NET ZERO CITIES

TOWARDS CLIMATE NEUTRAL URBAN PLANS

Recommendations for supporting municipalities in integrating climate action into their General Urban Ordinance Plan (PGOU)

CESF NetZeroCities

City Council of Vitoria-Gasteiz
paisaje transversal listen and transform the city
tecnalia
eucinco

What is this document?

A brief manual of recommendations for integrating the strategic objectives of Climate Agreements into the General Urban Ordinance Plan, using a participatory approach, with practical tools for the technical urban planning teams responsible for reviewing or updating it.

It is based on the work carried out for the case of Vitoria-Gasteiz.

CONTENTS

Ten rules for initial precautions

1. The PGOU is key to climate action, but it requires other instruments for action.
The plan organises the territory and defines land use, but it does not implement projects or replace operational programming (Climate Action Plans of Climate Agreements, Covenants of Mayors for Climate and Energy, Local Action Plan of Urban Agendas). Therefore, the PGOU must be coordinated and aligned with these more dynamic instruments.

2. Take into account climate resilience from the start
Planning must anticipate risks (heatwaves, flooding, water stress) and integrate them into the territorial model, without treating them as secondary aspects. This promotes adaptation, transformation, and vulnerability reduction, strengthening resilience against future impacts. Examples include consolidating connected green infrastructure, designing with bioclimatic criteria, providing climate shelters, and planning sustainable drainage networks.

3. Recognise jurisdictional limits and avoid over-regulation
The PGOU cannot impose everything, but it can be aware of other regulations (materials, safety, industry, employment etc.) to make them compatible with its specific ordinances and programmes. It is important not to overload it to make it viable.

4. Planning as "enabling infrastructure"
Even if the PGOU is not implemented, it can pave the way by: reserving land for renewable energies and heat networks, making regulations for energy rehabilitation more flexible, and recognising public space as a support for active mobility and green networks.

5. Incorporate urban metabolism as a structural criterion.
Understand the city as a metabolic system (energy, water, materials, waste, mobility), where planning defines flows and locations: where energy is produced (PV, biomass), how people and goods circulate, how resources are regenerated. This prevents climate-relevant infrastructure and logistics from becoming disjointed.

6. Land artificialisation as a differentiating factor.
Every new urban development, every square metre of artificialized land increases direct and indirect emissions and reduces sinks. The focus should be on:

Prioritising urban regeneration over expansion, containing urban sprawl, and reusing already transformed land (industrial, logistical) for new needs.

7. Inter-instrumental and interdepartmental coordination
Climate impact does not only depend on the provisions of the PGOU, but also on how it is coordinated with: Sectoral plans (mobility, energy, circular economy), Programmes and ordinances (rehabilitation, sustainable mobility, green infrastructure, etc.) and multilevel governance.

8. Be flexible, adaptive, and have continuous monitoring: not everything is predictable
Local experiences show the importance of the PGOU being adaptable, to allow for: Future technologies (autonomous cars, agro-voltaics, new land uses) and adjusting strategies to regulatory or climate changes. This also requires monitoring and follow-up mechanisms to evaluate its implementation and update the plan.

9. The relational aspect: common ground begins in corridors
Climate solutions do not depend solely on the text of the PGOU, but also on how it is implemented, on organisational culture and on trust between technical areas, between political parties and with other administrations. An ambitious new PGOU is a challenge for the entire administration.

10. Explain and collaborate with citizens on change
Taking care of communication, collaboration, and training for civil society so that it understands the importance of the Mission and commits to an ambitious PGOU is a precaution that is just as important, if not more so, than the regulation itself. The plan reflects society's common goal. As in the case of the Green Belt in Vitoria-Gasteiz, it is the citizens who consolidate a project if they feel it is their own.

Transforming from within

1

Municipalities and climate change

Adapting planning, a lever for the climate challenge

Like other social mechanisms, **the urban fabric has a strong unsustainable inertia** that we need to tackle decisively.

The challenge of achieving resilient and climate-neutral cities in the shortest possible time involves **transforming their most basic tools and management.** Urban planning, through the PGOU, is one of the main keys, as its plans land use and distributes rights and duties over the land.

Modifying urban planning is not just a technical necessity, but also a strategic opportunity. It involves incorporating a systematic vision, promoting active mobility, prioritising energy efficiency in buildings, promoting green infrastructure and favouring circularity in urban services. This comprehensive and systematic vision involves changing the way the PGOU is understood, designed, and implemented, promoting changes that not only contribute to reducing emissions (mitigation), but also improve the quality of life, health and resilience of the population and the environment in the face of extreme weather events (adaptation).

The current situation requires us to act differently

The big challenge lies in how to implement these changes in practice.

Many cities, including those with resources and political will, face a common challenge: **a lack of alignment between day-to-day processes and strategic objectives.**

- How can we deal with daily complexity and sustain long-term processes?
- How can we avoid succumbing to frustration when progress is slow and requires enormous, often invisible effort?
- How can we reconcile urgent and important matters?
- How can we coordinate and create coherence without overburdening municipal teams that are increasingly demanded but whose resources are not increasing?

It's not doing things that is difficult, **it's changing habits**.

Focus on learning and collaboration

What we are seeing is that it is becoming essential **to strengthen our ability to work in other ways:** through adaptation, continuous learning, and collaboration. We need to open up spaces to see the whole system and "look through different lenses", beyond the day-to-day details.

This does not only apply to public administrations, but also to the wider ecosystem. **We need to connect with other ways of seeing and doing – "to stop being an island and start being an archipelago**" – in order to enrich traditional approaches and be able to face uncertainty, urgency, and polarisation.

The second chapter delves deeper into organisational learning, i.e. **how your city council can work to achieve climate goals.**

Effective measures and cross-sector coordination

Many of the most effective measures, urban strategies, regulations, and recommendations needed to achieve a climate-neutral city are common to all European cities. **The difficulty lies not so much in defining them as in incorporating them into planning and adapting them to local circumstances.**

Moreover, urban planning is often regulatory and acts as a link between many of the areas that generate the most emissions and can sequester them: **mobility, new construction, public buildings, residential buildings, industry, natural spaces, infrastructure, etc.**

The third chapter delves deeper into the decisions that will make our plan **a useful tool against climate change.**

Planning based on quantifiable impacts

The difficult coordination of the different plans and strategies of each municipality to achieve the Climate Agreement **has an important organisational component, but an even greater technical-quantitative one.**

The ultimate aim of the Mission for Climate-Neutral Cities by 2030 is to achieve zero or neutralised greenhouse gas emissions for the municipality, and, as a result, **it is necessary to establish emissions and capture targets, as well as adaptation targets, associated with each of the aspects regulated by urban planning.**

Data is a common language for coordinating municipal work towards climate neutrality.

New approaches to municipal action

2

Methodological learning

It’s for you if…

You work at the City Council and **sometimes feel like you’re an island**, but you believe that it is possible to run the city another way.

You are motivated by the value of public service and would like to **rediscover the transformative meaning of your work.**

You are frustrated by bureaucratic constraints, but **you still want to change things from within.**

You would like **to meet other technicians** who share your concerns, enthusiasm, and commitment.

You are looking for spaces where you can think, talk, and act collectively, beyond your day-to-day tasks.

You are concerned about the climate future of your city and **want to know what you can do in your area.**

You are motivated by seeing concrete results, but you also **need time, partnerships, and new tools.**

You want to take part in **real processes** that connect public policy, citizen participation, and urban transformation.

You don’t know where to start, but **you want to stop doing things the same way.**

Cultivating conditions for change to occur.

Although cities have improved their strategic planning capabilities, **they often fail to implement what they design.**

This may be because… plans are usually developed in isolation from the actual working environment, without taking into consideration the invisible factors that influence their implementation: institutional culture, links between departments, distributed leadership, available human resources, or continuity beyond a political or funding cycle.

This gap between “formal planning” and “real conditions” is one of the most common bottlenecks in urban transition.

“We have a very good plan, but we can’t seem to get going with it. **It all remains on paper”.**

Perhaps you could try…

I Opening up spaces to **see the whole system** and not just your role.

II **Relational aspects are not incidental**

III Learning to **act amid complexity**

IV Transforming institutional logic

V Valuing the invisible and the intangible

I. Opening up spaces to see the whole system and not just your role

Generate collaborative networks: “stop being an island and become a connected archipelago”.

In order for the cost of changing the way things are done not to depend exclusively on the individual initiative of a technical team and even less on a single technician, but rather on an active relational network composed of infrastructures, actors, institutions, legal frameworks, spaces, times, everyday knowledge and well-established municipal dynamics, a well-oiled internal team is needed.

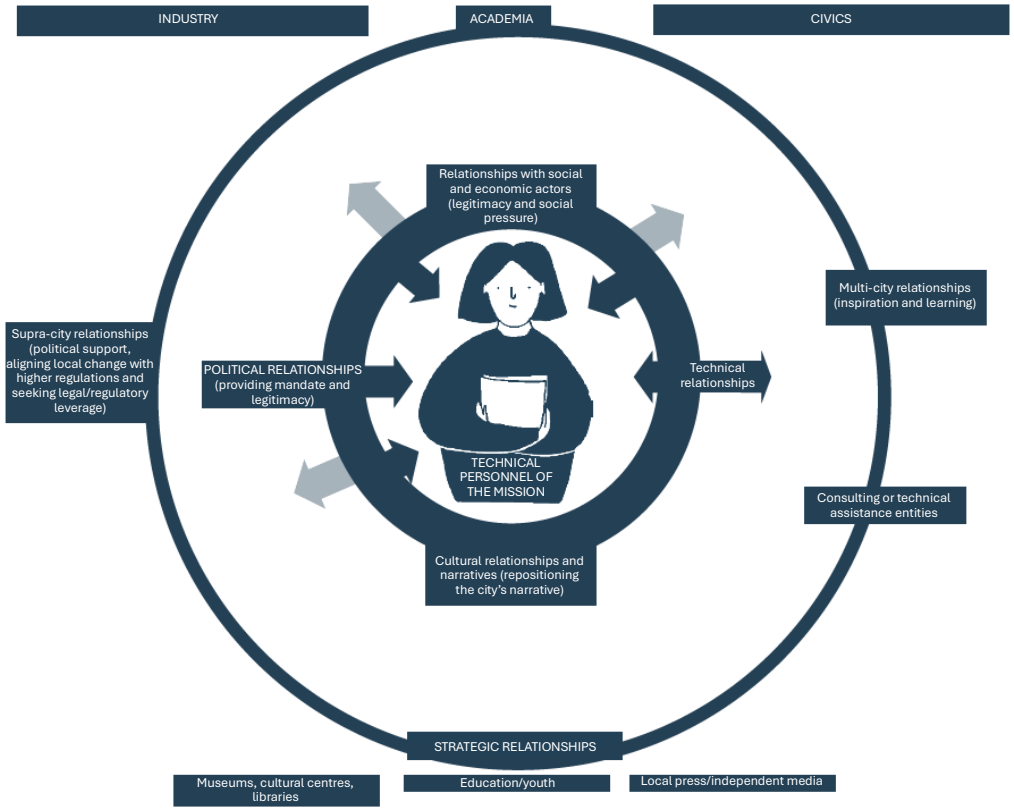
Recognise the need to stop and think and see yourself from the outside.

In Vitoria-Gasteiz, the impetus provided by the CESF (NZC) made it possible to create a “space for thinking” that many people attending the kick-off appreciated and identified as essential for this type of process. In addition, the timing, after two years of planning by the teams, the ideas were very mature, etc.

II. Relational aspects are not incidental

Institutional work is structured in silos, with fragmented competencies, responsibilities, and objectives.

At NZC, the focus is on "Transition Teams", but you can also do it in your own context.



If there are technical meetings where no one speaks honestly, change the format: **suggest an informal conversation,** without minutes or an agenda.

If each department speaks its own language and they do not understand each other, translate and connect: **identify words that act as a bridge.**

If you feel like you are working alone, **find someone to share your concerns with**. Collaboration begins with mutual support.

II. Relational aspects are not incidental

What worked in the Vitoria-Gasteiz process:

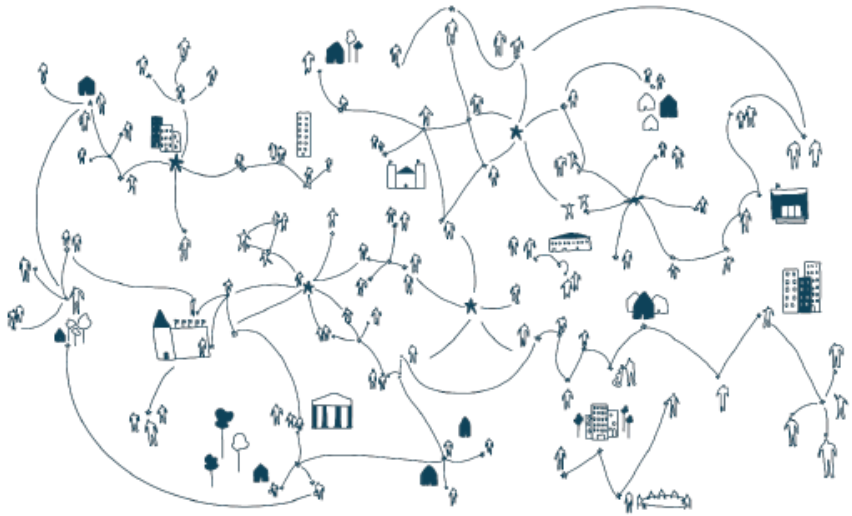
Prior investment in relational aspects was key: establishing solid, two-way links allows alliances to be activated quickly when the need arises. **Pre-existing relationships of trust with collaborators on previous projects, rather than based on positions, made it possible to obtain more accurate and inclusive results.**

Calling on mutual care. The work must be coordinated based on the schedules, languages, and real tensions of each municipal department and with an understanding of the "other's" problem.

Understanding, with empathy, both the difficulties and opportunities involved for each agent when asked to rethink their usual way of doing things, from rejection of legal and bureaucratic red tape, the initial investment of time or the fact that the more technical aspects require specialist advice or extra work.

Recognises and nurtures informal leaders and work with internal role models who have technical, political, and human leadership legitimacy as connectors of change. Profiles with strategic vision in climate, urban planning, green infrastructure and energy have been activated and have acted as hinges.

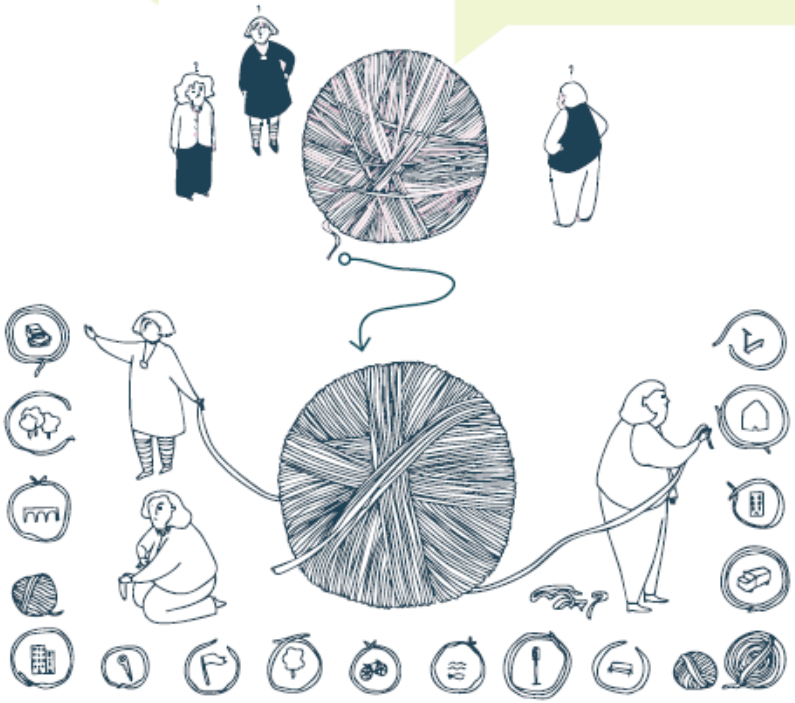
Mapping relationships between people, not just the place they occupy.



III. Learning to act amid complexity

"I already know what needs to be done... **but no one else seems to be taking action."**

"There are too many problems at the same time, and you don't know where to start."



Keys to progress:

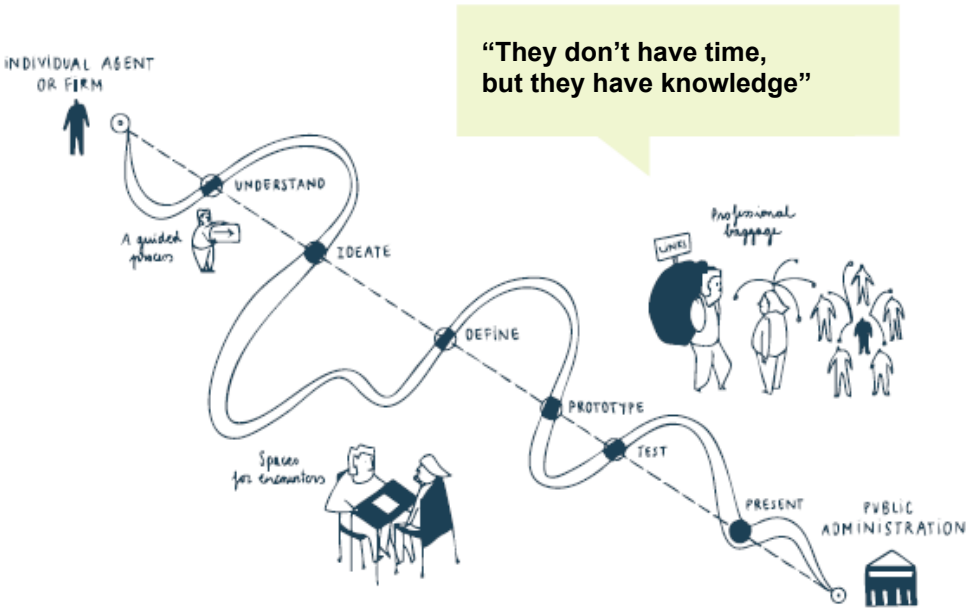
- Accept complexity: conflict and dissonance are part of change.
- Align motivations: technical aspects are not enough without shared meaning.
- Prototype and adapt: change is not imposed, it is built collectively.
- Iterate, listen, and adjust: the process is more important than the final solution.

In highly complex cases such as planning, climate, or just transition, **problems are not linear and do not have single solutions.**

This **creates a block,** especially among those who already have vision and urgency. Each area addresses its part, but **there is no common framework for alignment and prioritisation**.

III. Learning to act amid complexity

Prioritise iterative and open processes, not just closed solutions.



“They don’t have time, but they have knowledge”

What worked in the Vitoria-Gasteiz process:

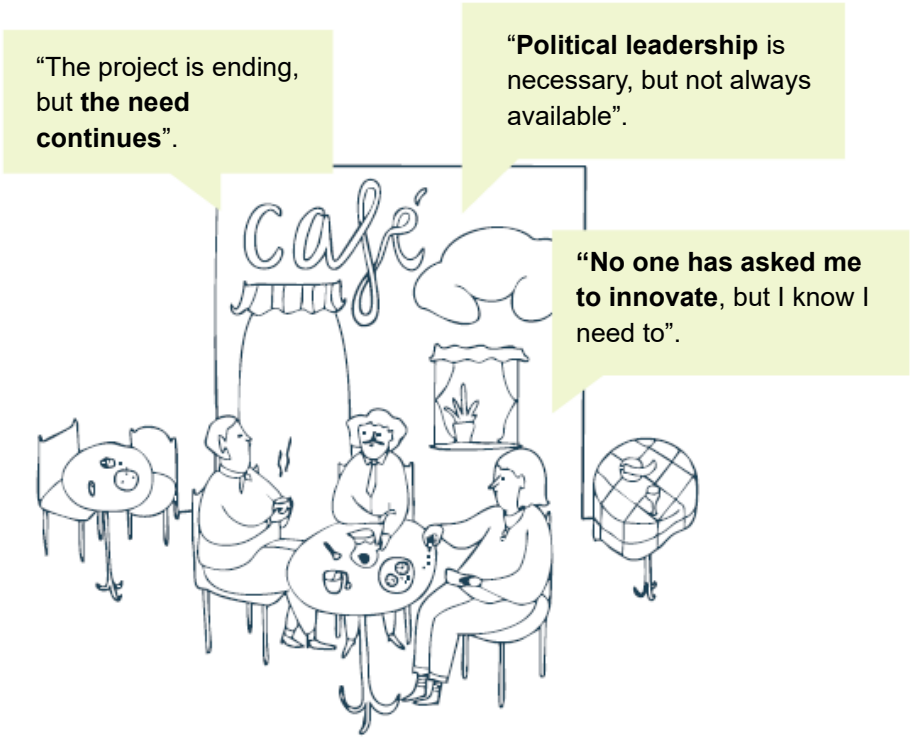
Introducing adaptability in management: planning flexibly and responding to the context. Defining the prioritisation and deepening methodology after the kick-off, adapting to the schedules of the people who were going to be activated.

In co-design processes, it is not always possible to anticipate everything. Following approaches such as “design doing”, or adaptive learning, the idea is to iterate, test, correct, and move forward. Listening to what is happening is part of the methodology, not a contingency.

IV. Transforming institutional logic

Public institutions are designed for stability, not for change.

In many cases, technicians perceive that there is a **disconnect between pilot projects and the ordinary structure**. Moreover, dependence on political leadership creates fragility in the face of cyclical changes. Finally, **staff shortages and structural overload** limit the capacity to sustain complex processes.



What worked in the Vitoria-Gasteiz process:

Starting with a shared framework: Vitoria had built a shared narrative on decarbonisation, and aligning planning with that goal is not perceived as a situational technical or political demand. It connects with the daily commitment of technical staff.

Recognise technical teams as agents of change, even without explicit "permission". In Vitoria, they relied on the "brains" of the organisation. The notion of redistributing internal knowledge, which comes from municipal experience in previous pilot projects such as Coronación or Zaramaga, was connected to the current challenge of revising the Plan by sharing informal learning and formal assessments.

V. Valuing the invisible and the intangible

If data is always prioritised, even if no one understands it**, you introduce narratives**: what story is this data telling? Who is experiencing it?

This technocratic bias also isolates technical work from its political dimension, as if “neutrality” were automatically better. But technical decision-making also involves values, priorities, collective imagination, and ways of exercising power.

Each technical decision incorporates values, exclusions, and priorities that shape the political future. Recognising this allows for more honest and transformative debates.

Incorporate qualitative tools, **stories, and testimonials as evidence.**

Motivation, recognition, joy, and care are also infrastructures for change. Although they are not easily measured, **it is essential to name intangible factors as part of analyses and plans.**

Reinforce narratives and symbols that **connect technical work with what matters to citizens.**

Epilogue: Collaborating in practice

The cities that move forward are those that take care of their processes.

Start where you are: you don't need to change the entire structure to initiate change. Sometimes, a different conversation can open up a new path.

Do not wait until everything is clear before taking action: action generates clarity. Trying, making mistakes and adjusting is also a valid way of planning.

Seek out informal allies: beyond organisational charts, identify who is willing to work with you, even if they are from another department or level.

Draw the connections: if you don't know how to start, make a relationship map. Who influences your work? Who hinders it? Who could help you?

Set aside time to talk, not just to do: collaboration cannot be decreed, it must be built. And that takes time.

Take care of what cannot be seen: trust, recognition, motivation... these cannot be measured in KPIs, but they underpin any transformation.

Share what you are doing: making your work visible helps others to understand it, recognise it and get involved.

Invite people on the margins to participate: when an area feels left out of the process, it is unlikely to collaborate. Sometimes an informal invitation is enough.

Keys to a climate-neutral and resilient PGOU

3

Technical learning, the case of Vitoria-Gasteiz

How?

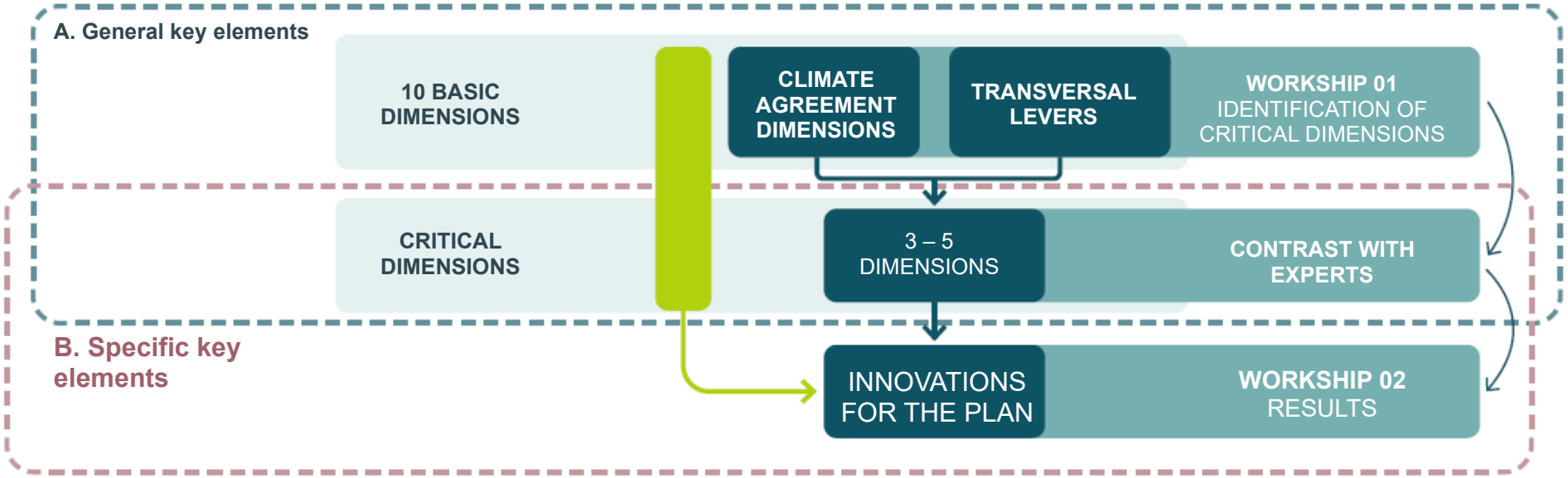
Example of Vitoria-Gasteiz

In order to draft a **PGOU that moves towards climate neutrality**, it is essential to recognise **which technical aspects can be incorporated into the planning itself**. To this end, we propose a methodology inspired by the experience of Vitoria-Gasteiz.

The process seeks to **identify, prioritise and specify the key elements** that should guide the revision or drafting of the PGOU and is organised into **two main phases:**

The first, focused on **general key elements**, allows the thematic and strategic framework of the planning to be defined.

And a second one, focused on **specific key elements**, which delves deeper into critical issues and facilitates the extraction of concrete guidelines to be included in the PGOU or articulated through other municipal instruments.



General key elements 3a

Dimensions towards climate neutrality to be addressed in the PGOU

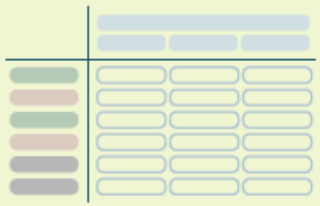
How can we identify the general key elements?

Identifying the **general key elements** for integrating climate neutrality into each municipality's PGOU requires a thorough understanding of the local situation, its climate challenges, its existing plans and the current form of urban planning, recognising the integration between the two and thus selecting the basic dimensions and critical issues to work on specifically.

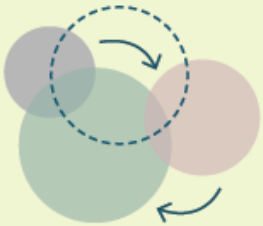
Proposed steps based on the case of Vitoria Gasteiz:

1. Identify the basic dimensions to be analysed based on knowledge of existing plans, such as the Climate Agreement in the case of Vitoria-Gasteiz, together with other relevant sectoral plans for the municipality.

2. Integrate climate neutrality dimensions into the PGOU, reviewing how they are currently reflected in urban planning or where it would be necessary to incorporate them.



3. Work on these dimensions in cross-sector workshops to jointly identify barriers and problems, propose solutions, and highlight synergies with circularity.



4. Select, through key questions distilled from previous work, the critical dimensions that are most valuable for furthering the PGOU, with the aim of integrating solutions or innovations that strengthen urban planning in the face of climate challenges.

General key elements How can we identity basic dimensions?

Example of Vitoria-Gasteiz

Alignment matrix

Climate Agreement Priorities	General Urban Ordinance Plan		
	Aims	General Regulations	Special Regulations
Eco-rehabilitation	✓ × →	✓ × →	✓ × →
Renewable Energy	✓ × →	✓ × →	✓ × →
Mobility	✓ × →	✓ × →	✓ × →
Circularity	✓ × →	✓ × →	✓ × →
Green Infr.	✓ × →	✓ × →	✓ × →
Intelligent City	✓ × →	✓ × →	✓ × →

The basic dimensions of Vitoria-Gasteiz are the priorities of its Climate Agreement, but they can also be extracted from other documents such as the Climate and Energy Action Plan, the Covenant of Mayors for Climate, the Municipal Green Infrastructure Master Plans, sectoral plans (water, agroforestry, etc.), circularity plans, etc.

1. **Identification of basic dimensions and alignment with the PGOU**
   In the case of Vitoria-Gasteiz, the priority areas of its Climate Agreement are selected. Circularity is not addressed because its objectives in the CA are cross-cutting from the PGOU, nor is the smart city, as it is considered to be a dimension outside the regulatory scope of the PGOU.

2. To recognise the potential of each of the basic dimensions, an **alignment matrix** is used, which allows their relationship with urban planning to be analysed.

3. **Cross-sector workshops**.
   In these sessions in Vitoria-Gasteiz, the alignment matrix was used as a basis for identifying the key aspects of municipal climate action and ways to address them through planning, as well as to detect where other instruments might be necessary. This work focused exclusively on the **four selected dimensions.**

General key elements How can we identity critical dimensions?

Example of Vitoria-Gasteiz

Basic dimensions selected from the Climate Agreement.

- Eco-rehabilitation
- Renewable Energy
- Mobility
- Green Infr.

Key questions arising from the alignment of the PGOU and the cross-sector workshops.

How to promote rehabilitation through planning

How to respond to new needs related to urban metabolism (mobility, energy, circularity) through planning.

- Integration (or lack thereof) of the criteria and proposals included in Sectoral Plans related to each of the dimensions of urban metabolism in the PGOU.
- Inclusion of design criteria related to these dimensions of urban metabolism in structural and detailed ordinance.

How planning responds to vulnerability, risks, and resilience… focusing on the impact chains of the city's Adaptation Plan:

- Drought in rural areas
- River flooding in urban and rural areas
- Stormwater flooding in urban areas
- Heatwaves on the population's health

Critical dimensions to be specifically analysed for inclusion in the PGOU.

I. Integrated regeneration and eco-rehabilitation of city neighbourhoods.

II. Sustainable mobility and transport

III. Heatwaves on the population's health

4. Finally, following the work carried out—including the initial analysis, alignment with the PGOU, and cross-sector reflection on barriers and opportunities—**key questions** are identified that enable the detection of **critical dimensions that are fundamental for aligning the PGOU with climate neutrality** in the case of Vitoria-Gasteiz.

Note that critical dimensions respond to a municipal opportunity space. Aspects such as energy, circularity, and climate risks - for example, droughts and floods - can be particularly decisive in the PGOU of other municipalities.

Specific key elements 3a

CASE OF VITORIA-GASTEIZ

Technical aspects to be integrated into the PGOU

How can we identify specific key elements?

Once the general key elements have been defined, the next step is to define specific key elements and **delve deeper into the critical dimensions**, which in the case of Vitoria-Gasteiz were considered decisive and applicable to other municipalities. To this end, a **detailed technical analysis is applied using the contrast methodology,** followed by a review and validation by technical specialists to ensure its technical soundness and regulatory viability. This process culminates in the **final integration of the specific key elements into the PGOU**, or their articulation through complementary instruments, a process that should be considered open and reiterative over time.

1. Energy rehabilitation from the planning stage

2. Sustainable mobility for urban metabolism.

3. Reducing the risk of heatwaves

The **contrast methodology** for obtaining guidelines to be included in the plan consisted of detecting:

Aspects that have **ALREADY been incorporated** into the PGOU of Vitoria-Gasteiz.

Aspects that have **NOT been incorporated** into the Vitoria-Gasteiz PGOU but which **are PROPOSED for incorporation.**

Aspects that are **NOT within the scope** of the PGOU and for which a **response is proposed through OTHER INSTRUMENTS**.

I. Energy rehabilitation from the planning stage

Identify measures and decisions that can encourage and facilitate **rehabilitation from an urban planning perspective,** based on lessons learnt from previous rehabilitation processes and projects.

Objectives of the Agreement:

1. Improve the **energy efficiency** of residential and tertiary buildings, including publicly owned buildings.
2. Improve **universal accessibility**.
3. Connect homes to a high-speed **digital network**.
4. Connect homes and commercial premises to a **decarbonised district heating network** throughout the city.
5. Improve **public space** with the introduction of green infrastructure.
6. Generate **urban developments and construction areas with low or zero emissions**.

I. Energy rehabilitation from the planning stage

Aspects ALREADY INCLUDED in the PGOU

- The PGOU establishes minimum criteria to **ensure energy efficiency in the rehabilitation** of residential, tertiary and equipment buildings, including measures such as natural ventilation, solar collection and insulation
- Broad **regulatory flexibility** is allowed: screeds, cantilevers, or energy installations are excluded from the building calculation if their purpose is to improve energy efficiency.
- The **use of renewable energies** on roofs and in open spaces is promoted, both for self-consumption and for supply, including cultural properties or public facilities.
- The regulations allow the installation of **energy infrastructure in different types of buildings**, as well as its implementation in public and private spaces without regulatory penalties.
- Re-densification in specific areas of the city.

New aspects PROPOSED for Planning

- It is proposed to reinforce the **bioclimatic approach** by incorporating measures such as shading, vegetation on façades, and green roofs directly into the regulations governing different urban uses.
- It is proposed to integrate **ecosystem services and climate criteria** into the chapters regulating housing, open spaces, economic activities, facilities, and infrastructure.
- In public spaces, it is suggested to promote **active and accessible mobility** as tools for climate adaptation.
- It is proposed to redefine the **specific conditions of use** to include recommendations on energy efficiency and climate resilience as a structural part of planning.
- It is also proposed to include in the regulations the **implementation of digital and energy infrastructures** (such as data centres) with environmental and landscape sustainability criteria.

Aspects proposed for OTHER INSTRUMENTS

- At the regulatory and management level, it is recommended to promote **specific renovation ordinances** and encourage **joint actions** (by blocks or neighbourhoods) to improve energy efficiency in aggregate terms.
- **Tax and financial incentives**, such as rebates, tax breaks and specific grants, are proposed to support low-carbon interventions.
- In terms of accessibility, it is proposed to implement a **Universal Accessibility Plan**, in line with state regulations, to guarantee accessibility throughout the city.
- It is suggested that measures for **digital infrastructure and urban heating** be included, providing for their orderly and sustainable deployment in the urban environment.

I. Energy rehabilitation from the planning stage

What doubts/conflicts have arisen?

- The primary objective is **energy efficiency and reduction, but how can this be achieved without losing architectural and landscape values** in a rapid renovation process? It is considered necessary to establish **solutions agreed upon** with heritage protection institutions and energy bodies in order to move forward while preserving the unique characteristics of urban environments and rural centres in this process.
- The question arises as to whether to incentivise **new nearly zero-energy buildings** as opposed to rehabilitating existing buildings with E or F certifications.

Key learning points:

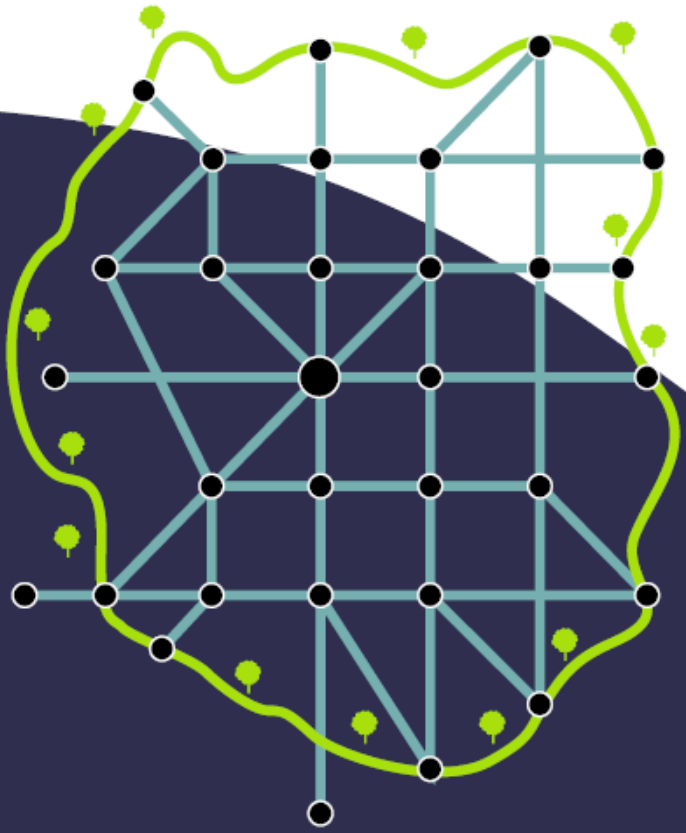
- Consider the regeneration of existing tissues separately from the creation of new urban developments. The **neighbourhood that consumes the least is the one that is not built. Containment and use of already artificialized land**.
- There is a clear need for **energy efficiency**, emissions reduction and bioclimatic architecture **criteria** to be the subject of **complementary ordinances** with their own entity, which complement urban planning, covering regulatory aspects not addressed in the PGOU.
- Planning needs to be **as flexible and adaptive as possible in terms of forms and volumes** in order to promote the energy rehabilitation of buildings. Similarly, **energy regulation needs to be broad** to allow for energy communities, self-consumption and production.
- Define **specific guidelines and criteria for intervention in building rehabilitation** in neighbourhoods with similar characteristics in terms of construction quality, climatic conditions and location, proposing materials and solutions. Transfer to ordinance, specific regulations or maintain as a recommendation.
- **Include measures**, in the form of strategic planning (PDIV, AU, etc.), that promote adaptation and mitigation in open spaces.
- In redevelopment and renovation projects, the implementation of **digital networks** should be obligatory, in anticipation of future interests.
- The PGOU cannot implement **central heating systems** in existing neighbourhoods, only facilitate deployment with flexible regulations.
- Enforce through regulations the return to **soil permeability** in open spaces in order to aid infiltration and evapotranspiration.

II. Sustainable mobility for urban metabolism

Develop a sustainable mobility model based on **active mobility, electrified public transport and a reduction in private vehicles**.

Objectives of the Agreement:

1. Develop a **new sustainable mobility model** that promotes active mobility and an electrified public transport system.
2. Develop the superblock model and implement **traffic calming zones.**
3. Expand **pedestrian and cycle networks** and expand the **public transport network**
4. Reformulate **regulated parking** zones
5. Promote the **electrification of mobility** (private and public, passenger and freight)
6. Promote the use of **efficient driving** techniques.



II. Sustainable mobility for urban metabolism

Aspects ALREADY INCLUDED IN THE PGOU

- The PGOU prioritises **sustainable mobility**: public transport (tram, BEI), cycling and pedestrian mobility are reinforced, and car use is limited.
- A **compact and connected urban model** is promoted, with integrated cycling and pedestrian networks and the naturalisation of routes (such as rural paths).
- The value of the **tram as a structural axis** of modal change and of public space as a support for new mobility infrastructure is recognised.
- A **continuous and connected** active mobility network is proposed to connect the city and nature.
- The regulations also include principles of **road hierarchy**, traffic-calmed streets and superblocks as an organisational model.

New aspects PROPOSED for planning

- It is proposed to strengthen **coordination with the PMUS** [sustainable urban mobility plan] **(PMSEP** [sustainable mobility and public space plan]), establishing **criteria in the PGOU on appropriate densities, centralities and urban typologies** that facilitate sustainable mobility.
- The PGOU can define **standard street models** that integrate recreational space, active modes, public transport and traffic calming.
- **Conditions for loading, unloading and emergency access** must be provided for in all urban landscapes.
- With regard to **parking**, a more restrictive model is suggested in order to adjust demand to the urban context, in coordination with the PMUS.
- It is recommended that **infrastructure for electric vehicles** be provided, without favouring private vehicles over more sustainable modes of transport.

Aspects proposed for OTHER INSTRUMENTS

- The **PMUS** must coordinate the network system (pedestrian, cyclist and public transport) with clear hierarchies and traffic calming objectives.
- The **Low Emission Zone** is highlighted as a lever for urban change, with potential for expansion.
- The **Mobility Ordinance** must be updated to reinforce sustainable modes and manage the occupation of public space.
- **Minimum pedestrian quality standards** are proposed, designing accessible and comfortable streets for all people within the PMUS.
- The **deployment of electric charging points** must be strategic and coordinated, promoting a fair and balanced transition.

III. Sustainable mobility for urban metabolism

What doubts/conflicts have arisen?

- The objectives of the Climate Agreement overlap on certain issues, which made it necessary to **differentiate between the structural aspects** of different modes of transport and electrification.
- It is difficult to **regulate for future changes,** such as autonomous or electric cars, without knowing the impact and format in which they will be developed.
- Recognise the **competence of each instrument** (PGOU, PMUS, Ordinance, etc.) so that the **final urban design** is consistent with the general objective of promoting active mobility and reducing emissions.

Key learning points:

- The wording must **coordinate the PGOU guidelines with the PMUS proposals**, mobility is modelled according to the established ordinance, and the ordinance is adapted so that its mobility works and generates fewer emissions. The PMUS serves as a strategic and operational framework for mobility policies and is responsible for defining mobility networks and their internal hierarchy. The role of the PGOU is to prepare the groundwork and establish the appropriate context for the PMUS to be ambitious.
- Planning has a decisive influence on mobility as it **shapes future travel by establishing**:
    - The location and density of housing, jobs, facilities and other activities: ***dense, mixed-use city***
    - The distance between buildings, the free space between alignments, streets: ***compact, continuous city***
    - Growth, expansion of urbanised and artificial areas, sprawl and possible increase in travel: ***contained city***
- Planning should not establish pedestrian and cycle networks, as these need to be more adaptive and changeable, but it can create **typologies and standards** that serve as a basis for their specific design.

III. Reducing the risk of heatwaves

Identify urban areas that are particularly **vulnerable to heat stress in order to incorporate specific adaptation measures** into their urban development.

Objectives of the Agreement:

1. Incorporate **thermal comfort and bioclimatic urban criteria** into detailed planning, prioritising solutions for shade, ventilation and naturalisation.
2. **Apply climate and public health studies** to justify detailed planning and anticipate corrective measures in new developments.
3. Integrate **environmental indicators** to assess ecosystem conservation and urban climate resilience.
4. Develop **sustainable urban drainage plans** to mitigate the effects of heavy rainfall and reduce saturation of the sanitation network (in terms of its undetected impact on thermal regulation).

III. Reducing the risk of heatwaves

Aspects ALREADY INCLUDED IN THE PGOU

- **Strengthening green infrastructure** against climate change, increasing its capacity as a carbon sink and improving urban biodiversity.
- **Systematic integration of SUDS** [sustainable urban drainage systems] **and vegetation** in urban public spaces. **Mandatory use of permeable paving and other sustainable drainage systems**, especially in open spaces and car parks.
- **Protection of fertile soil and non-developable land** through limits on impermeabilization and revegetation strategies.
- **Improvements to public spaces** that prioritise vegetation, air quality and thermal comfort, including the protection of tree cover and the use of plant species.
- **Specific design regulations** requiring high permeability in private green areas.
- **Bioclimatic design in public and private buildings.**

New aspects PROPOSED for planning

- **Creation of a network of climate shelters** (inside and outside), connected by green corridors that also integrate classroom solutions, school routes and inclusive criteria.
- **Review and creation of climate ordinances** that ensure minimum vegetation, shade and permeable soil according to the type of urban space.
- It is proposed to include **thermal comfort criteria and corrective solutions in detailed planning,** especially in neighbourhoods with higher thermal stress.

Aspects proposed for OTHER INSTRUMENTS

- **Citizen participation in naturalisation**, facilitating community management of tree pits, flower beds and green spaces through urban gardening ordinances.
- **Neighbourhood naturalisation and integrated stormwater management plans** aimed at mitigating the impact of heavy rainfall and improving local resilience.
- **Benefits and assistance** to protect vulnerable populations from extreme heat, including home care services.
- **Tax breaks and public subsidies** to encourage private energy efficiency and urban naturalisation initiatives.
- **Integration of climate criteria into development planning**, with specific studies in vulnerable areas and the use of indicators such as the Urban Space Ecological Return Index (IDEEU) or the Basal Area Factor (BAF) to measure impact and ecological conservation.

III. Reducing the risk of heatwaves

What doubts/conflicts have arisen?

- Urban overheating cannot be addressed in isolation or independently, but should be linked to other sectors (issues) and urban dimensions.
- The Vitoria Gasteiz Climate Agreement does not include the risk of heat stress in public spaces as one of its priorities, so there are no proposals related to this issue.
- How planning can **adapt to the transformations that climate change will bring about in our territories** and climates.

Key learning points:

- The PGOU should consider the synergies between climate change adaptation and mitigation from the outset. The urban areas most affected by climate change must be identified in order to guide urban design and require specific studies in future developments.
- It is crucial to integrate indicators aligned with the Green Infrastructure Assessment and Monitoring System to ensure that the city achieves its aims.
- The opportunity to incorporate specific conditions of urban land affected by the overlapping constraint of the network of bioclimatic shelters.
- Detailed planning in neighbourhoods with greater thermal stress should incorporate thermal comfort criteria and corrective solutions.
- The **multidisciplinary approach** required by the issue should flow from the definition of the city model to the detailing and implementation of the plan.

Next steps for your municipality

4

Work plan and resources

I. What is a typical review process like?

Addressing the revision of the General Urban Ordinance Plan (PGOU) by incorporating the perspective of climate neutrality is a challenge that each municipality must adapt to its own reality. There is no single path, but rather a flexible process that can—and should—be adjusted according to the size, technical capabilities and resources available in each local context.

This chapter proposes a phased work plan to serve as a guide for municipalities that need to undertake a comprehensive review of their PGOU.

The standard work plan is structured in four consecutive and interrelated phases:

1 **Preliminary phase** to prepare the ground by strengthening internal organisation and the relational framework

2 **Analysis phase**, where challenges are identified and key indicators are defined to guide the process

3 **Development** and integration **phase**, focused on designing and agreeing on regulatory proposals that shape a PGOU aligned with climate objectives

4 **Evaluation and monitoring phase**, which ensures continuous learning, adaptation and social involvement over time.

Each phase combines different **types of actions** that are articulated in three complementary dimensions.

- **Governance,** aimed at transforming institutional culture, improving intersectorality, and consolidating the spaces for innovation necessary to sustain the process.
- **Technical**, providing knowledge, data, expert analysis, and specific regulatory proposals to ensure that the PGOU incorporates criteria for climate change mitigation and adaptation.
- **Participatory,** aimed at involving citizens from diagnosis to evaluation, integrating diverse social perspectives, with special attention to vulnerable groups.

1. **Preliminary phase:** Preparing the ground

Consolidate an organisational, technical, and social foundation that allows for a cross-cutting approach to the review of the PGOU, ensuring shared leadership, awareness of the starting point, and the involvement of the entire municipal structure and citizens.

- **Strengthen municipal organisation**
  Improve intersectorality, recognising shared leadership and creating governance spaces where they do not exist.

- **Foster cross-cutting innovation spaces**
  Create formal and informal spaces that strengthen trust between areas (technical cafés, open meetings), and enable stable environments for collective reflection on the city and planning.

- **Identify existing strategic and sectoral plans**
  Map current planning and its connections with the PGOU (mobility, energy, water, health, circular economy, etc.).

- **Identify available databases.**
  Locate existing or missing baseline data and climate indicators, and review current monitoring systems.

- **Analyse the citizen participation system.**
  Evaluate current spaces for collaboration (forums, participatory budgets, associations), their openness to climate challenges, and strengthen social awareness through awareness-raising processes.

- **Ensure an intersectional gender perspective**
  Review municipal processes—both internal and participatory—to integrate gender and intersectionality perspectives into content and methodologies.

2. **Phase of analysis** and identification of actions to be included in the PGOU (Initial Studies)

Conduct a technical and social assessment to understand current issues and opportunities surrounding climate neutrality, lay the groundwork using clear indicators, and build shared knowledge that will guide decisions in the new PGOU.

- **Identify general key elements for the municipality in terms of climate neutrality**
  Conduct a technical analysis of current plans and projects, supplemented by workshops or cross-sector round tables to identify:
  - How is the regeneration of the built environment being addressed?
  - What are the regulations governing urban metabolism (energy, water, waste, productive land)?
  - How do we manage climate vulnerability and risks?

- **Develop specific key elements for the PGOU**
  - Organise thematic working groups with experts, integrating technical, social and economic profiles, to delve deeper into the major climate challenges identified in general terms (rehabilitation, sustainable mobility, vulnerability to heat waves in the case of Vitoria)
  - Incorporate the analysis of successful cases of implementation of specific actions in other plans.

- **Establish climate neutrality indicators**
  Define baseline indicators that measure the municipality's starting point and serve as a reference framework for evaluating the effectiveness of the PGOU in meeting climate objectives.

- **Promote communication and public education**
  Launch specific campaigns to explain the reasons behind and purpose of the process, paying particular attention to the specific needs of neighbourhoods.

3. **Development and integration** phase in urban planning. (Initial proposal)

Define and agree on the regulatory provisions of the new PGOU, ensuring that they explicitly incorporate climate neutrality criteria and a comprehensive approach to adaptation, mitigation and climate justice.

- **Establish working groups to develop specific regulatory proposals**
  Design PGOU proposals with the direct participation of municipal technicians, external experts, and interested citizens.

- **Calculate the impact on climate neutrality indicators**
  Assess how regulatory proposals affect baseline indicators and what improvements they bring to ensure the municipality's climate neutrality, using these indicators as a benchmark for future measurement.

- **Promote cross-sectoral work in the expansion of the PGOU**
  Ensure that planning decisions integrate criteria for adaptation, mitigation and climate justice, assimilated and understood by all areas involved (mobility, housing, public space, green infrastructure), identifying how they should be applied, their feasibility and specific needs.

- **Promote citizen involvement through exemplary cases**
  Showcase local pilot cases or examples from other cities and organise conferences or workshops to discuss how to apply the new PGOU measures and what implications they have on everyday life.

4. **Evaluation and follow-up phase** (Proposal Approval and Management)

Ensure that the PGOU evolves with the context, monitoring its climate effectiveness, consolidating learning within the municipal structure and maintaining active citizen involvement to adapt the plan on an ongoing basis.

- **Follow up on barriers or problems identified from an intersectoral perspective**
  - Incorporate indicators that assess the climate effectiveness of the PGOU, enable the detection of obstacles and allow measures to be adjusted as conditions evolve.
  - Set up a specific working group to facilitate the review and application of the regulations, promoting specific modifications if necessary.

- **Consolidate and highlight learning within the municipal structure**
  - Document experiences and partial results so that knowledge remains within the organisation, regardless of political cycles or changes in teams.
  - Maintain spaces for innovation that provide feedback to the PGOU and other plans or initiatives necessary to achieve climate neutrality.

- **Maintain spaces for citizen participation to evaluate the impact of the PGOU**
  Ensure open and stable channels for gathering citizens' concerns and proposals, reviewing and adjusting the plan iteratively.

II. How much time does it take?

The time required to incorporate the climate neutrality perspective into the PGOU review **is complementary to the phases of the urban planning review process itself**. Each stage of the standard work plan follows the usual PGOU preparation schedule, except for the initial preparation phase, the duration of which will depend to a large extent on the starting point and organisational capacity of each municipality.

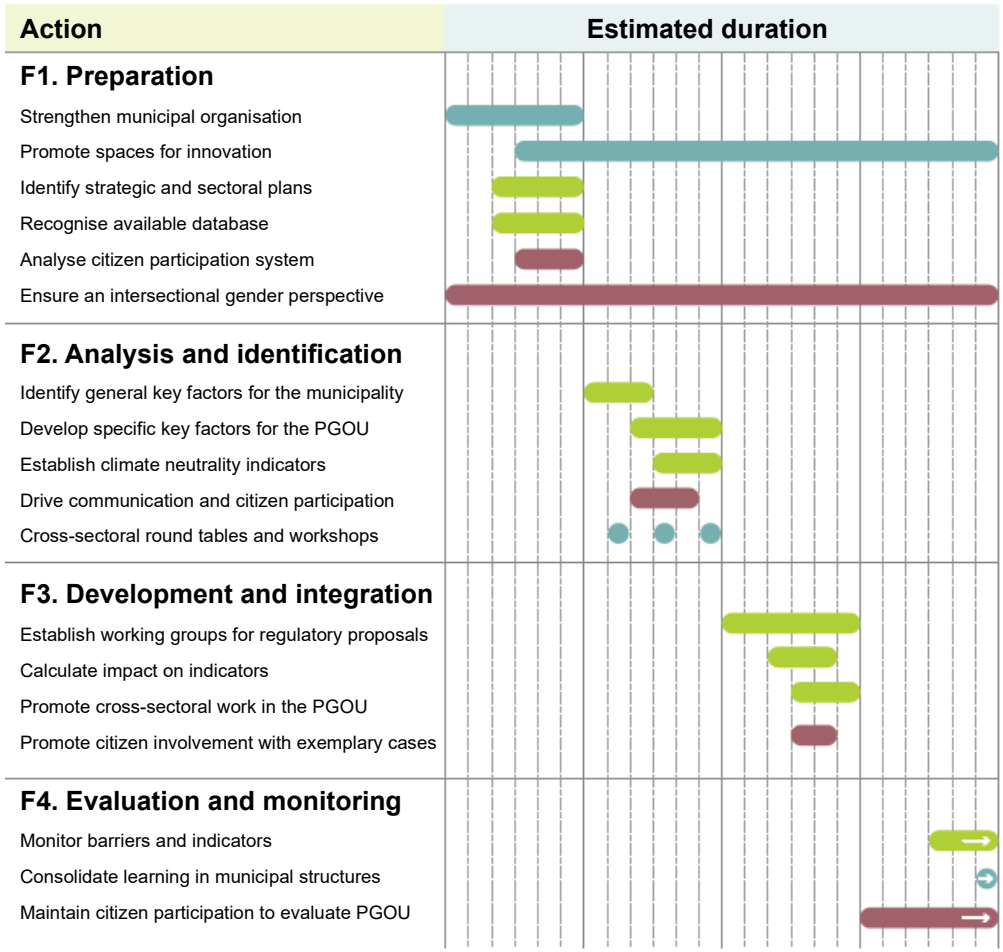
F.1. Preparation: depending on the starting point and the time required to strengthen the internal organisation and lay the technical and participatory foundations.

F.2. Analysis and identification: carried out in parallel with the drafting period of the Initial Studies.

F.3. Development and integration into the regulations*: coincides with the preparation and processing of the Initial Proposal, subject to the time required for sectoral reports and corrections.

F.4. Evaluation and monitoring*: begins with the public information and comments period and extends from the final approval of the PGOU until its expected effective date, with ad hoc reviews or adjustments as the climate and regulatory context evolves.

***Note**: If initial and final approval are delayed, cross-sectoral work and citizen participation may continue, complemented by other planning instruments and parallel projects that do not depend exclusively on the PGOU.



III. How much does it cost to work differently?

Incorporating the perspective of climate neutrality into the revision of the PGOU involves broadening the traditional scope of planning, both in terms of the type of assessments and in the regulatory criteria and participatory methodology. **This requires a multidisciplinary team that can be organised in different ways depending on the local context:** through a specialised external team hired to draft the entire plan, a technical commission made up of municipal staff, or a combination that includes specific hires or ad hoc collaborations.

Essential technical profiles, usually required in any PGOU, indispensable for ensuring the climate perspective:

- **Urban architects,** for regulatory design and urban model structuring.
- **Civil engineers**, for mobility infrastructure, technical networks and roads.
- **Environmental technicians**, to integrate **the ecosystem approach** and manage strategic assessments.
- **Lawyers specialising in urban planning**, to ensure the legal consistency of decisions.
- **Economists**, to assess the socio-economic impact of planning and the feasibility of actions.
- **GIS specialists**, to model cartography, analyse spatial data and scenarios.
- **Experts** in citizen participation, to design and facilitate deliberative processes.
- **Specialists in gender perspective**, to ensure inclusive analysis and design.

+

Specific complementary technical resources for a climate-friendly PGOU

- **Municipal cross-sector coordination and promotion**: Technicians who lead and facilitate joint decision-making spaces between areas, improving internal governance and cross-cutting work.
- **Specialists in environmental education and urban climate communication**: To design campaigns, teaching materials and processes that translate planning into a language that the public can understand.
- **Scientific experts or technicians specialising in specific subjects**, who can participate as occasional support or in round tables:
  - Energy rehabilitation and sustainable building.
  - Renewable energies and energy communities.
  - Urban ecology and green infrastructure.
  - Integral water cycle and sustainable drainage.
  - Environmental and climate law.
  - Other areas according to local characteristics (e.g. productive soils).
- **Specialists in calculating and standardising climate indicators**: To design, select or adapt international indicators to the specific context of the municipality and ensure their monitoring.

An effort that can be adjusted

Working in this way requires additional effort, but it is **scalable and flexible**. Many municipalities can **gradually train their internal staff** to take on new skills, combining this with **specific external support** in critical areas at the beginning and end of each phase (technical diagnostics, climate indicators, or legal and environmental validation of the final document).

Learning from other cities

5

Examples and tools

Other resources

Prior to this document, other administrations had already developed guidelines to support city councils in drawing up their plans **with the aim of reducing their emissions and mitigating climate impact**. Some of these are presented below:

- Climate Action Guide for Urban Planners. C40 Cities (2024)
- Guide for the inclusion of Climate Change and Ecological Transition in urban planning. Government of the Canary Islands GMICC (2020)
- Methodological guide to measures for climate change mitigation and adaptation in urban planning. FEMP. (2015)
- LIFENADAPTA Guide. Guide to Urban Planning, Architecture and Climate Change in Navarre (2021)
- LIFENADAPTA Guide. Proposals for implementing adaptation. Necessary modifications to legislative frameworks (2021).
- Guidelines for integrating climate considerations into the environmental assessment procedure for urban planning instruments in the Valencian Community (2023)
- Guide for incorporating climate change into the environmental assessment procedure for urban planning instruments in Andalusia. Regional Government of Andalusia (2020)
- Methodological guide for municipalities in Navarre. Proposed Technical Planning Instructions (2018).

Good practices

Join the cities that are integrating criteria for climate neutrality.

Many cities are exploring new ways of conducting urban and climate policy, cultivating the conditions for change to occur: strengthening trust, generating impact and facing the challenges ahead.

These new approaches are necessary to achieve better results in an uncertain future and to generate more inclusive, pluralistic and, therefore, more robust processes.

Cities named in the Climate Action Guide for Planners. C40 Cities (2024)

100 CLIMATE-NEUTRAL AND SMART CITIES - EU CITIES

Technical direction:

Ayuntamiento de Vitoria-Gasteiz
Ana Oregi Bastarrika
Beatriz García-Moncó Piñeiro
Itxaso Molinero Aguirre

Editorial team:

Paisaje Transversal
Jon Aguirre Such
Iñaki Romero Fernández de Larrea
Pilar Díaz Rodríguez
Guillermo Acero Caballero
Anna Meléndez Schofield
Landa Hernández Martínez, comunicación
Vanessa Morant Muñoz, maquetación

Tecnalia
Carolina García Madruga
Olatz Nicolas Buxens
Gemma García Blanco

EUCINCO 2.0
Alicia Carvajal Rowan (Dark Matter Labs)
Andrea Lusquiños Mansilla (citiES 2030)
Aurora González-Adalid Núñez (Democratic Society)
Ana Salom (Democratic Society), ilustraciones

*The EU CINCO 2.0 initiative receives funding from the Laudes Foundation

Special thanks to:
Carmen Andrés Mateo &
Llanos Masiá González (Cemaselle)
Alfonso Sanz Alduán (GEA21)
Estibaliz Sanz Gogeaskoetxea &
María José Sanz Sánchez (BC3)
Juan Requejo Liberal (Arenal)

NET ZERO CITIES

Ayuntamiento de Vitoria-Gasteiz
Vitoria-Gasteizko Udala

paisaje transversal
escuchar y transformar la ciudad

tecnalia

eucinco