnerships.

Identifying these projects also facilitates the planning for resource mobilisation, both public and private, and prioritises the technical and political support necessary for their maturation, execution, and monitoring.



MODULE B-2. Climate neutrality portfolio capital planning

This module aims to present an initial economic plan for the portfolio of projects prioritised by Viladecans to achieve climate neutrality by 2030, identifying what resources are currently available, what financing needs arise from the transformative projects, and what opportunities exist to mobilise additional capital — both public and private — to close the investment gap.

Viladecans has historically operated with a balanced budget, with a significant proportion of own revenue and moderate borrowing capacity that could be used strategically for climate investment. However, the volume of investment needed to achieve the neutrality targets exceeds the resources available through ordinary channels, requiring the optimisation of all available sources (e.g. European funds, regional and national grants, green financial instruments, private and community co-investment).

Although Viladecans' experience in directly activating private capital is still limited, there is a valuable precedent in the case of Vilawatt, which operates as a public-community consortium with shared governance and as a platform for channelling climate investment towards the local energy transition. This model provides a basis for exploring new forms of public-private collaboration, as well as mixed investment mechanisms in areas such as energy rehabilitation, energy communities and the circular economy.

Table B-2.1 presents an initial financial breakdown of the Viladecans Climate Action Plan's portfolio of actions, classifying transformative initiatives by sector and line of action, and estimating the costs associated with their implementation. This table shows the total investment required to achieve climate neutrality and distinguishes between resources already available (own budget or secured funding) and those that require future mobilisation.

The financial breakdown not only identifies the existing investment gap, but also constitutes a useful tool for prioritising the search for resources, designing co-financing mechanisms and forging partnerships with public, private, and community actors. As the Climate Investment Plan is rolled out, this analysis should be refined and incorporated into the monitoring system so that the evolution of the city's climate finance effort can be tracked more accurately.



B-2.1: Capital planning by actors								
Area of Action	Action / Indicator	Citizens	Private sector	City Council	Healthcare providers	Transport operators	Public service providers	Total
Transport	<i>Reduced motorised passenger transportation need</i>	€ -	€ -	€ -	€ -	€ -	€ -	€ -
	<i>Shift to public & non-motorised transport</i>	€ (0)	€ (0)	€ (0)	€ -	€ (3)	€ (0)	€ (3)
	<i>Increased carpooling</i>	€ (0)	€ (0)	€ (0)	€ -	€ -	€ -	€ (0)
	<i>Electrification of cars + motorcycles</i>	€ (6)	€ (3)	€ (0)	€ -	€ -	€ (0)	€ (9)
	<i>Electrification of buses</i>	€ (0)	€ (0)	€ (0)	€ -	€ (10)	€ (0)	€ (10)
	<i>Optimised logistics</i>	€ -	€ -	€ -	€ -	€ -	€ -	€ -
	<i>Electrification of trucks</i>	€ (0)	€ (0)	€ (0)	€ -	€ (15)	€ (0)	€ (16)
Buildings & Heating	<i>Building renovations (envelope)</i>	€ (40)	€ (23)	€ (4)	€ -	€ -	€ -	€ (67)
	<i>New energy-efficient buildings</i>	€ (1)	€ (3)	€ (0)	€ -	€ -	€ -	€ (4)
	<i>Decarbonising heating generation</i>	€ -	€ -	€ (4)	€ -	€ -	€ (17)	€ (21)
Electricity	<i>Efficient lighting & appliances</i>	€ (64)	€ (23)	€ (5)	€ -	€ -	€ -	€ (91)



	<i>Decarbonising electricity generation</i>	€ (21)	€ (7)	€ (1)	€ -	€ -	€ (8)	€ (37)
Increased	<i>Increased waste recycling</i>	€ -	€ -	€ -	€ -	€ -	€ -	€ -
TOTAL		€ (131)	€ (59)	€ (15)	€ -	€ (28)	€ (25)	€ (257)
% of Total		51%	23%	6%	0%	11%	10%	100%
Euros per capita (2030 population)		€ (1.637)	€ (731)	€ (184)	€ -	€ (346)	€ (316)	€ (3.214)



Table B-2.2 provides an overview of the capital mobilisation plan needed to finance the implementation of Viladecans' climate portfolio, linking the key sectors of the Action Plan with potential sources of financing. This exercise makes it possible to analyse the extent to which the municipality already has committed resources, how much of the necessary capital still needs to be mobilised, and through which channels this mobilisation can be achieved.

This preliminary planning is essential for establishing fundraising strategies, designing financial instruments tailored to each type of action, and facilitating decision-making on prioritisation and scheduling. It also provides a useful basis for dialogue with external actors (investors, funding agencies, local community) and reinforces the plan's credibility in terms of economic viability.

B-2.2: Capital planning				
Scope of action	Action/indicator	Cost of own funds City Council	Cost of other actors	% of costs covered
Transport	<i>Reduced motorised passenger transportation need</i>	€ -	€ -	
	<i>Shift to public and non-motorised transport</i>	€ (0)	€ (3)	
	<i>Increased carpooling</i>	€ (0)	€ (0)	
	<i>Electrification of cars + motorcycles</i>	€ (0)	€ (8)	
	<i>Electrification of buses</i>	€ (0)	€ (10)	
	<i>Optimised logistics</i>	€ -	€ -	
	<i>Electrification of trucks</i>	€ (0)	€ (16)	
Buildings & Heating	<i>Building renovations (envelope)</i>	€ (4)	€ (63)	
	<i>New energy-efficient buildings</i>	€ (0)	€ (3)	
	<i>Decarbonising heating generation</i>	€ (4)	€ (17)	
Electricity	<i>Efficient lighting & appliances</i>	€ (5)	€ (86)	
	<i>Decarbonising electricity generation</i>	€ (1)	€ (35)	
Waste	<i>Increased waste recycling</i>	€ -	€ -	
TOTAL		€ (15)	€ (242)	



The combined analysis of Tables B-2.1 and B-2.2 provides a preliminary overview of the total investment effort required to implement the Viladecans climate portfolio, as well as the gap between currently available resources and those that must still be mobilised to achieve the 2030 neutrality targets.

The results show that most of the transformative actions identified in the Climate Action Plan involve structural investments in sectors such as sustainable mobility, energy renovation, renewable energy generation and urban regeneration. These actions tend to have a high unit cost of intervention, but also a high potential for emissions reductions, social co-benefits and economic returns in the medium term.

Table B-2.1 suggests that a significant part of the necessary budget has already been committed through municipal resources and secured subsidies, especially for ongoing projects, which demonstrates the institutional capacity of the City Council to direct investment towards climate objectives. However, it also shows that a significant proportion of the investment required still needs to be mobilised, particularly for actions that depend on supra-municipal funding, partnerships with private stakeholders or new financial instruments.

Table B-2.2 complements this assessment by showing that, although Viladecans has a solid base of public capital (tax revenue, subsidies, European funds), the climate transition will require diversifying sources of financing and mobilising complementary financial instruments, such as:

- Private investment in renovation, self-consumption or energy efficiency.
- Community participation (e.g. in energy communities).
- Blended financing mechanisms or local climate investment funds.
- In addition, the need to strengthen financial planning capacity and the traceability of climate spending is identified, in order to facilitate access to European funds, design effective public-private partnerships and develop a climate co-investment logic at the urban level.
- Overall, the results reflect that Viladecans has laid a realistic and operational foundation for its climate capital planning, although progress is needed in the following areas:
 - The consolidation of green budget monitoring tools.
 - Scaling up innovative financing instruments, such as Vilawatt.
 - The formulation of a comprehensive climate finance strategy aligned with the Investment Plan and the City Climate Contract.



MODULE B-3. Economic and financial indicators for monitoring, evaluation and learning

The transition to climate neutrality requires not only strategic planning and investment, but also robust monitoring, evaluation and learning systems to measure the real impact of actions, address deviations and strengthen evidence-based decision-making. This module presents Viladecans' initial approach to the economic and financial indicators to support the implementation of the Climate Investment Plan.

Viladecans does not yet have a fully developed and systematic framework for monitoring the economic impact of climate investments, but it has begun to lay the foundations for building one. Through the development of the Climate Action Plan and the City Climate Contract, the need to define a set of key indicators was identified to:

- Estimate the reduction in emissions associated with each line of action.
- Assess economic and social co-benefits (such as energy savings, improved public health, jobs created or the revaluation of urban space).
- Monitor the financial execution and efficiency of the use of the capital mobilised.
- Identify deviations from the plan and make iterative adjustments.

The set of economic and financial indicators included in this module is aligned with the work carried out in the Action Plan, especially in those sectors where a direct relationship between investment and climate or social return has been estimated. A pragmatic approach has been adopted, starting with those indicators for which municipal data is already available or can be estimated with the support of external sources, without ruling out that some indicators may require engagement from other stakeholders in the local ecosystem (private sector, academia, energy agencies, etc.).

Table B-3.1 presents a first approximation of the key economic indicators linked to the implementation of the Viladecans Climate Action Plan, broken down by strategic sectors. These indicators make it possible to assess the economic case for climate neutrality, incorporating not only the direct costs of the actions, but also the associated benefits and potential social, economic and environmental returns.



B-3.1: Economic indicators by sector				
Sector	Indicator	Unit	Baseline value (2023)	Target value (2030)
Transport	Reduced motorised passenger transportation need	% reduction by 2030		30%
	Reduced passenger kilometres by car through shift to public and non-motorised transportation	% reduction in car passenger kilometres by 2030		30%
	Carpooling	average passengers per car	1,241	1,490441
	Electrification of cars + motorcycles by 0	% of fleet electrified	0%	0%
	Electrification of buses	% of fleet electrified	19%	107%
	Optimisation of trucking logistics - light duty trucks (< 3.5 t)	Average utilisation of maximum load weight for light-duty trucks (< 3.5 t)	23%	45%
	Optimisation of trucking logistics - heavy-duty trucks (> 3.5 t)	Average utilisation of maximum load weight for heavy-duty trucks (< 3.5 t)	45%	60%
	Electrification of light-duty trucks (<3.5 t) by 0	% of fleet electrified	7%	0%
	Electrification of heavy-duty trucks >3.5t by 0	% of fleet electrified	0%	0%
Buildings & Heating	Building renovation (envelope)	% annual renovation rate	0,6%	2,5%
	New buildings built to top performing standard	% of buildings built to the top standard	60%	65%
	Heating technologies	Share of heating as district heating	0%	8%
	Decarbonising district heating	share of district heating produced using fossil fuels	0%	0%
	Decarbonising district heating	share of district heating produced using electric heat pumps	0%	0%



B-3.1: Economic indicators by sector				
Sector	Indicator	Unit	Baseline value (2023)	Target value (2030)
	Decarbonising district heating	share of district heating produced using biofuels	0%	0%
	Heating technologies	share of heating as local heating	100%	92%
	Decarbonising local heating	share of local heating produced using fossil fuels	69%	20%
	Decarbonising local heating	share of local heating produced using electric heat pumps	31%	63%
	Decarbonising local heating	share of local heating produced using biofuels	0%	17%
Electricity	Efficient lighting and appliances	% annual renovation rate	0,6%	10,0%
	Renewable/fossil fuel electricity production	share of electricity produced using fossil fuels	41%	6%
Waste	Paper recycling	% recycling rate	45%	80%
	Metal recycling	% recycling rate	57%	100%
	Plastic recycling	% recycling rate	43%	80%
	Glass recycling	% recycling rate	77%	89%
	Organic recycling	% recycling rate	36%	88%

Table B-3.2 presents an initial set of sectoral financial indicators designed to assess the economic viability, resource allocation efficiency and estimated return on investments linked to the Viladecans Climate Action Plan. This information complements the environmental impact and co-benefit data collected in the previous table, offering a broader view of the climate transition's economic performance.

These indicators make it possible to identify which sectors or types of action offer the best cost-benefit ratio, which ones present the greatest financial challenges, and where the search for complementary financing or public-private partnerships could be concentrated.



B-3.2: Financial indicators by sector								
Sector	Subsector	NPV Investment Expense - CAPEX (MEUR 2023-2030)	NPV Operational Savings - OPEX (MEUR 2023-2040)	NPV Co-benefits (MEUR 2023-2040)	NPV Return on Investment (ROI) (MEUR 2023-2040)	% Return on Investment (ROI)	CO ₂ e Reduction (kton)	NPV MEUR Investment Expense per kton CO ₂ e Reduction
Transport	Reduced motorised passenger transportation need	€ -	€ 58	€ 16	€ 74	0%	5	€ -
	Shift to public and non-motorised transport	€ (2)	€ 6	€ 25	€ 28	1180%	3	€ 0,96
	Increased carpooling	€ (0)	€ 5	€ 2	€ 7	0%	1	€ 0,00
	Electrification of cars + motorcycles	€ (7)	€ 1	€ 1	€ (5)	-75%	1	€ 5,69
	Electrification of buses	€ (9)	€ 1	€ 5	€ (3)	-33%	2	€ 3,57
	Optimised logistics	€ -	€ 15	€ 2	€ 16	0%	1	€ -
	Electrification of trucks	€ (13)	€ (0)	€ 1	€ (12)	-96%	1	€ 23,96
Buildings & Heating	Building renovations (envelope)	€ (53)	€ 5	€ 0	€ (48)	-90%	0	€126,60
	New energy-efficient buildings	€ (3)	€ 1	€ 0	€ (2)	-51%	0	€ 29,54
	Decarbonising heating generation	€ (16)	€ 15	€ 8	€ 6	38%	12	€ 1,35
Electricity	Efficient lighting & appliances	€ (72)	€ 167	€ 1	€ 96	135%	11	€ 6,26
	Decarbonising electricity generation	€ (30)	€ 68	€ 3	€ 40	133%	39	€ 0,79
Waste	Increased waste recycling	€ -	€ 1	€ 3	€ 5	0%	2	€ -
TOTAL		€ (206)	€ 343	€ 66	€ 203	98%	78	€ 2,63



The results of the economic model show that investing in decarbonisation is profitable in the long term in the vast majority of sectors and in global terms. This is because many of the planned actions focus on improving urban efficiency — including better transport, heating, lighting, as well as generating and consuming renewable energy.

There are two major exceptions to this pattern: the electrification of mobility and, above all, the energy renovation of buildings. In these cases, the economic rationale alone may not justify the investment. However, the strong case made by the anticipated co-benefits becomes decisive.



PART C - CONDITIONS FOR CLIMATE NEUTRALITY BY 2030

Part C examines the key conditions required to ensure the success and sustainability of climate-related investments. It addresses local policies that support capital deployment, evaluates financial risks and mitigation strategies, and assesses institutional capacity and stakeholder engagement.

The section is divided into three modules: Module C-1 identifies supportive local policies; Module C-2 analyses investment risks and mitigation measures; and Module C-3 evaluates governance capabilities and the involvement of key actors.

MODULE C-1. Climate policies for obtaining and deploying capital

The city will need to optimise the allocation of capital between public and private sources across the portfolio outlined in the Action Plan to cover the costs associated with achieving climate neutrality. Several key policies have been identified to ensure the deployment of capital towards climate neutrality.

As we have seen above, a significant portion of the economic cost of decarbonisation falls on other actors in the city, outside the City Council (in particular citizens and private companies). Therefore, the policies presented in Table C-1-1 below seek to encourage the involvement of these actors so that they feel part of this change and actively engage in the necessary transition.

Table C-1.1 lists a set of active public policies in the institutional ecosystem of Viladecans that directly or indirectly facilitate the deployment of capital to accelerate the transition to climate neutrality. These policies represent the an enabling framework that facilitates both public investment and the mobilisation of private or community capital into decarbonisation projects.

All of them have as a common denominator the creation of more favourable conditions for mobilising financial resources towards low-carbon technologies, infrastructure and behaviours. In the case of Viladecans, these policies have enabled progress in areas such as energy rehabilitation, decentralised renewable energy generation, sustainable mobility and the circular economy in the industrial sector.

This policy framework will be key to supporting the implementation of the Climate Investment Plan and ensuring that the required economic effort is deployed effectively, equitably and with measurable impact. The table shows the current status of each policy, a brief description and the expected results in terms of capital mobilisation.



C-1.1: List of climate policies to enable capital deployment			
Climate policy	Status of policy	Policy description	Expected outcome
Policy on the transfer of European funds to cities to finance key investments for their decarbonisation	In force	The central government and/or regional government agree to transfer a larger share of structural funds and extraordinary funds (Next Generation) to city governments.	Increase in funds available in the municipal budget for investment in decarbonisation projects.
Policy on multi-level partnerships	In progress	The central government and/or regional government agree to joint investments in decarbonisation projects.	Increase in the amount of public capital invested in decarbonisation projects in the city.
Green fiscal policy, designed to penalise GHG emissions and redistribute the revenue collected through infrastructure policies and incentives for decarbonisation.	In force	The public administrations operating in the city, each within their respective areas of competence, approve taxes or surcharges on existing taxes, or specific taxes on activities that generate high levels of GHG emissions.	Increase in the funds available in the municipal budget for investment in decarbonisation projects. Indirectly, greater private investment in measures or technologies that reduce the tax burden.



C-1.1: List of climate policies to enable capital deployment			
Climate policy	Status of policy	Policy description	Expected outcome
Subsidy and bonus policy to encourage private capital investment in low- or zero-emission technologies (vehicles, heating, household appliances) and in renewable energy generation.	In progress	The public administrations operating in the city, each within their own sphere of competence, approve subsidies and/or tax breaks that cover a reasonable part of the cost of investment projects in equipment, devices, technologies, etc. that promote decarbonisation.	If the incentives are well designed, there will be an increase in private capital investment – from households, businesses and all types of entities – in equipment, devices, technologies, etc. that promote decarbonisation.
Policy to attract private investment through public-private mechanisms for investment in renewable energy generation and/or energy regeneration in buildings.	In progress	The City Council certifies private investors with proven capacity to lead investment projects in renewable energy and/or energy regeneration in buildings; viable projects are identified and evaluated; special investment vehicles are created to channel and manage investment projects.	Massive attraction of private capital towards financially profitable investments that promote decarbonisation, thus overcoming the lack of liquidity that slows down the growth rate of this type of investment.



C-1.1: List of climate policies to enable capital deployment			
Climate policy	Status of policy	Policy description	Expected outcome
Policy to review the regulatory and procedural requirements applied to the approval of investment projects and/or subsidies for infrastructure and technologies that promote decarbonisation.	In force	The various public administrations systematically review the administrative processes linked to the granting of permits for projects, aid for the acquisition of low-carbon technologies, etc.	Increase in private capital investment – from households, businesses and all types of entities – in equipment, devices, technologies, etc. that promote decarbonisation.
Policy for the renovation of public spaces in neighbourhoods through climate change adaptation and mitigation measures.	In progress/in planning	Policy for the renovation of public spaces in neighbourhoods, with a view to mitigating the urban heat island effect, passive cooling of the city and naturalisation.	Increased climate change adaptation and mitigation in public spaces in Viladecans.



MODULE C-2. Risk identification and mitigation

The transition to climate neutrality involves strategic investment decisions that must be accompanied by a systematic assessment of the associated risks, whether financial, technical, regulatory, social or institutional. This module describes the approach adopted by Viladecans to identify, mitigate and manage the risks that may affect the effective deployment of the Climate Investment Plan and the achievement of its targets in 2030.

Although Viladecans does not yet have a formalised, cross-cutting climate and financial risk management system, it has begun to incorporate risk analysis into its planning process, particularly through:

- The participatory development of the City Climate Contract.
- The prioritisation of structural projects with external co-financing.
- Collaboration with key stakeholders in the local ecosystem (technicians, private sector, citizens).

Risk analysis is considered in the action design and resource mobilisation phases, especially to identify barriers to financing, administrative bottlenecks, risks of non-implementation or regulatory uncertainties. Similarly, specific technical and economic risk assessment approaches have already been applied to strategic projects such as Vilawatt and AgroDeltaLab.

Work is currently underway to develop a qualitative understanding of mitigation methods. In the next phases of the Climate Action Plan's implementation, Viladecans plans to move towards a more robust and systematic risk management framework based on European urban transition and continuous learning methodologies. This framework will be integrated into the monitoring and evaluation mechanisms of the Climate Contract and will be reviewed periodically (at least every two years), in coordination with existing governance structures (Comunidad Alia't, Climate Mission Office, relevant municipal services).

This approach will not only reduce the likelihood of project failure, but also increase the confidence of potential investors and partners, and ensure a fair, efficient and resilient climate transition in the long term.



C-2.2: List of risks by impact

Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
Transport	Low Emission Zone	Very high initial capital costs.	The costs of equipment (cameras for ZBE) and infrastructure (provisions for proximity cities, sensorisation and digital infrastructure, etc.) represent a large initial and selective outlay in different areas of the city that may clash with social perceptions, as has happened in other cities, of a restriction of freedoms (freedom of movement) in terms of restrictions on entry with certain vehicles in certain areas. as well as promoting socio-spatial	Communication of the co-benefits derived from the reduction in emissions resulting from the reduction in motorised mobility.
	15-minute city	Social rejection of restrictions on freedoms and unequal distribution of mobility in the city.		
	MaaS-Mobility as a Service			Communicate the conveniences and advantages of having facilities nearby.
	Digitalisation of mobility			Invite co-creation and citizen participation, involvement in legislative processes (e.g. NEZ ordinance, project implementation).



C-2.2: List of risks by impact				
Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
			segregation (criticised in the case of the proximity city).	
Transport Car electrification Electrification of buses Electrification of trucks		Very high capital costs No amortisation of existing vehicles Job losses	Capital costs for vehicle replacement represent a significant investment that is difficult for citizens and SMEs to access. Assets have a depreciation period that creates the economic case for individuals and businesses	Facilitate access to special low-interest loans for both citizens and SMEs. Communicate the savings associated with the change in technology. Work on incentives to abandon the most polluting technologies and propose measures and a circular economy market where



C-2.2: List of risks by impact				
Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
			Jobs related to the maintenance of combustion engine vehicles will be severely affected.	discarded products can be used as a resource, including their sale. Help workers and companies in these sectors to retrain, either in new circular sectors or in new technologies.
Buildings and heating Building renovations		Very high initial capital costs No amortisation of existing equipment (boilers, etc.)	Capital costs for replacing building envelopes and heating technologies represent a significant investment that is difficult for citizens and SMEs to access.	Facilitate access to special low-interest loans for both citizens and SMEs



C-2.2: List of risks by impact

Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
Low-emission heat generation (decarbonisation of heating)			The assets have a payback period that creates the economic case for individuals and businesses.	Communicate the savings associated with changing technology Work on incentives to abandon the most polluting technologies and propose measures and a circular economy market where discarded products can be used as a resource, including their sale
Electricity		Very high initial capital costs	The switch to renewables involves a very high initial	Incentives to promote renewable self-consumption



C-2.2: List of risks by impact

Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
Low-emission electricity generation		Unfavourable energy price market Technical regulations/legislative and administrative restrictions	investment cost in infrastructure. The energy price market does not favour the implementation of renewables. Legislation on self-consumption/renewables sets technical limits that make implementation difficult in some cases, for example, shared self-consumption or the use of surpluses by small producers, with	Negotiate price intervention mechanisms in the market, also with the EU Work on amending self-consumption legislation, removing barriers and promoting administrative simplification Encourage local energy communities by promoting innovative management systems (pilot projects and trials) through the Valencia



C-2.2: List of risks by impact				
Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
			administrative complexity leading some potential producers to install anti-dumping systems, which is a waste of renewable production.	Urban Sandbox focused on the Climate Mission and the improvement of public services
Waste		Inefficient processes Behavioural barriers	Inefficient recycling processes. Slow behavioural change, including cultural barriers.	Promote pilot projects and disruptive technologies to improve selective collection and recycling processes. Use innovative public procurement for this area.



C-2.2: List of risks by impact				
Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
				Education and guidance on recycling, facilitating behavioural change among citizens. Awareness campaigns. Transforming waste into a resource, stimulating the market for recycled products
City-level risks (cross-cutting)		Greenwashing practices	There is a risk that companies and funds involved in the mission will use it speculatively and not be truly committed to it, for	Monitoring and tracking of the commitments of the different entities that join the mission.



C-2.2: List of risks by impact

Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
			example by increasing their scope 3 emissions by outsourcing their processes. This phenomenon generates mistrust and disaffection among the public: citizens would lose confidence in the purpose of the mission. Not only is the implementing company penalised, but mistrust spreads to other actions and actors.	Monitoring and tracking of Scope 3 emissions.
City-level risks (cross-cutting)		Unequal distribution of benefits and increased inequalities	Some neighbourhoods may see increasing investment and an	Socio-spatial monitoring of investment.



C-2.2: List of risks by impact

Sector and sub-sector emitting	Sectoral project	Identified risks	Risk description	Risk mitigation
		in vulnerable neighbourhoods	economically profitable green transformation and consequent improvement in quality of life, while other neighbourhoods with fewer resources are neglected and also see an increase in risks from climate change (e.g. heat waves in unprepared/unrenovated buildings, flooding due to unresolved urban planning problems, etc.).	Propose legislation to require a minimum investment in vulnerable neighbourhoods. Preferential public investment in synergistic mitigation and adaptation measures in vulnerable neighbourhoods.



MODULE C-3. Capacity building and stakeholder participation

Viladecans, through its commitment to the Climate Mission and a mission-based approach, has demonstrated a strong political and organisational commitment to climate neutrality. However, like many medium-sized cities, the team responsible for leading this transition—the Transition Team—faces significant structural constraints. Although it has consolidated technical expertise in areas such as urban sustainability, energy management and rehabilitation (e.g. the Vilawatt model), it still has significant gaps in its capacity to develop and implement a robust and viable Climate Investment Plan.

The main weaknesses identified include a shortage of technical profiles specialised in green financing, structuring bankable projects, raising private capital and risk assessment. There are also limitations in human resource capacity to scale up climate action, especially in the implementation phase. This highlights the need to strengthen internal capacities through specific technical training, the recruitment of new cross-cutting profiles and coordination with specialised external actors.

In this context, Viladecans has begun to map key stakeholders from both the financial and non-financial sectors. The actors identified include local companies with significant emitting assets, regional financial institutions, cooperatives, energy and logistics project developers, energy efficiency agencies, and citizen organisations and educational centres with mobilisation capacity. The city is aware that its direct authority over emissions is limited, so the active involvement of the private sector and citizens is essential to achieve climate neutrality goals.

At the participatory level, the city has made significant progress. The strategy adopted through the mission-based approach offers structured spaces for multi-level and multi-stakeholder dialogue and co-creation, where different visions and capacities converge to drive transformative solutions. However, there is a recognised need to strengthen this strategy in the area of financing, establishing a common narrative with investor actors, articulating clear incentives, and defining return schemes that generate trust and mutual commitment. This includes not only entities that can invest in public projects, but also those that need to decarbonise their own assets, as well as those that can collaborate through mixed financing or financial innovation (green bonds, consortia, social return mechanisms, etc.).

With regard to non-financial stakeholders—especially citizens, neighbourhood communities, associations and local SMEs—it will be essential to design and implement incentive programmes that facilitate their active participation in the transition. Some of these programmes will require specific budget allocations, such as subsidies for public transport, aid for the purchase of electric vehicles or green bonds to support residential energy retrofits. For example, extending the Vilawatt model to vulnerable neighbourhoods will involve offering free technical assistance, micro-finance lines and partial subsidies, which represents a significant yet strategic investment. Likewise, promoting active mobility will require investments in cycling infrastructure, incentives for



shared use and campaigns to change habits. These costs must be included and assessed in the Investment Plan, as they represent a key condition for achieving a fair and socially accepted transition.

Capacity building in this regard must be accompanied by a clear roadmap to identify gaps, strengthen internal resources and forge strategic partnerships. Ultimately, it is a question of building an organisational, technical and financial infrastructure that is up to the climate challenge and enables us to move forward with determination towards a climate-neutral, inclusive and resilient city by 2030.

The stakeholder mapping table is shown below:

C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
Institute for Advanced Architecture of Catalonia (IAAC)	Universities and research academies	High	Achieve climate neutrality in Viladecans by contributing knowledge and research carried out in the territory.	Signed commitment to join the Climate Mission – Viladecans 2030
Polytechnic University of Catalonia (UPC)	Universities and research academies	High	Achieve climate neutrality in Viladecans by contributing knowledge and research carried out in the area.	Signed commitment to join the Climate Mission – Viladecans 2030
Transition to a Carbon-Free University (TULE) Community of the Polytechnic University of Madrid () Polytechnic University of Madrid (UPM)	Universities and research academies	High	Achieve climate neutrality in Viladecans by contributing knowledge and research carried out in the area.	Signed commitment to join the Climate Mission – Viladecans 2030



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
Viladecans City Council	Public	Very high	Achieve climate neutrality by 2030.	Promoting and implementing body for the Climate Mission – Viladecans 2030
Baix Llobregat Regional Council	Public sector	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission - Viladecans 2030
Consortium for the Protection and Management of the Natural Areas of the Llobregat Delta	Public	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Barcelona Provincial Council, Department of Urban Planning, Housing and Urban Regeneration	Public	High	Achieve climate neutrality in Viladecans by contributing experiences, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
Viladecans City Foundation	Public sector	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Viladecans Hospital	Public sector	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Barcelona Metropolitan Strategic Plan (PEMB)	Public sector	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
VIMED	Public	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
VIQUAL	Public	High	Achieve climate neutrality in Viladecans by contributing	Signed commitment to join the Climate



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
			experience, carrying out demonstration projects and providing support.	Mission – Viladecans 2030
Viladecans Basketball Club	Organised citizens	High	Achieve climate neutrality in Viladecans by contributing experiences, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Miquel Martí i Pol School	Organised citizens	High	Achieve climate neutrality in Viladecans by contributing experiences, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Viladecans Magic Volleyball Sports Club	Organised citizenship	High	Achieve climate neutrality in Viladecans by contributing experiences, carrying out demonstration projects, and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Viladecans Women Meet Up Association	Organised citizens	High	Achieve climate neutrality in Viladecans by contributing experiences,	Signed commitment to join the Climate



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
			carrying out demonstration projects, and providing support.	Mission – Viladecans 2030
Alliance Healthcare Spain, S.A.	Private sector	Registration	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Commitment signed to join the Climate Mission – Viladecans 2030
SERVICIOS INTEGRALES SERMA 2006, S.L. (ARQTERIA)	Private	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
UTE AVANZA BAIX	Private	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Biyiud, S.L.	Private	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration	Signed commitment to join the Climate Mission – Viladecans 2030



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
			projects and providing support.	
BLADVERD HORTA XXI, SL	Private	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Catalonia Energy Efficiency Cluster	Private	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
FCC MEDIO AMBIENTE S.A.U.	Private	Joined	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects, and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
IQEMBU SL	Private	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
Paisaje Transversal S.L.L.	Private sector	Register	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Simbiosy. Simbiosi Industrial SL	Private	Register	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
TEODORO GARCIA S.A	Private	Registration	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
URBASER S.A	Private	Register	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030
Promcat Alternativa S.L.U.	Private sector	Register	Achieving climate neutrality in Viladecans by contributing	Signed commitment to join the Climate



C-3.1: Stakeholder identification map				
Parties involved	Network	Influence	Interests	Level and type of commitment
(Viladecans Style Outlet)			experience, carrying out pilot and demonstration projects, and providing support.	Mission – Viladecans 2030
ELECTRO CALBET, S.A.	Private sector	High	Achieve climate neutrality in Viladecans by contributing experience, carrying out demonstration projects and providing support.	Signed commitment to join the Climate Mission – Viladecans 2030

C-3.2: Cost of activities of the parties involved		
Parties involved	Activity	Cost to the City Council (€)
Citizens and schools	Programmes aimed at young people and schools to bring about a change in behaviour in relation to the climate crisis: Change Makers Programme, Agenda 2030 story, <i>Aprènem el sol</i> (let's learn from the sun), 50/50 energy efficiency project in schools, bicibus ⁴ .	Pending assessment
Citizens and businesses	Subsidy programmes or tax incentives for citizens and businesses related to climate neutrality: sustainable mobility, housing renovation, energy efficiency projects, Vilawatt project.	Property tax (IBI), construction tax (ICIO) and business tax (IAE) rebates for photovoltaic systems and electric vehicle charging points. In

⁴ Bicibús. (n.d.). Viladecans. <https://bicibus.eu/es/viladecans/> (accessed 28 June 2025)



		2025: total 264.650,26 IBI: 171.847,18 € IVTM: 74.107,08 € ICIO: 18.696,00 € In the years 2021 to 2024, there are also similar rebates , pending quantification. Energy efficiency awards for citizens: 15.000 € per year from 2021 to 2015 (total 75.000 €)
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Outlook and next steps

The development of the Viladecans Climate Investment Plan, integrated into the broader framework of the City Climate Contract, has represented a fundamental step towards consolidating a coherent, realistic and transformative strategy to achieve climate neutrality by 2030. This process has made it possible not only to quantify the economic dimension of the climate challenge, but also to identify levers for action, available sources of financing and mechanisms to mobilise additional capital effectively, equitably and collaboratively.

Among the most relevant lessons learned from this exercise are the importance of:

- Integrating the financial approach into all phases of climate policy design and evaluation.
- Strengthening systems for monitoring, tracking and evaluating climate spending.
- Promoting institutional innovation and public-private collaboration to scale up flagship projects.
- Linking investment efforts to a broader agenda of fair and inclusive urban transformation.

Looking ahead, Viladecans City Council is committed to consolidating this framework through a series of key actions:

- Develop a structured green budgeting and labelling system to align municipal resources with the objectives of the Climate Contract and the local Urban Agenda.
- Strengthening the financial Planning of priority climate projects, incorporating impact and return indicators, risk analysis and co-financing strategies.
- Refine the monitoring and evaluation model of the Investment Plan, ensuring its integration with the city's overall climate governance system and its connection with municipal economic and budgetary information systems.
- Strengthen the mobilisation of external capital through active participation in European calls for proposals, partnerships with other levels of government and the creation of local mechanisms to attract private and community investment.
- Periodically review and update the climate investment portfolio, taking into account monitoring results, developments in the financial context and the incorporation of new technological and social solutions.
- Incorporate lessons learned and synergies from demonstration projects, such as Vilawatt, AgroDeltaLab and energy communities, to design replicable, participatory financing mechanisms adapted to the local context.



These next steps will enable the Climate Investment Plan to become not just a strategic document, but a living, operational tool capable of guiding and sustaining the city's climate action in the coming years, in line with its commitment to the European Climate Mission and its ambition to lead among Europe's medium-sized cities.