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Infoday WP 2023-2024 Cluster 5-Energía

Destination 4 – “Energy demand”

“Mission on Cities”



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 **Energía.** @HE_Energia_CDTI

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1. Oportunidades de financiación- WP 2023-2024:
Destination 4- “Efficient, sustainable and inclusive energy use ”
2. Oportunidades de financiación – WP 2023-2024:
“Mission on Climate-neutral and Smart Cities”

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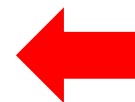
1. Oportunidades de financiación- WP 2023-2024:
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2. Oportunidades de financiación – WP 2023-2024:
“Mission on Climate-neutral and Smart Cities”

Convocatorias “Energía” (2023-2024)

90 topics
1.200 M€

Destination 2	Cross-cutting	• 2 topics – 14 M€
	Breakthrough technologies	• 1 topic – 10 M€
Destination 3	Renewable energy	• 44 topics – 605 M€
	Energy systems, grids and storage	• 21 topics – 281 M€
	Carbon capture, utilisation and storage (CCUS)	• 3 topics – 70 M€
Destination 4	Buildings	• 17 topics – 172 M€
	Industry	• 2 topics – 36 M€

[wp-8-climate-energy-and-mobility_horizon-2023-2024_en.pdf](#)
(europa.eu)

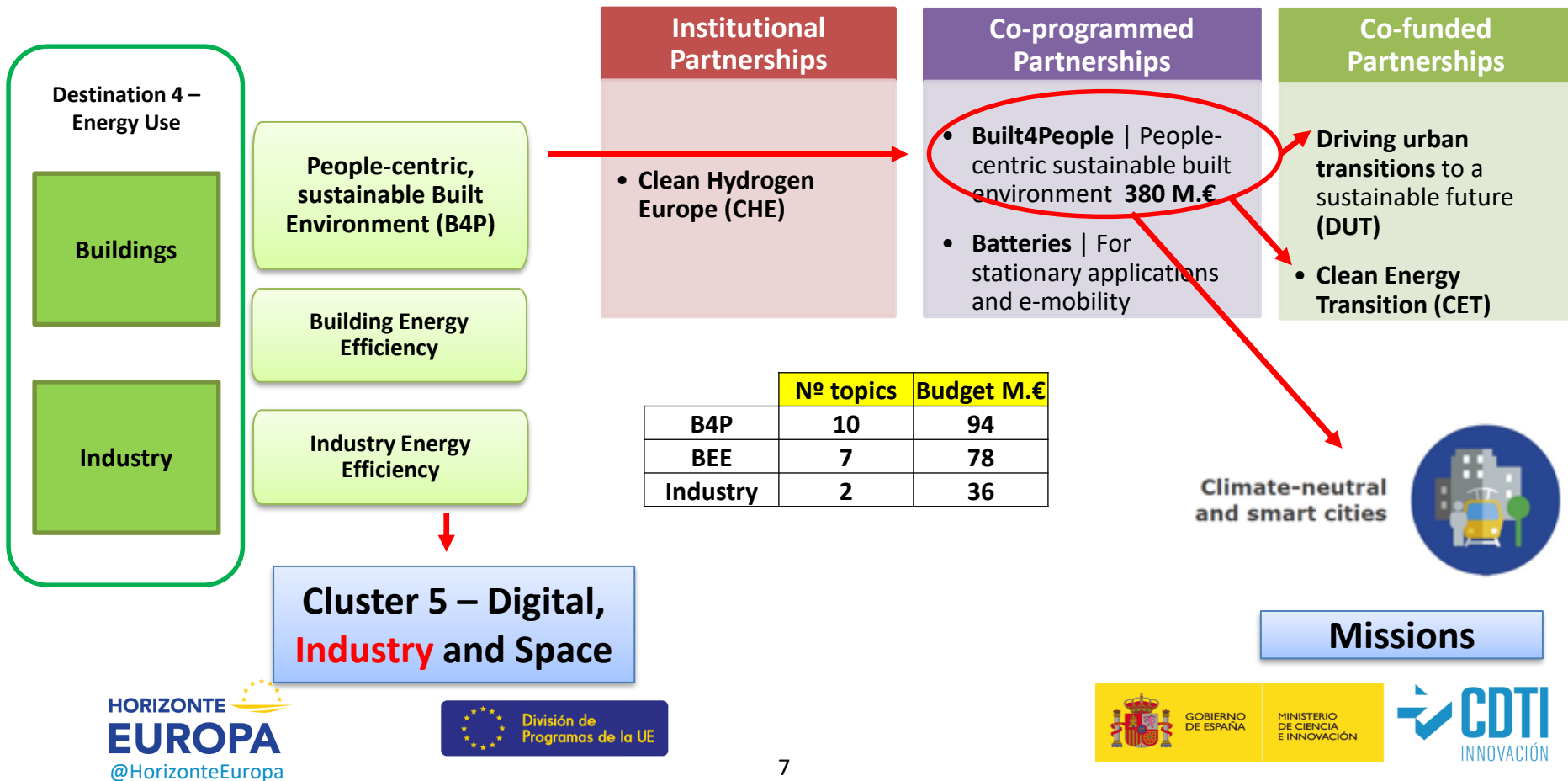


Calendario de convocatorias (2023-2024)

Destination	Call	Opening	Deadline
Destination 3	HORIZON-CL5-2023-D3-01	13 Diciembre 2022	30 Marzo 2023
Destination 2	HORIZON-CL5-2023-D2-01	13 Diciembre 2022	18 Abril 2023
Destination 4	HORIZON-CL5-2023-D4-01	13 Diciembre 2022	20 Abril 2023
Destination 3	HORIZON-CL5-2023-D3-02	4 Mayo 2023	5 Septiembre 2023
Destination 4	HORIZON-CL5-2023-D4-02	4 Mayo 2023	5 Septiembre 2023
Destination 3	HORIZON-CL5-2023-D3-03	4 Mayo 2023	10 Octubre 2023
Destination 3	HORIZON-CL5-2024-D3-01	12 Septiembre 2023	16 Enero 2024
Destination 2	HORIZON-CL5-2024-D2-01	7 Diciembre 2023	18 Abril 2024
Destination 4	HORIZON-CL5-2024-D4-01	7 Diciembre 2023	18 Abril 2024
Destination 3	HORIZON-CL5-2024-D3-02	7 Mayo 2024	5 Septiembre 2024
Destination 4	HORIZON-CL5-2024-D4-02	7 Mayo 2024	5 Septiembre 2024



Destination 4 – Efficient, sustainable and inclusive energy use



Destination 4

Topics

Destination 4 Buildings

Destination 4 - Buildings (1/3)

- **Zero-emissions buildings**
- Renovation of **historical buildings**
- Interoperable solutions for **positive energy districts**
- **Thermal management** of high energy demand IT systems equipment in tertiary buildings
- Decarbonization of buildings through **energy efficiency and electrification**
- Low-disruptive **renovation processes using prefabricated solutions**
- **Smart-grid ready buildings**



Destination 4 - Buildings (2/3)

- Uses of **lifecycle data for the management of buildings (B4P)**
- Improve the **resilience of vulnerable buildings and people-centric built environment** in disruptive events and changing climate **(B4P)**
- Built-environment decarbonization pathways through **technological, social and policy innovation for renovation solutions (B4P)**
- **Fast-tracking of built environment construction and renovation** with local value chains **(B4P)**
- Supporting the **creation of an accessible and inclusive built environment (B4P)**



Destination 4 - Buildings (3/3)

- **Industrialisation of circular deep renovation workflows (B4P)**
- **Robotics** and other automated solutions **for assembly, renovation and maintenance** in a sustainable built environment **(B4P)**
- **Building Information Modelling-based processes and digital twins** for facilitating and optimizing circular energy renovation **(B4P)**
- Design for **adaptability, re-use and deconstruction of buildings**, in line with the principles of circular economy **(B4P)**
- Digital solutions to foster **participative design, planning and management of buildings, neighbourhoods and urban districts (B4P)**



Destination 4 – Buildings (1/2)

Subarea	Topic code	Topic title	Opening	Deadline	Type of Action	Budget	Budget per project	Number of projects expected	Lump Sum Topics
Energy Efficient Buildings	HORIZON-CL5-2023-D4-01-01	Innovative cost-efficient solutions for zero-emission buildings	13/12/2022	20/04/2023	IA	10,00	3-5	3	
	HORIZON-CL5-2023-D4-01-02	Future-proofing historical buildings for the clean energy transition	13/12/2022	20/04/2023	RIA	9,00	3-4,5	3	
	HORIZON-CL5-2023-D4-01-03	Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources	13/12/2022	20/04/2023	IA	8,00	3-4	2	Lump Sum
	HORIZON-CL5-2023-D4-01-04	Thermal management and energy optimisation of high energy demand IT systems equipment in tertiary buildings	13/12/2022	20/04/2023	RIA	6,00	2-3	3	Lump Sum
	HORIZON-CL5-2023-D4-01-05	Innovative solutions for cost-effective decarbonisation of buildings through energy efficiency and electrification	13/12/2022	20/04/2023	IA	25,00	10-15	3	
	HORIZON-CL5-2024-D4-01-01	Low-disruptive renovation processes using integration of prefabricated solutions for energy-efficient buildings	07/12/2023	18/04/2024	IA	10,00	3-5	3	
	HORIZON-CL5-2024-D4-01-02	Smart grid-ready buildings	07/12/2023	18/04/2024	IA	10,00	3-5	3	

Destination 4 – Buildings (2/2)

Subarea	Topic code	Topic title	Opening	Deadline	Type of Action	Budget	Budget per project	Number of projects expected	Lump Sum Topics
Built4People	HORIZON-CLS-2023-D4-02-01	Innovative uses of lifecycle data for the management of buildings and buildings portfolios (Built4People Partnership)	04/05/2023	05/09/2023	IA	10,00	3-5	3	Lump Sum
	HORIZON-CLS-2023-D4-02-02	Solutions for the identification of vulnerable buildings and people-centric built environment, and for improving their resilience in disruptive events and altered conditions in a changing climate (Built4People Partnership)	04/05/2023	05/09/2023	IA	10,00	3-5	3	
	HORIZON-CLS-2023-D4-02-03	Demonstrate built-environment decarbonisation pathways through bottom-up technological, social and policy innovation for adaptive integrated sustainable renovation solutions (Built4People Partnership)	04/05/2023	05/09/2023	IA	12,00	4-6	3	
	HORIZON-CLS-2023-D4-02-04	Fast-tracking and promoting built environment construction and renovation innovation with local value chains (Built4People Partnership)	04/05/2023	05/09/2023	CSA	2,00	2	1	Lump Sum
	HORIZON-CLS-2023-D4-02-05	Supporting the creation of an accessible and inclusive built environment (Built4People Partnership)	04/05/2023	05/09/2023	IA	10,00	3-5	3	Lump Sum
	HORIZON-CLS-2024-D4-02-01	Industrialisation of sustainable and circular deep renovation workflows (Built4People Partnership)	07/05/2024	05/09/2024	IA	16,00	3-5,5	2	Lump Sum
	HORIZON-CLS-2024-D4-02-02	Robotics and other automated solutions for assembly, renovation and maintenance in a sustainable built environment (Built4People Partnership)	07/05/2024	05/09/2024	RIA	8,00	3-4	2	
	HORIZON-CLS-2024-D4-02-03	BIM-based processes and digital twins for facilitating and optimising circular energy renovation (Built4People Partnership)	07/05/2024	05/09/2024	IA	8,00	3-4	2	Lump Sum
	HORIZON-CLS-2024-D4-02-04	Design for adaptability, re-use and deconstruction of buildings, in line with the principles of circular economy (Built4People Partnership)	07/05/2024	05/09/2024	RIA	8,00	3-4	2	
	HORIZON-CLS-2024-D4-02-05	Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts (Built4People Partnership)	07/05/2024	05/09/2024	IA	10,00	3-5	3	Lump Sum

Destination 4 Industry

Destination 4 - Industry

- Integration of renewable heat or industrial waste heat in heat-to-cold conversion systems **to generate cold for industrial processes**
- Alternative heating systems for efficient, flexible and electrified **heat generation in industry**



Destination 4 – Industry

Subarea	Topic code	Topic title	Opening	Deadline	Type of Action	Budget	Budget per project	Number of projects expected	Lump Sum Topics
Industry	HORIZON-CLS-2023-D4-01-06	Integration of renewable heat or industrial waste heat in heat-to-cold conversion systems to generate cold for industrial processes	13/12/2022	20/04/2023	IA	20,00	10	2	Lump Sum
	HORIZON-CLS-2024-D4-01-03	Alternative heating systems for efficient, flexible and electrified heat generation in industry	07/12/2023	18/04/2024	IA	16,00	5	3	Lump Sum

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1. Oportunidades de financiación- WP 2023-2024 Destination 4-Energy demand
2. Programa de trabajo 2023-2024 “MISSION on Cities”

Objectives of the Cities Mission

- Deliver at least **100** climate-neutral and smart European cities by **2030**
- Ensure that these cities act as experimentation and **innovation hubs** to put all European cities in a position to become climate-neutral by 2050

29.09.2021: Official launch of the EU Mission on **Climate Neutral and Smart Cities** and publication
of the mission implementation plan
[Implementation Plan - master copy 19 05 \(europa.eu\)](#)



EUROPEAN UNION

**A WARM
WELCOME
TO ALL
MISSION
CITIES
FROM THE
WHOLE
MISSION
TEAM!**



Ciudades españolas seleccionadas:

Madrid, Barcelona,
Valencia, Sevilla,
Vitoria, Valladolid y
Zaragoza.


 **ALBANIA**
Elbasan

 **ISRAEL**
Eilat

 **TURKEY**
Istanbul
Izmir

 **BOSNIA AND
HERZEGOVINA**
Sarajevo

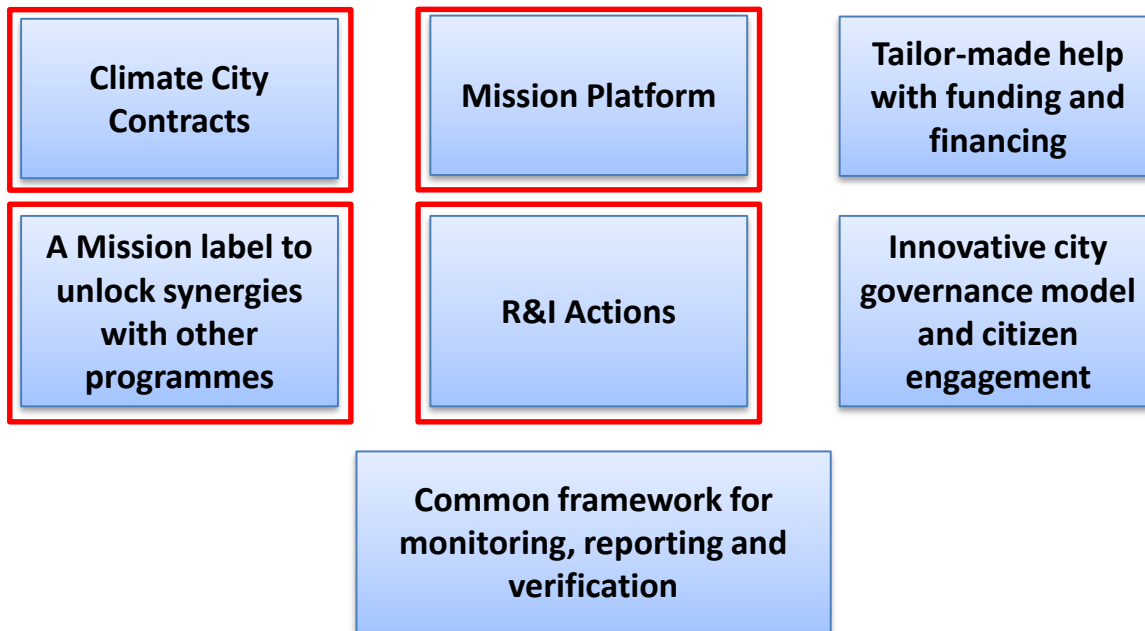
 **MONTENEGRO**
Podgorica

 **UNITED KINGDOM***
Bristol
Glasgow

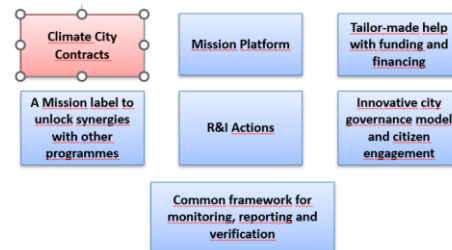
 **ICELAND**
Reykjavik

 **NORWAY**
Oslo
Stavanger
Trondheim

Main elements of the Cities Mission

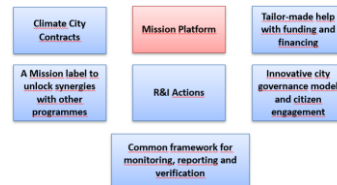


Climate City Contract



- ✓ Non legally binding – **Memorandum of Understanding. Signed by the Mayor (or equivalent),** witnessed by the Commission and others
- ✓ **Tailor-made plans** on how to reach climate neutrality, adapted to the individual needs of the city, supported by the Mission Platform
- ✓ **Visible political commitment** to the EC, national and regional authorities and to citizens
- ✓ To be **co-created** with the involvement of national authorities, regions and local stakeholders, including citizens and local economic actors

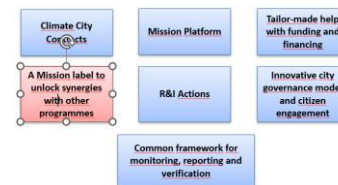
Mission Platform (www.netzerocities.eu)



- ✓ Run by the **NetZeroCities** consortium who start work **1.10.2021**. **Funded under Horizon 2020**. Develop a one-stop shop platform to help cities implement their climate action plans and related social innovation action plans providing the necessary technical, regulatory, financial and socio-economic expertise and assistance.
- ✓ **R&I pilots and demonstrators**: launch calls for proposals for large scale pilots in lead cities that will twin with and mentor other cities – **32 M.€**. Call already closed

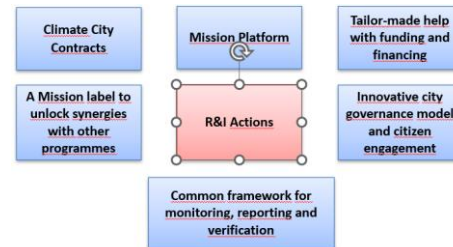
A Mission LABEL

- ✓ A LABEL will be awarded to the **selected cities that have signed a CCC**
- ✓ It will facilitate **access to EU funding programmes** . It will offer an **opportunity for Regions and Member States** to support highly visible activities on climate neutrality.



R&I Content

- ✓ Portfolio of **R&I activities** targeting cities and communities launched in the Horizon Europe Work Programme for Missions
- ✓ Goals: **develop capacity and showcase** possibilities of scale-up and replicability
- ✓ **Complementarity and synergy** with ongoing and upcoming initiatives e.g. partnerships, other missions



Horizon Europe will **invest around €350 million** in research and innovation actions linked to the **Cities Mission** (e.g. in mobility, energy, urban planning) in the period **2021-23**.

HE – WP for Cities Mission – Call 2021-2022

CLOSED

Topics	Type of Action	Budget M.€	EU Contribution per topic M.€	No projects funded
Opening: 11 Jan 2022 Deadline(s): 26 Apr 2022				
HORIZON-MISS-2021-CIT-02-01: Urban planning and design for just, sustainable, resilient and climate-neutral cities by 2030	IA	35	11.00 to 12.00	3
HORIZON-MISS-2021-CIT-02-02: Unleashing the innovation potential of public transport as backbone of urban mobility	IA	40	12.00 to 20.00	3
HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform	FPA	0		1
HORIZON-MISS-2021-CIT-02-04: Positive Clean Energy Districts	IA	40	15.00 to 20.00	2
HORIZON-MISS-2021-CIT-02-05: Global cooperation and exchange on urban climate neutrality	CSA	2	2.00	1
Opening: 28 Apr 2022 Deadline(s): 06 Sep 2022				
HORIZON-MISS-2022-CIT-01-01: Designing inclusive, safe, affordable and sustainable urban mobility	IA	42	8.00 to 12.00	4
		159		

HE - WP for Cities Mission – Call 2023

Topics	Type of Action	Budget M.€
HORIZON-MISS-2023-CIT-01-01: Co-designed smart systems and services for user-centred shared zero-emission mobility of people and freight in urban areas (2Zero, CCAM and Cities' Mission)	IA	50
HORIZON-MISS-2023-CIT-01-02: Positive clean energy district (PED) digital twins – from modelling to creating climate neutral Cities	IA	20
HORIZON-MISS-2023-CLIMA-CITIES-01-01: Urban greening and re-naturing for urban regeneration, resilience and climate neutrality	IA	40
HORIZON-MISS-2023-CIT-02-01: Associating Ukrainian cities to the Climate-neutral and smart cities Mission	CSA	5
		115

[wp-12-missions_horizon-2023-2024_en.pdf \(europa.eu\)](#)

HORIZON-MISS-2023-CIT-01-01: Shared zero-emission mobility (2Zero, CCAM and Cities' Mission)

HORIZON-MISS-2023-CIT-01-01: Shared zero-emission mobility (2Zero, CCAM and Cities' Mission)

Deadline:
27.04.2023

- **Type of action:** Innovation Actions
- **Indicative budget:** EUR 50.00 million
- **Expected EU contribution per project:** around EUR 25.00 million (2 projects expected)
- **Specific conditions:** collaboration with the 2Zero and CCAM Partnerships and the Cities Mission Platform through an MoU.
- **Eligibility condition:** If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS

HORIZON-MISS-2023-CIT-01-01: Shared zero-emission mobility (2Zero, CCAM and Cities' Mission)

Expected outcomes/Scope

- Mobility solutions that respond to people's and cities' needs. Establish a co-design process between local public authorities, city planners, end users and automated and zero-emission mobility systems providers to ensure a user-centric and seamless integration of solutions in existing ecosystems;
- Demonstration of transferrable solutions for mobility of people and goods exploiting the combined potential of electrification, automation and connectivity;
- Economically viable, modular and adaptable solutions that are transferrable among cities committed to achieving climate neutrality by 2030;
- Capacity built among local authorities, users and mobility systems providers.

HORIZON-MISS-2023-CIT-01-02: Positive clean energy district (PED) digital twins – from modelling to creating climate neutral Cities

HORIZON-MISS-2023-CIT-01-02: Positive clean energy district (PED) digital twins – from modelling to creating climate neutral Cities

Deadline:
27.04.2023

- **Type of action:** Innovation Actions
- **Indicative budget:** EUR 20.00 million
- **Expected EU contribution per project:** between EUR 6.00 and 7.00 million(3 projects expected)
- **Specific conditions:** collaboration with the Cities Mission Platform through an MoU.

HORIZON-MISS-2023-CIT-01-02: Positive clean energy district (PED) digital twins – from modelling to creating climate neutral Cities

Expected outcome/Scope

- Increased number of city planning actions for positive clean energy districts using the (proto-)PED design, development and management digital twin tools. Develop and test a digital twin of a (project defined) potential Positive clean Energy District (PED) in a European city.
- Enhanced data gathering approaches with identification relevant (standardised) multidimensional data set, high-resolution real-time data streams, and relevant forecasting data
- Consolidated city sensor network specifications
- Increased integration of existing smaller scale management systems (BMS...), with open-standards based operational city platforms using sectorial data.
- Involve/train necessary public and private actors at district/city level in building and using digital twins for co-creation, communication, public consultation/dialogues and good practice sharing.

HORIZON-MISS-2023-CLIMA-CITIES-01-01: Urban greening and re-naturing for urban regeneration, resilience and climate neutrality

HORIZON-MISS-2023-CLIMA-CITIES-01-01: Urban greening and re-naturing for urban regeneration, resilience and climate neutrality

Deadline:
27.04.2023

- **Type of action:** Innovation Actions
- **Indicative budget:** EUR 40.00 million
- **Expected EU contribution per project:** between EUR 10.00 -12.00 million (4 projects expected)
- **Specific conditions:** : pilot demonstrations in at least four '**lead**', accompanied by at least four '**replicator**' cities situated each in different MS or AC (***eligibility criterion***); establish collaboration (MoU) with **Mission Platforms** for the Cities and Climate Adaptation (to be established) missions.

HORIZON-MISS-2023-CLIMA-CITIES-01-01: Urban greening and re-naturing for urban regeneration, resilience and climate neutrality

Expected outcome / Scope

- Regenerated, rehabilitated, climate-proofed, resilient, environmentally, socially and economically upgraded built environment;
- Set up in each demonstration city **platforms** engaging relevant **local actors**, including **appropriate regional authorities**, for the co-creation of regeneration plans, whilst ensuring compatibility and coherence among urban/regional climate mitigation and adaptation plans
- Improved liveability, functionality, quality of life and social cohesiveness
- Compared to baselines at the start of the project:
 - Increase by at **least 25%** the share of **newly created and/or restored public green spaces** over the total targeted under regeneration area;
 - Increase by at least **20% citizens satisfaction**;

HORIZON-MISS-2023-CIT-02-01: Associating Ukrainian cities to the Climate-neutral and smart cities Mission

HORIZON-MISS-2023-CIT-02-01: Associating Ukrainian cities to the Climate-neutral and smart cities Mission

Deadline:
06.09.2023

- **Type of action:** Coordination and Support Actions
- **Indicative budget:** EUR 05.00 million
- **Deadline:** 06.09.2023
- **Specific conditions:** collaboration with the Cities Mission Platform through an MoU.

HORIZON-MISS-2023-CIT-02-01: Associating Ukrainian cities to the Climate-neutral and smart cities Mission

Scope:

- Map the cities in Ukraine that could commit to the target of climate neutrality;
- Identify and support a number of Ukrainian cities in developing their strategy for climate neutrality;
- Support the twinning and teaming between these Ukrainian cities and like-minded cities involved in the EU Cities Mission;
- Facilitate the exchange of good practices within the target group of Ukrainian cities and between them and the other cities in Ukraine.

Contribution from HE

Strong contribution to the implementation of the Cities Mission is expected from relevant HE partnerships:

- **Built4People** – Cluster 5- HE- Destination 4
- **2Zero** – Zero Emission Road Transport - Cluster 5- Destination 5
- **CCAM** – Connected, Cooperative and Automated Mobility – Cluster 5- Destination 6
- **DUT** – Driving Urban Transition – Partnership co-fund



Importance of National Networks

Comunidad de Transformación de Ciudades-Grupo Espejo de la Misión de Ciudades

[Comunidad de Ciudades - El Día Después será... \(diadespues.org\)](https://diadespues.org)

Plataforma de Colaboración para la Neutralidad Climática de las Ciudades Españolas

19 octubre 2022 - Financiada por el MITERD. [----- \(miteco.gob.es\)](https://miteco.gob.es); [#Biodirectos - Plataforma de colaboración para la neutralidad climática de las ciudades españolas - YouTube](#)

Para cualquier consulta

Mantente informado a través del Portal español de Horizonte Europa: www.horizonteeuropa.es

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