



Design Your City's Net Zero Strategy: Online Planning Lab

NetZeroCities online course for all cities

September 16th- December 11th 2025



Funded by
the European Union



23/10/2025

Module 3 - Spotlight Session 3

Using NetZeroPlanner to Achieve Net-Zero Goals

Supporting Climate Planning, Monitoring / Evaluation / Learning, and Implementation Management



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<https://netzerocities.app/resource-4501>

MODULE 1	Core The NetZeroCities program, service offering, systemic approach, what works for Mission Cities	Spotlight 1 NetZeroCities Orientation	Spotlight 2 Shaping Climate Narratives	Spotlight 3 Climate City Contracts
MODULE 2	Core Developing a transition team, mapping and activating the ecosystem	Spotlight 1 Transition team & climate leadership	Spotlight 2 Engaging the private sector	Spotlight 3 Citizen engagement for systemic climate action
MODULE 3	Core Developing the city's action plan for climate neutrality	Spotlight 1 Reporting and MEL	Spotlight 2 Co-Designing a Climate Portfolio	Spotlight 3 Using NetZeroPlanner to Support Climate Planning, MEL, and Implementation Management to Achieve Net Zero Goals
MODULE 4	Core Levers of change: Technical solutions, social innovation and multi-actor collaborations	Spotlight 1 Passive solutions to reduce energy demand in buildings	Spotlight 2 Systemic energy transition at buildings, districts and city level	Spotlight 3 Data-driven approaches to energy transition in buildings and districts
MODULE 5	Core Increase finance knowledge of the public administration & learn about options to finance projects	Spotlight 1 Preparing a pipeline of projects with necessary data and information	Spotlight 2 Different investor groups and the key priorities and returns profiles for each and instruments	Spotlight 3 Financing the ambition: Learning from Mission Cities
MODULE 6	Core Multilevel governance, national platforms and policy strategies	Spotlight 1 Policy and regulations innovation	Spotlight 2 Public procurement – national specificities	Spotlight 3 Just transition





Housekeeping



All participants will be muted until Q&A period.



Use the chat for questions and to introduce yourself.



Raise your hand before speaking.



Change your Zoom name to include your city.



Stay engaged: We invite you to keep your camera on.

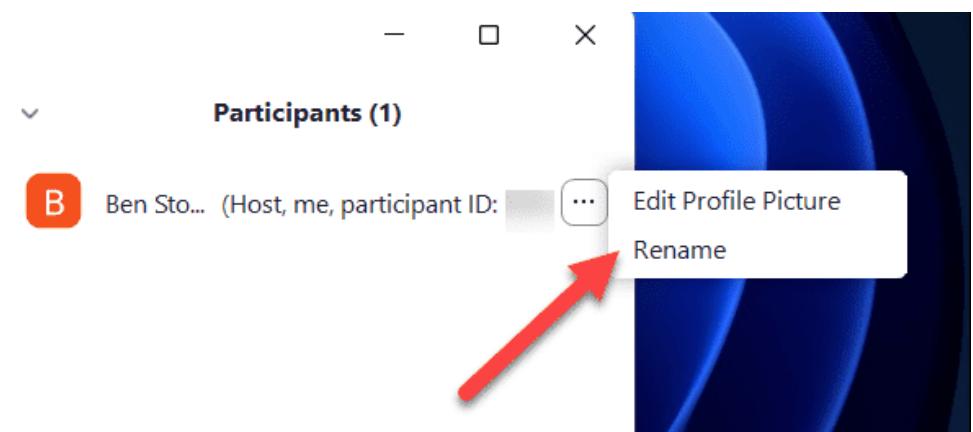


Activate Closed Captions to keep up with the speakers.



Renaming

- In the meeting controls toolbar, click on **Participants**.
- Hover your mouse over your name, then click **More** or the **ellipsis icon**. (•••)
- Click **Rename**. A pop-up box will appear.
- In the pop-up box, enter your display name.
- Click **Change**.





Activating Closed Captions

- In the meeting controls toolbar, click the **Show captions** icon. ()
- Captions will automatically appear above the meeting controls toolbar.

***Caption language:** Please do not change the spoken language of the meeting, as captions will change for everyone.





Participation

This course is intended for all EU (and Horizon affiliated countries) cities that do not yet have (or aim to improve) a climate Action Plan for the city

- It's open to any municipality as well as to consultants, experts, regional authorities, etc.
- The course guides cities into developing a climate action plan | No funding available for participating cities
- This course is NOT for students
- After each session, facilitators remain online for Q&A

26 online sessions
of which 6 are core sessions

Tuesday 9.15-11.00 and
Thursday 13.15-15.00

Participation is **free**





Certification

Free

Municipalities that **attend all 6 core sessions** will obtain a certificate of attendance for the city issued by the NetZeroCities project

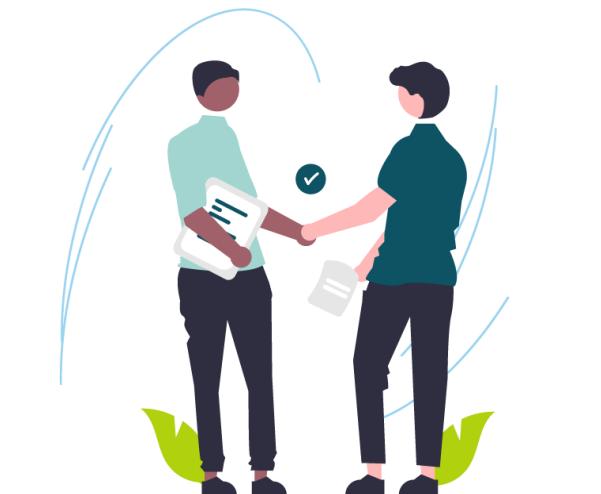
30€

Participants who **attend all 6 core sessions** can obtain a certificate of attendance issued by **Universidad Politecnica de Madrid**



Online ceremony on December 11th 2025

In-person ceremony at the City Conference in Turin May 2026





Recordings and activities

- All participants who sign up for the program receive an email **after each module with the video recording** of the sessions and additional useful information.
- Before joining each session, you will be requested to agree with the course privacy policy, provide **permission for recording** and details of your municipality or profile to be able to issue the attendance certificates.
- The program is structured into **six modules**, each offering 4-6 hands-on sessions led by expert practitioners and cities. Each session will have an interactive component, in which you can share your questions and experiences.

Q: Can you participate in single sessions?

A: Yes! If you sign up for the course, you will receive communications and links to all the sessions. All sessions are held on Zoom (online). All participants who sign up for the program receive an email after each module with the video recording of the session and additional useful information.

Q: What is the level of English proficiency required?

A: Participants can ask questions in their own (European) language in the chat.

DISCLAIMER: Before joining each session, you will be requested to agree with the course privacy policy, provide **permission for recording** and details of your municipality or profile to be able to issue the attendance certificates.



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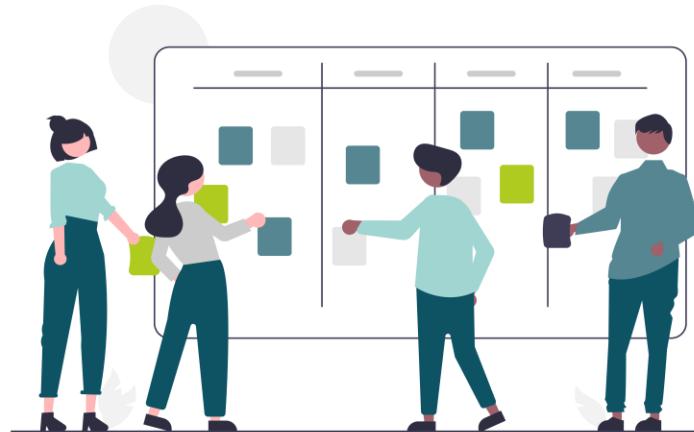


Sign-up and Portal Group

What should you do now?

There is **no deadline** for applying to the course. All sessions are held on Zoom, and you can join the Zoom meeting through the link provided in this email or in the course program page on the NetZeroCities portal.

1. **SIGN UP NOW** for Zoom sessions and ADD them to your CALENDAR
2. Read carefully the online pages for each session and register in advance for each of the sessions on the Zoom platform.
3. Join the dedicated group for this course to interact with other participants: [Design Your City's Net Zero Strategy: Online Planning Lab](#)





Faculty

Scientific Directors



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Lecturers



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Carolina García Madruga



Julia Kantorovitch



Mari Hukkanainen



David Brito



Marzia Mortati



Georgia Cameron



Meline González Piloyan



Nupur Prothi



Vaneshree Naidoo



Cristina Robledano



Apurva Singh



Janne Rinne



Alexandru Buftic



Marcial Silva



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NetZeroPlanner

An online tool to help you structure the process
of planning, implementing, and achieving your
net-zero goals





Lecturers



Sean Murray

Universidad Politécnica de Madrid (UPM)
Politecnico di Milano (POLIMI)



Ramon Canal Oliveras

Director of the Technical Programming Office
Barcelona City Council





Session Agenda

1. Introduction and overview of the session – Sean (10 mins)
2. Overview of planning, monitoring/evaluation/learning, and implementation management process and how NetZeroPlanner (NZP) fits into that process – Sean (20 mins)
3. Live web demonstration of NetZeroPlanner – Sean (10 mins)
4. Walkthrough of how Barcelona used NZP to go through the entire process – Ramon (45 mins)
5. Q&A and closing – Sean & Ramon (20 mins)



Learning objectives for this session

- In order for cities to **achieve carbon neutrality**, they must create a strong **climate plan** or roadmap to net-zero. Once the plan is created, cities must **monitor, evaluate, and learn** from their results so they can effectively **manage the implementation of the plan and achieve their climate goals**.
- **NetZeroPlanner is an online tool** cities can use to evaluate and improve their climate plans, measure their results, and manage implementation to achieve net-zero success.
- **By the end of this session, you will:**
 - Understand the iterative process of climate planning, measurement, and implementation to achieve your climate goals.
 - Understand how NetZeroPlanner supports that process and how it works within the Climate City Contract structure including financial analysis
 - Learn from a city expert how Barcelona is using NetZeroPlanner for planning, implementation, learning, and continuous improvement.





NetZeroPlanner is accessed through the NetZeroCities Portal

Welcome to NetZeroPlanner

In partnership with NetZeroCities and Kausal

NetZeroPlanner is a powerful online tool that enables cities to assess the impact of their Climate Action Plans, refine them, and ensure they meet decarbonisation goals.

This tool is available to city users of the NetZeroCities Portal, [visit the Portal](#) to find out more and create an account.

[Create a NetZeroCities account](#)  Or sign in



How NetZeroPlanner guides your city's decarbonisation journey



Tailored City Data

Input your city's unique characteristics and strategic decarbonisation plans.



Decarbonisation Roadmap

NetZeroPlanner generates a customised roadmap for your city's journey to climate neutrality.



Impact and Assessment

Evaluate costs, benefits, and returns across carbon sub-sectors and stakeholders, optimizing carbon reductions and comparing Euros invested.



Performance Tracking

Leverage annual performance reports to measure progress, ensuring your Climate Action Plans remain on track.





NZP models 13 sub-sectors that are the main pathways to net-zero

13 sub-sectors modelled*

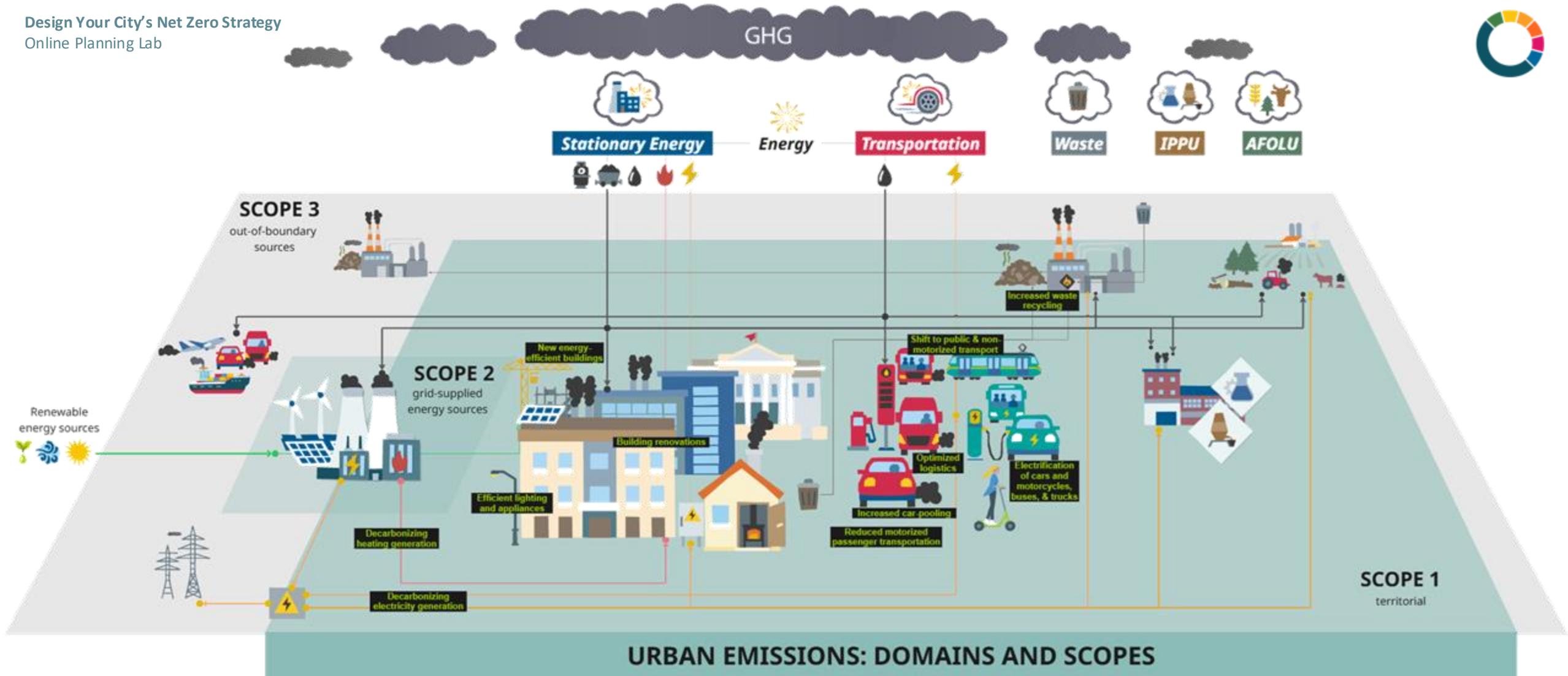
- **Reduce energy usage per capita**
 - Reduced motorized passenger transportation
 - Shift to public & non-motorized transport
 - Increased car-pooling
 - Optimized logistics
 - Building renovations (envelope)
 - New energy-efficient buildings
 - Efficient lighting and appliances
 - Increased waste recycling
- **Decarbonize the electrical grid**
 - Decarbonizing electricity generation
- **Electrify everything that is feasible**
 - Electrification of cars and motorcycles
 - Electrification of buses
 - Electrification of trucks
 - Decarbonizing heating generation
- **Offset the rest**

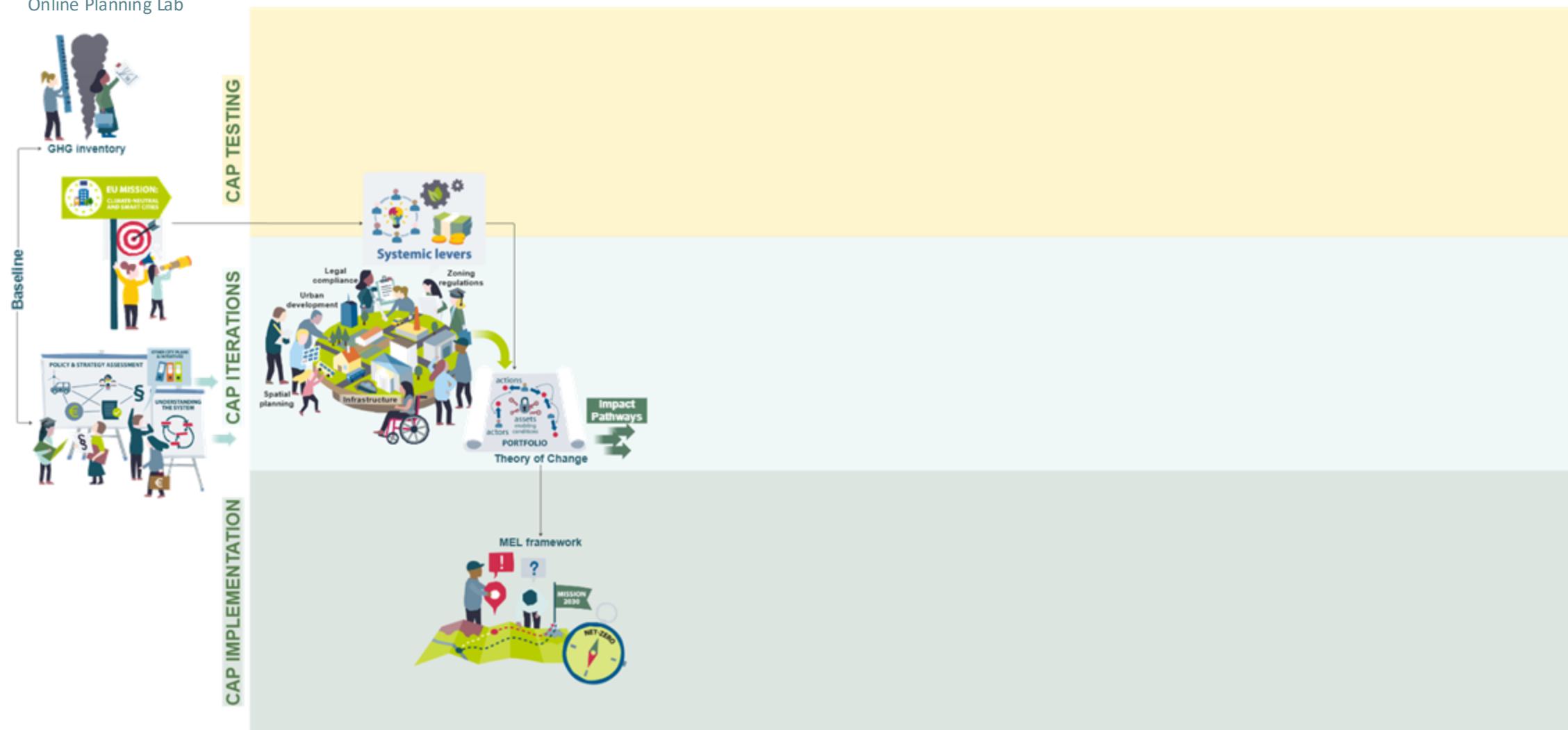
* Chosen based on city decarbonization potential and ability to influence that sub-sector

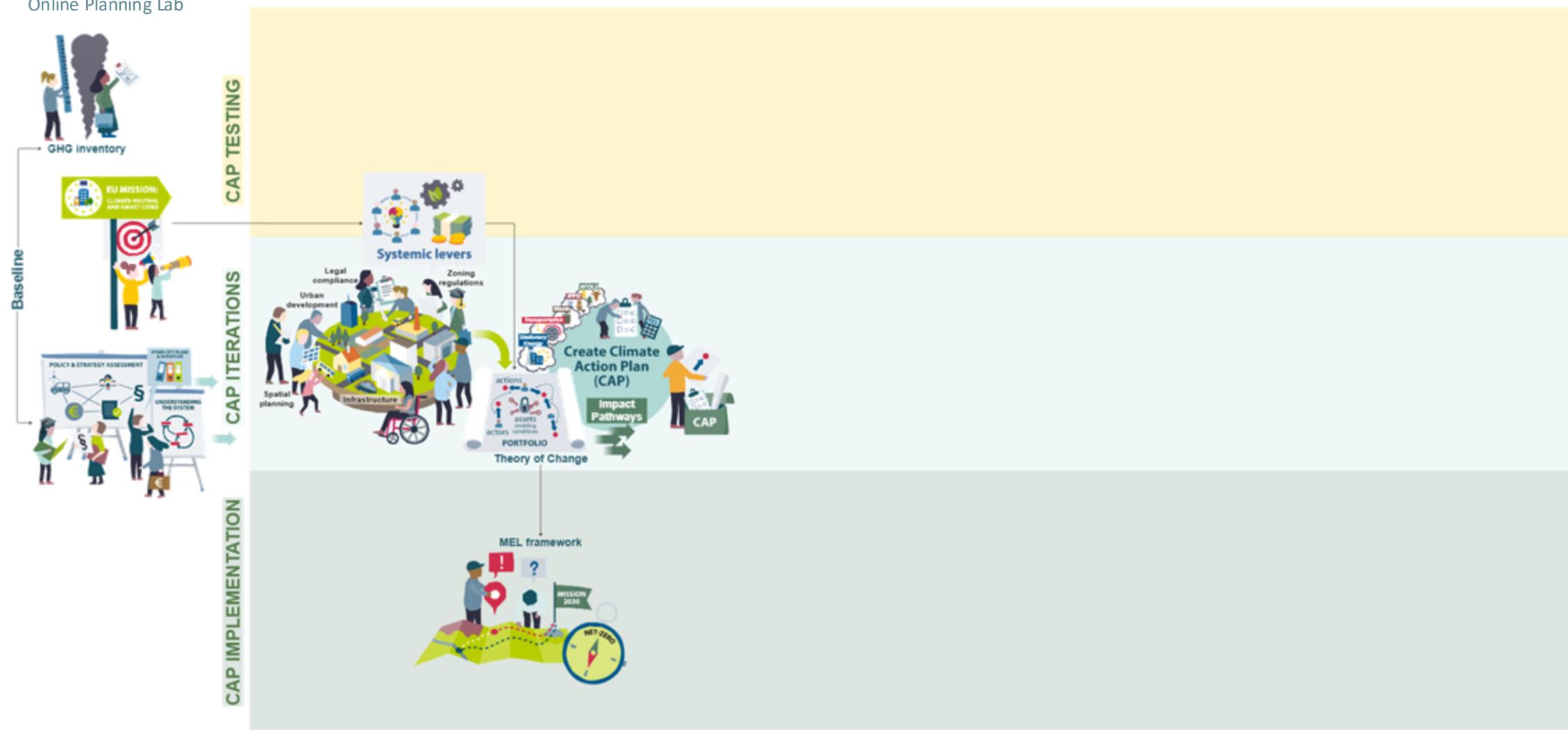
** Plus Scope 3 for solid waste



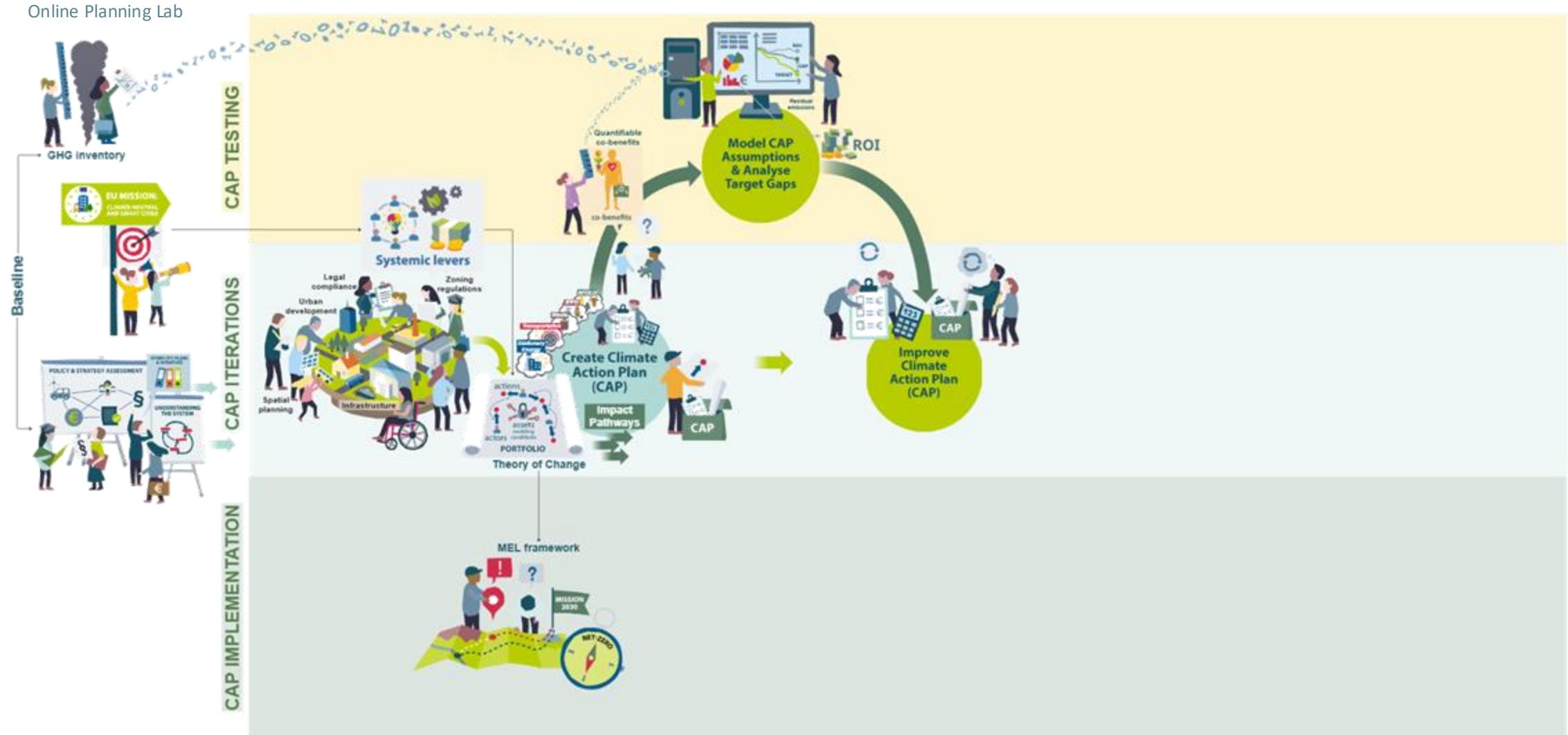
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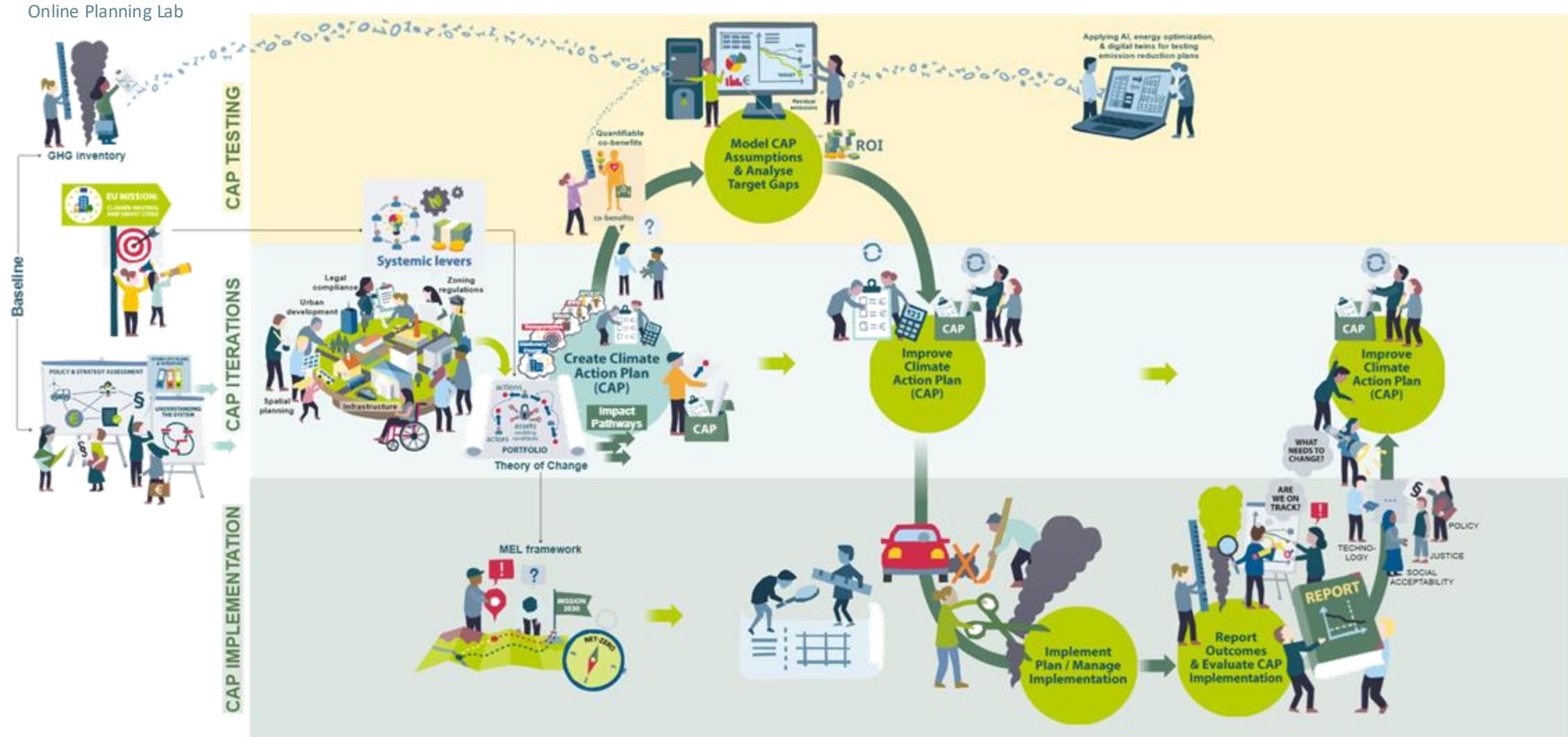


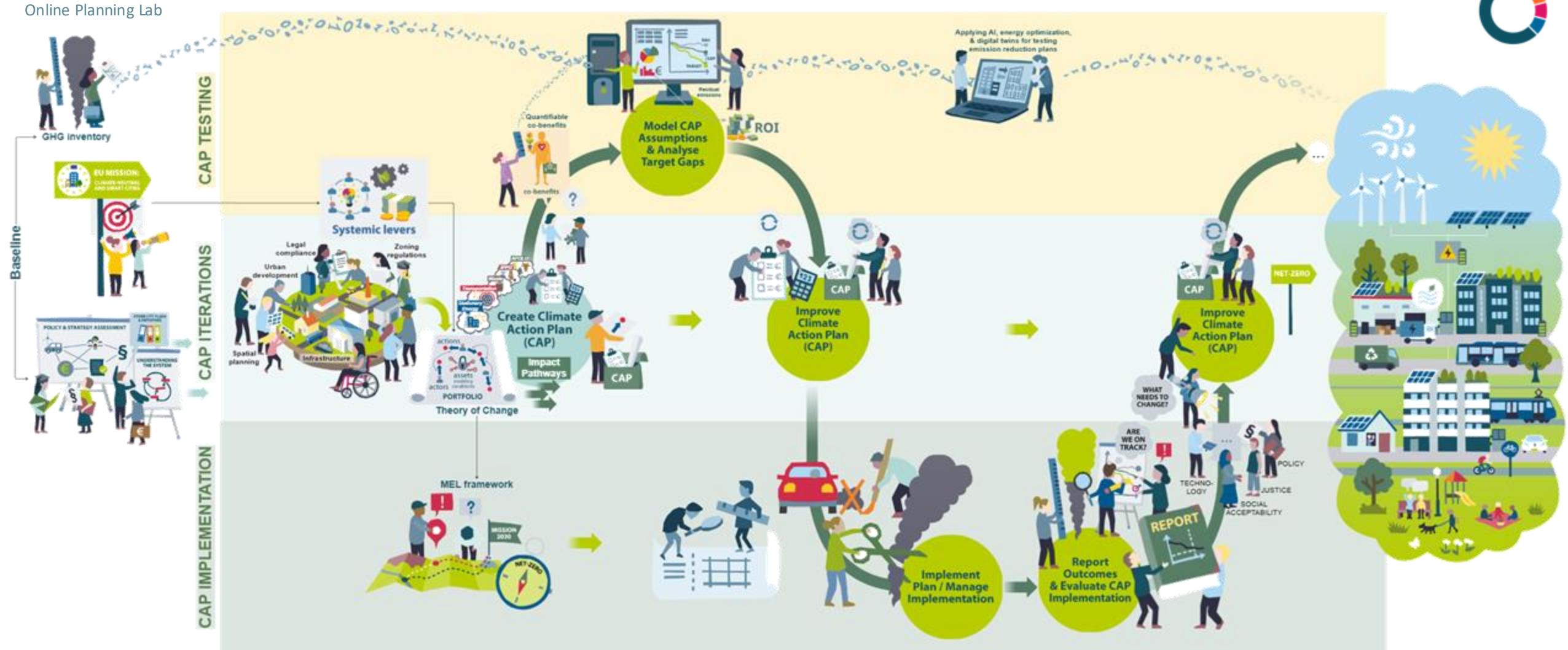












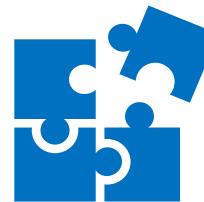


NetZeroPlanner structures the process to help cities achieve their climate goals

City provides city-specific baseline year data inputs and 2030 Climate Action Plan assumptions

Barcelona CAP 2030

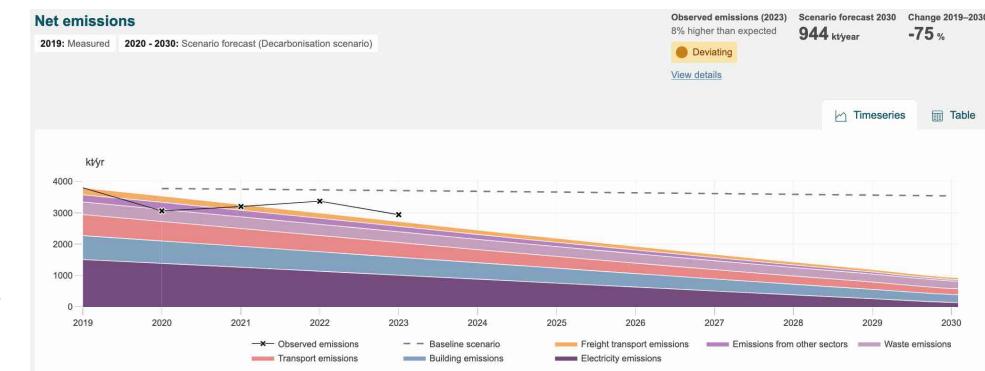
NZP Database:
Research-based non-city-specific data and assumptions



NetZeroPlanner tool:
mathematical calculations for validation and analysis



Decarbonization Dashboard and downloadable Excel tables



B-2: Table 8 - Capital Planning by Stakeholder - Total Investment-CAPEX (Cash Basis MEUR 2020-2030)								
Sector	Subsector	Citizens	Businesses	City	Transport Operators	Utilities	Total	
Transport	Reduced motorized passenger transportation need	€ -	€ -	€ -	€ -	€ -	€ -	
	Shift to public & non-motorized transport	€ (69)	€ -	€ (17)	€ (170)	€ -	€ (256)	
	Increased car pooling	€ -	€ -	€ -	€ -	€ -	€ -	
	Electrification of cars + motorcycles	€ (89)	€ (26)	€ (3)	€ -	€ -	€ (118)	
	Electrification of buses	€ -	€ -	€ -	€ (94)	€ -	€ (94)	
	Optimized logistics	€ -	€ -	€ -	€ -	€ -	€ -	
	Electrification of trucks	€ -	€ (47)	€ (7)	€ (233)	€ -	€ (287)	





Achieving Net-Zero in Barcelona

Developing Climate Action Plan and managing
implementation using NetZeroPlanner

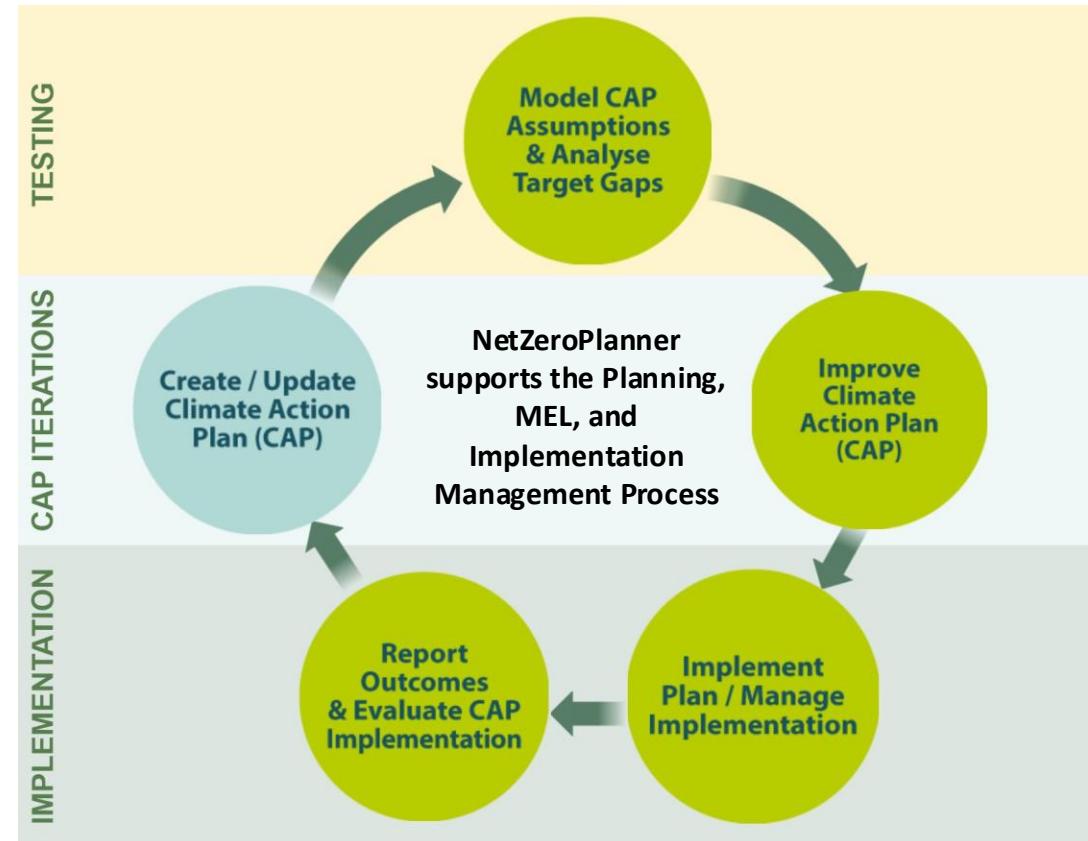


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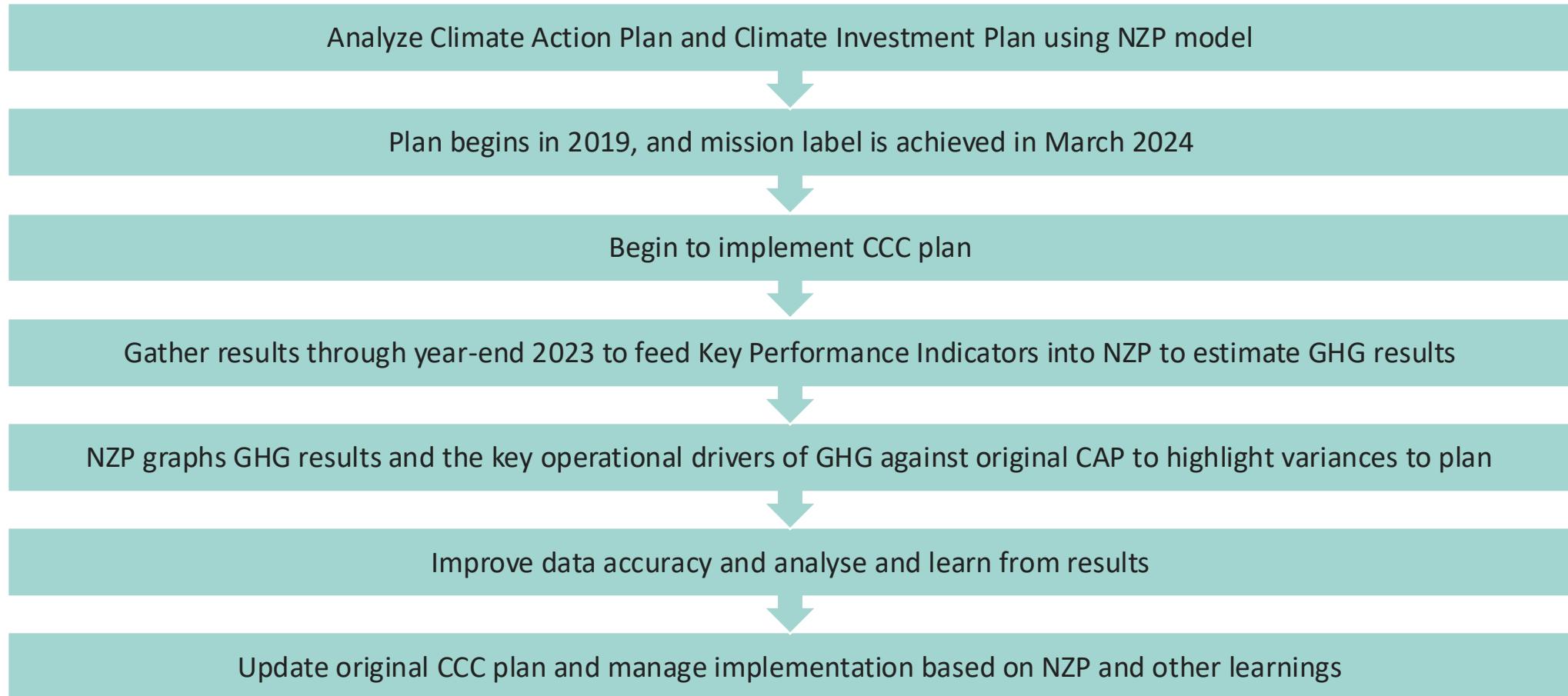
Barcelona received its mission label in March, 2024 and has since been implementing its Climate Action Plan

- Barcelona used 2019 as the baseline year
- Barcelona's Climate Action Plan strives to reach net-zero by 2030
- Barcelona analysed and improved its Climate Action Plan and Climate Investment Plan using the NetZeroPlanner model
- Now Barcelona is using NZP to monitor, evaluate, and learn in order to manage their implementation to net-zero success by 2030





Barcelona followed a structured process to stay on track to meeting their 2030 net-zero goals





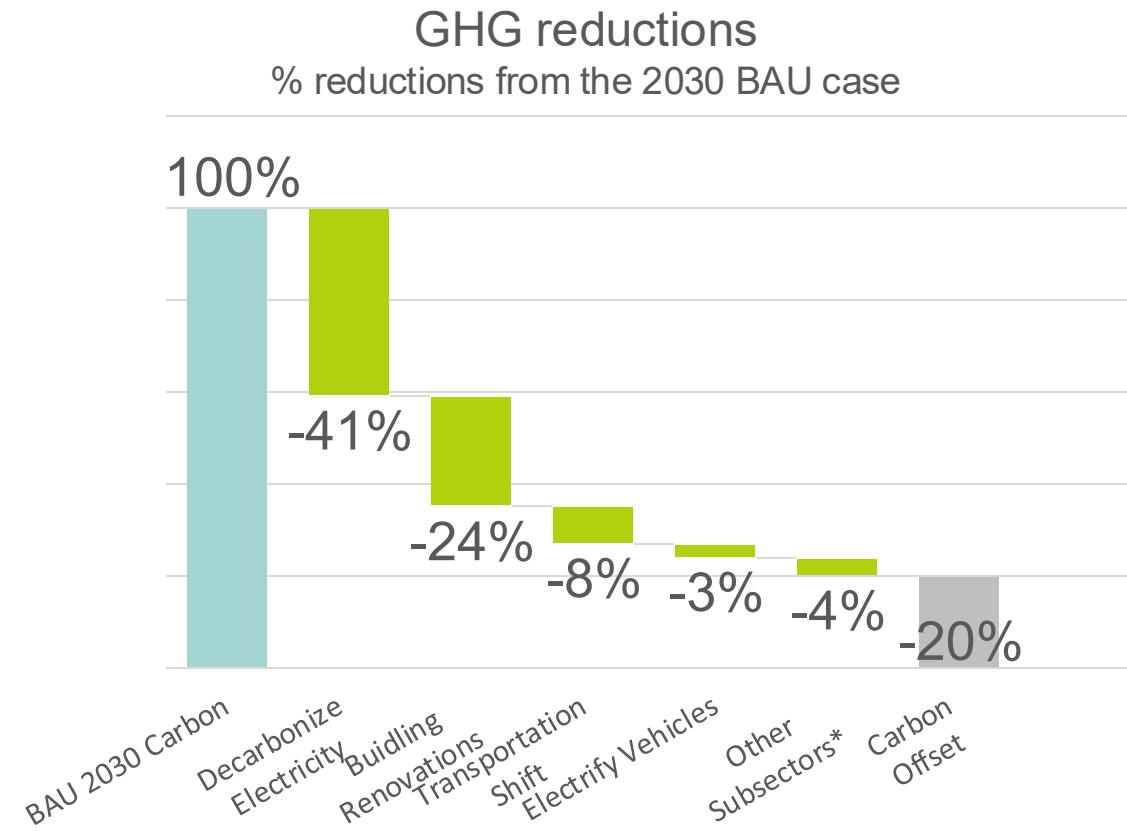
Barcelona listed the actions they would take to achieve net-zero in their Climate Action Plan (CCC Figure 15)

Climate Action Plan Module B-1: Climate Neutral Scenarios and Impact Pathways		
B-1.1: Impact Pathways		
Issuing Sector	Scope of Action	Transformative Actions with Direct Impact
Transport (Passenger)	Reduction in the need for motorized transport Modal shift (to public transport and/or non-motorized private transport)	6. Smart mobility program 1. Walking mobility program 2. Public and collective transport mobility program 3. Bicycle and personal vehicle mobility program 6. Smart mobility program 6. Smart mobility program 5. Private transport mobility program 2. Public and collective transport mobility program
	Shared transport	
	Other measures in the mobility sector	
	Car electrification	
	Bus electrification	
Transport (Freight)	Optimization of freight transport logistics	4. Urban freight distribution program
	Electrification of trucks	4. Urban freight distribution program 5. Private transport mobility program
Buildings & Heating	Building renovations	7. Energy rehabilitation program for buildings
	New net nearly zero-energy buildings	8. Building and heating innovation program
	Low-emission heat generation (decarbonization of heating)	8. Building and heating innovation program
Electricity	Building improvements in the domestic sector Tertiary sector building improvements Improvements to municipal buildings Efficient lighting and appliances	9. Energy efficiency program in the use of buildings 9. Energy efficiency program in the use of buildings 9. Energy efficiency program in the use of buildings 9. Energy efficiency program in the use of buildings 12 Lighting program for public spaces and municipal buildings
	Industrial activity (electricity)	16. Industrial decarbonization program
	Solar generation in the municipality of Barcelona	10. Renewable energy generation program in municipal buildings and public space 11. Renewable energy generation program in non-municipal residential, service, and industrial buildings
	Decarbonization of electricity	24. Metropolitan and multilevel concertation program
Waste	Zero waste strategy	13. Low-emission municipal waste management program 14. Waste prevention and reduction program
Other	Industrial activity (natural gas)	16. Industrial decarbonization program
	Other	15. Water cycle management program with a climate perspective 17. Urban green infrastructure program





Analysis of Barcelona Climate Action Plan shows which sub-sectors drive GHG reductions in the city



* Other subsectors include: Increased car-pooling, Optimised logistics, New energy-efficient buildings, and Increased waste recycling

- CAP reduces BAU CO2e per capita from 2.1 tonnes to .4 tonnes in 2030.
- 41% of the total reduction comes from decarbonising the electrical grid.
- 24% of the total reduction comes from a large increase in annual building renovations (from 1% to 5.7%).
- 8% of the total GHG reduction comes from ambitious targets for a 26% reduction in motorized trips and a 35% shift from cars to public transportation.
- The shift to electric vehicles reduces GHG another 3%. CAP assumes 100% of cars and light trucks will be electric by 2040.





Downloadable
Excel tables
helped with
financial
analysis,
learning, and
plan creation

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	Increased car pooling	€ -	€ -	€ -	€ -	€ -	€ -	
	Electrification of cars + motorcycles	€ (89)	€ (26)	€ (3)	€ -	€ -	€ (118)	
	Electrification of buses	€ -	€ -	€ -	€ (94)	€ -	€ (94)	
	Optimized logistics	€ -	€ -	€ -	€ -	€ -	€ -	
Buildings & Heating	Electrification of trucks	€ -	€ (47)	€ (7)	€ (233)	€ -	€ (287)	
	Building renovations (envelope)	€ (3,895)	€ (1,391)	€ (278)	€ -	€ -	€ (5,565)	
	New energy-efficient buildings	€ (49)	€ (98)	€ (16)	€ -	€ -	€ (163)	
	Efficient lighting & appliances	€ (1,163)	€ (416)	€ (83)	€ -	€ -	€ (1,662)	
Electricity	Decarbonizing heating generation	€ (261)	€ (93)	€ (63)	€ -	€ (177)	€ (595)	
	Decarbonizing electricity generation	€ (203)	€ (73)	€ (15)	€ -	€ (696)	€ (986)	
Waste	Increased waste recycling	€ -	€ -	€ (16)	€ -	€ -	€ (16)	
TOTAL		€ (5,731)	€ (2,144)	€ (498)	€ (496)	€ (873)	€ (9,742)	
% of Total		59%	22%	5%	5%	9%	100%	
Euros Per Capita (2030 population)		€ (3,408)	€ (1,275)	€ (296)	€ (295)	€ (519)	€ (5,794)	

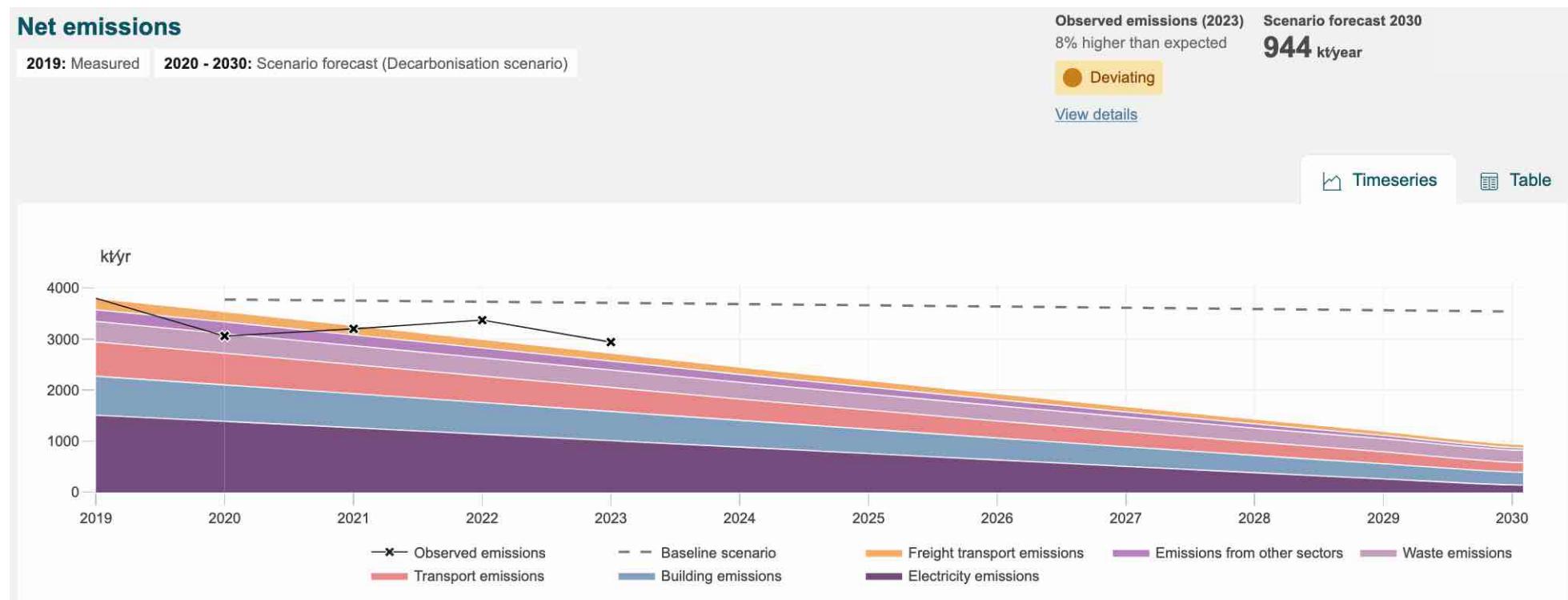
* Note: negative numbers denote outflows of money (investment / cost) and positive numbers denote inflows of money (savings / co-benefits)



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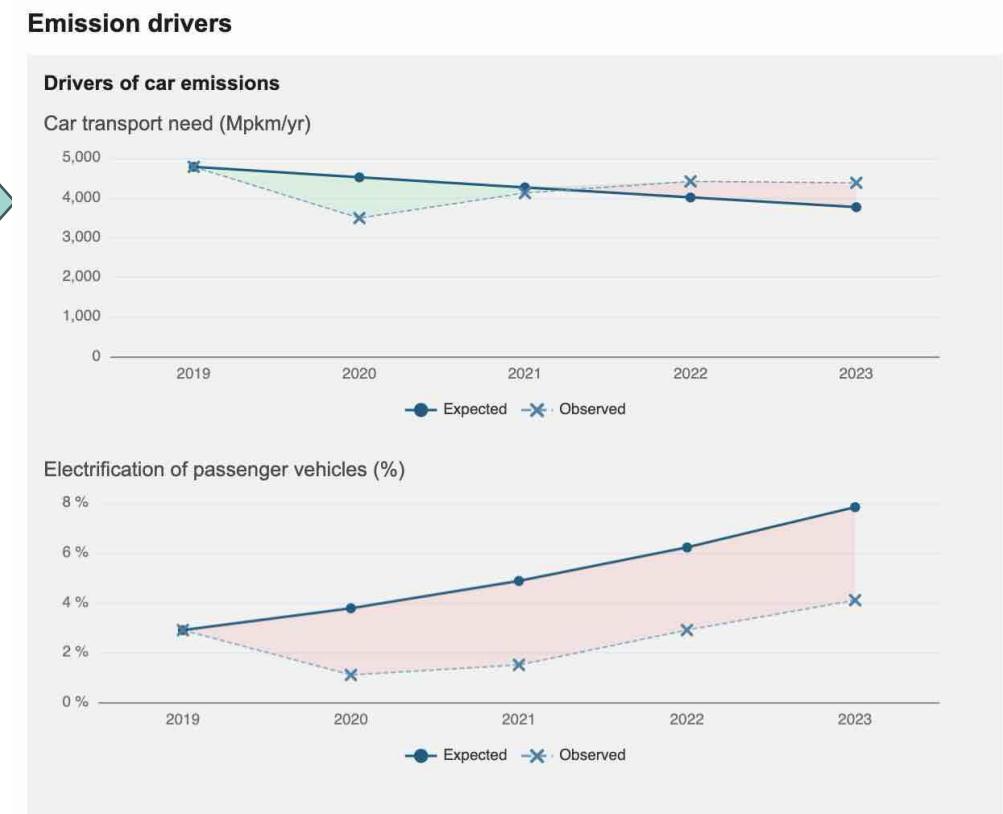
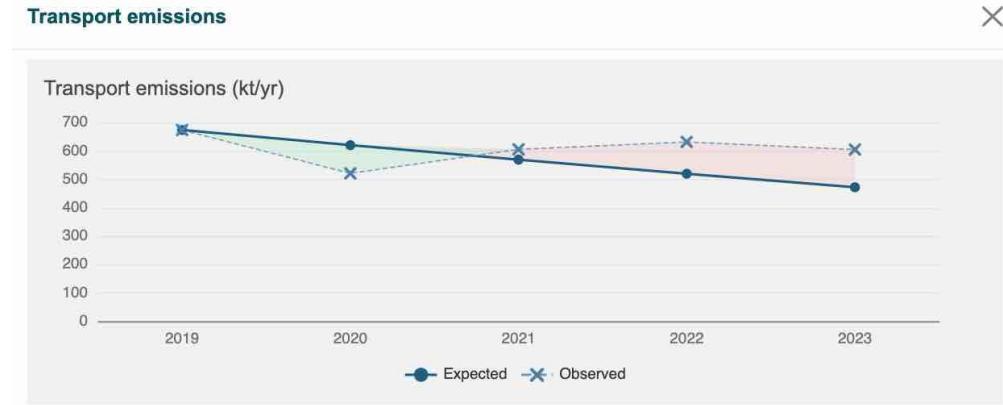
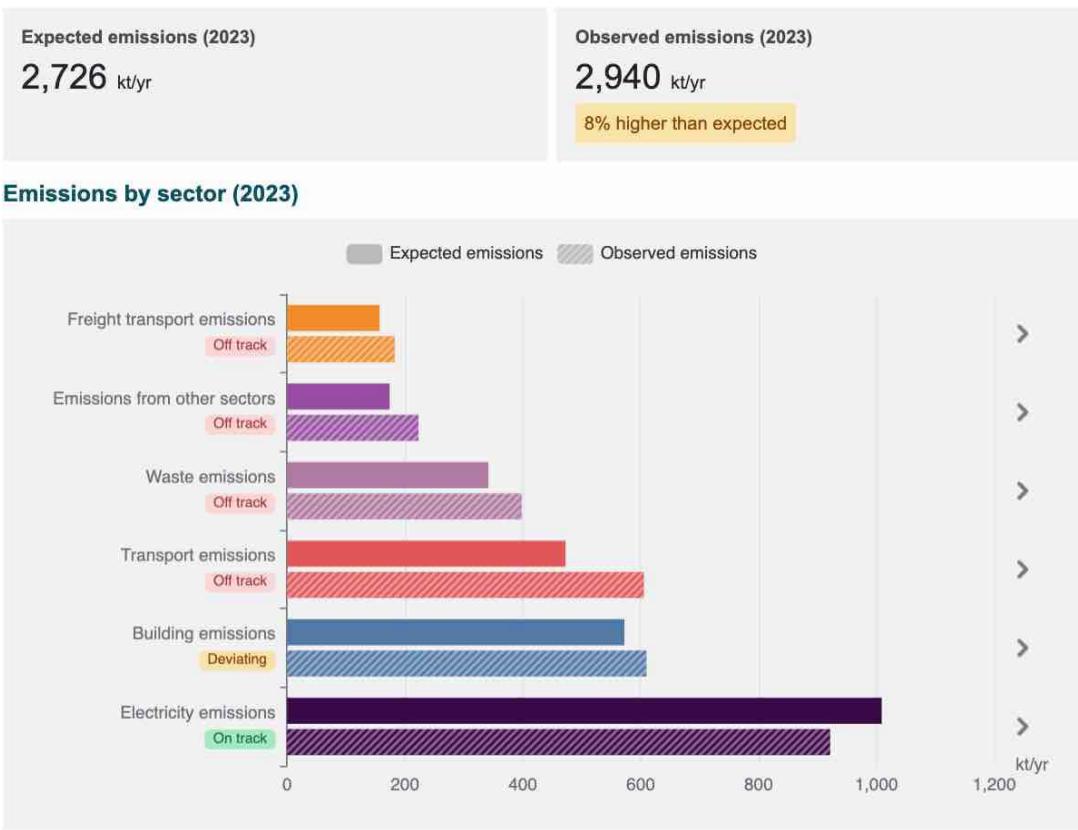


How is it going? - Barcelona GHG is falling but is still 8% higher than 2023 GHG plan goal





Barcelona drilled down to understand what was causing GHG variances to plan

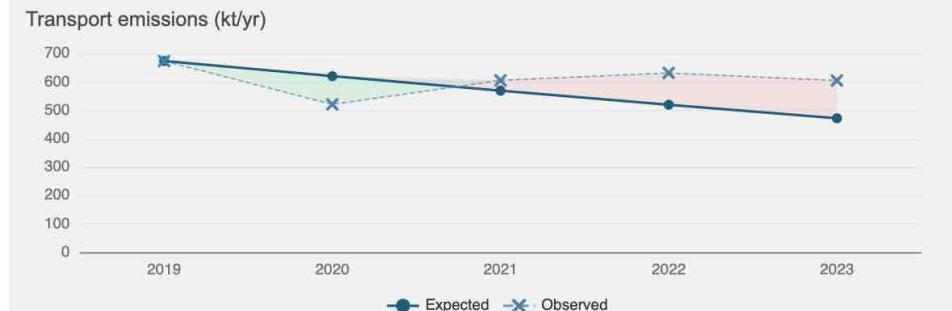




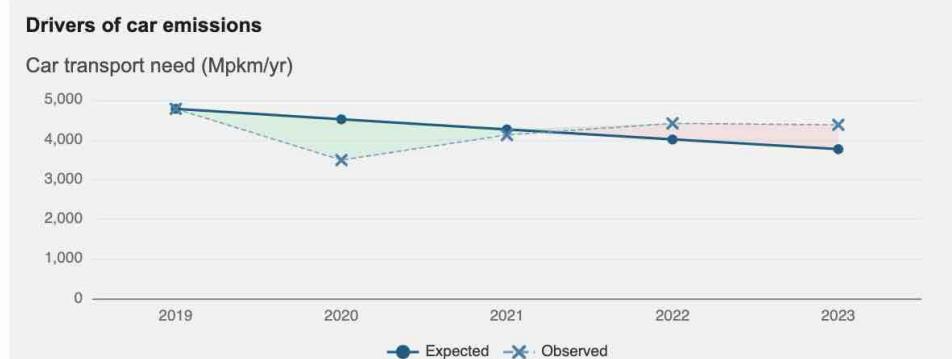
Sector of Transportation highlights a challenge

- Cities are not seeing the reduction in car driving (kms) or electrification of vehicles that they had planned - (transportation shift away from cars makes up 8% points and vehicle electrification makes up 3% points of total CAP GHG reduction by 2030)
 - Aggressive 2030 assumption to cut car usage by nearly half by shifting to public and other modes of transportation was highlighted as a risk in initial CCCs
 - May suggest that actions in city CAPs to reduce driving and move people to public transportation are not as effective as planned – additional research required to determine if modal shift strategies are on track and are changing behavior as expected

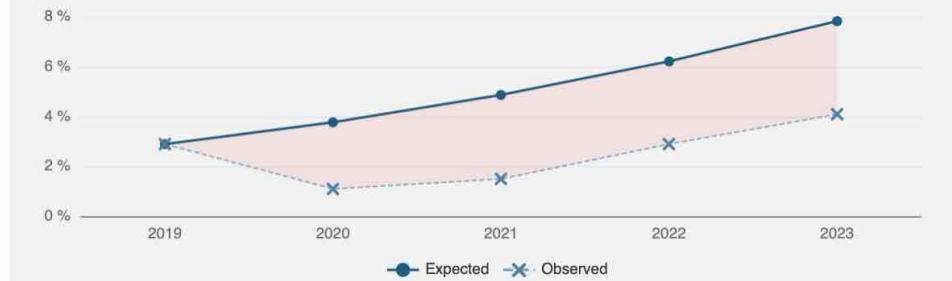
Transport emissions



Emission drivers



Electrification of passenger vehicles (%)





Barcelona aligned KPI results with original CAP actions to learn what was working and to stay on track to 2030 goals

Climate Action Plan Module B-1: Climate Neutral Scenarios and Impact Pathways								
B-1.1: Impact Pathways				NZP KPI Definitions	2023 Observed	2023 Expected	2019 Baseline	2030 Goal
Issuing Sector	Scope of Action	Transformative Actions with Direct Impact	Key Performance Indicator (KPI)					
Transport (Passenger)	Reduction in the need for motorized transport	6. Smart mobility program	Passenger transport emissions	CO2e kt / yr	585	472	674	116
	Modal shift (to public transport and/or non-motorized private transport)	1. Walking mobility program	Car transport need	Million passenger kms / yr	4,375	3,763	4,777	2,546
		2. Public and collective transport mobility program	Bus transport need	Million passenger kms / yr	1,098	693	612	741
		3. Bicycle and personal vehicle mobility program						
	Shared transport	6. Smart mobility program						
	Other measures in the mobility sector	6. Smart mobility program						
	Car electrification	5. Private transport mobility program	Electrification of passenger vehicles	% of total cars	4%	8%	3%	23%
		2. Public and collective transport mobility program	Electrification of buses	% of total buses	4%	1%	1%	61%
Transport (Freight)	Optimization of freight transport logistics	4. Urban freight distribution program	Freight transport emissions	CO2e kt / yr	134	157	192	45
			Light truck freight transport need	megaton kms / yr	243	186	184	189
			Heavy truck freight transport need	megaton kms / yr	109	669	661	679
	Electrification of trucks	4. Urban freight distribution program	Electrification of light trucks	% of light trucks	2%	7%	0%	56%
			Electrification of heavy trucks	% of heavy trucks	3%	3%	0%	25%
Total			Total emissions	CO2e kt / yr	2,821	2,726	3,765	882

	GHG negative variance to plan
	GHG positive variance to plan
	No data
	Inaccurate CCC model data input
	KPI focus areas





Learnings in Barcelona inform implementation changes and potential updates to the plan

- Cities are not seeing the reduction in car driving (kms) that they had planned - (transportation shift away from cars makes up 8% points of total CAP GHG reduction by 2030)
 - May suggest that actions in city CAPs to reduce driving and move people to public transportation are not as effective as planned
- Local heating is not transitioning from fossil to clean energy at the speed originally planned (building renovations make up 24% points of total CAP GHG reduction by 2030)
 - Government loan program to promote purchase of heat pumps should be assessed for effectiveness
- Shortfalls in GHG reduction in Buildings and Transportation is being partially offset by more rapid implementation of renewable electricity than planned (decarbonizing electricity makes up 41% points of total CAP GHG reduction by 2030)
 - Transition of Spanish utility to renewables is ahead of schedule but largely out of the control of cities
- Barcelona has a large shipping port which produces high emissions, so the city will also need to develop strategies with business and government to reduce those emissions to reach net-zero goals





Q&A



Related NetZeroCities Portal Groups

[Design Your City's Net Zero Strategy: Online Planning Lab](#)

[NetZeroPlanner: Building a Strong Economic Case](#)

Additional helpful links:

NetZeroPlanner Website including support materials and access link to the system: <https://netzerocities.app/netzeroplanner>

NetZeroPlanner Technical Support Helpdesk:

<https://app.smartsheet.com/b/form/3feb65b4134e40cfa0d90306a8cfc91e>

More information about using NetZeroPlanner for planning, monitoring, and implementation:

sean.murray@redpointsustainability.com





Please join us next week for Module 4

<https://netzerocities.app/resource-4501>

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Thank you!

Please share your feedback at:
<https://forms.office.com/e/X4d8eGi0Ke>



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Get in touch with NetZeroCities!

NetZeroCities Help Desk: infocities@netzerocities.eu



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[NetZeroCities](https://www.instagram.com/NetZeroCities)



[NetZeroCitiesEU](https://www.linkedin.com/company/netzerocitieseu)



[NetZeroCities EU](https://www.youtube.com/NetZeroCitiesEU)



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