



MINISTÈRE
DE L'ENSEIGNEMENT
SUPÉRIEUR,
DE LA RECHERCHE
ET DE L'INNOVATION

*Liberté
Égalité
Fraternité*



Présentation du Cluster 5 d'Horizon Europe

14 avril 2022



De la vision politique au programme de R&I

Les priorités de la nouvelle Commission

Les 6 priorités de la Commission pour 2019-2024

Un Green Deal européen

Ambitionner d'être le premier continent climatiquement neutre



Une Europe adaptée à l'ère du numérique

Favoriser une nouvelle génération de technologies donnant aux citoyens les moyens d'agir



Une économie au service des personnes

Agir en faveur de l'équité sociale et de la prospérité



Une Europe plus forte sur la scène internationale

Renforcer notre leadership mondial responsable



Promouvoir notre mode de vie européen

Protéger nos citoyens et nos valeurs

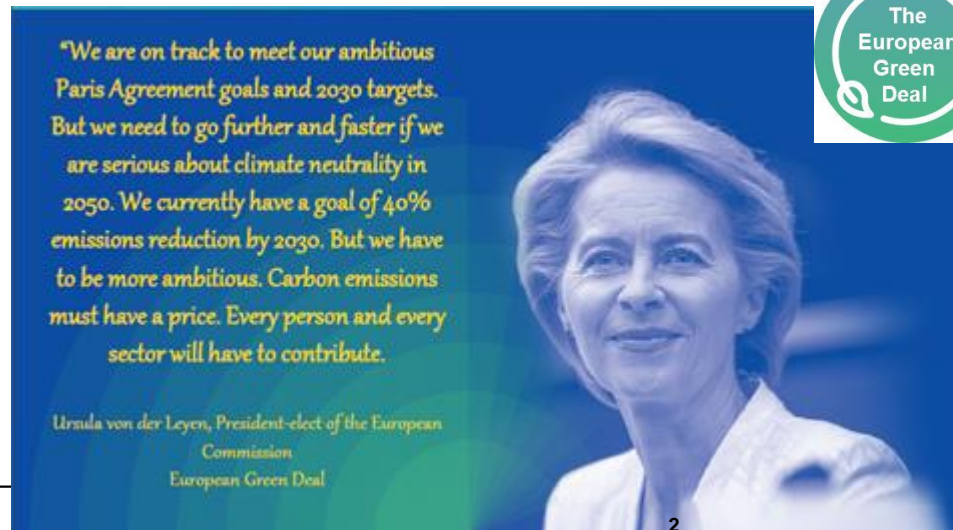


Un nouvel élan pour la démocratie européenne

Promouvoir, protéger et renforcer notre démocratie



- Maintenir l'augmentation de température en deçà de 2°C, et efforts pour < 1,5°C
- **0 émission de GES en 2050 (rôle clé du système énergétique, transport)**
- ... en accord avec une transition socialement juste, renforçant la compétitivité de l'économie



Ambitions du programme Horizon Europe

Qu'est ce que Horizon Europe ?

Horizon Europe est le **9^e programme-cadre de l'Union européenne pour la recherche et l'innovation.**

Horizon Europe prendra la suite du programme Horizon 2020

Il a pris effet le 1er janvier 2021, pour la période 2021-2027

95,5 milliards d'euros (prix courants)



Ce budget bénéficiera également des contributions des futurs pays associés



Structuration d'Horizon Europe



Pilier I Science d'excellence

25 Mds€

Conseil européen de la
recherche

Actions
Marie Skłodowska-Curie

Infrastructures de recherche



Pilier II Problématiques mondiales et compétitivité industrielle européenne

53,5 Mds€

- Pôles
- Santé
 - Culture, créativité et société inclusive
 - Sécurité civile pour la société
 - Numérique, industrie et espace
 - Climat, énergie et mobilité **15,1Mds€**
 - Alimentation, bioéconomie, ressources naturelles, agriculture et environnement

Centre commun de recherche



Pilier III Europe innovante

13,6 Mds€

Conseil européen de
l'innovation

Écosystèmes
européens d'innovation

Institut européen
d'innovation
et de technologie

Élargir la participation et renforcer l'espace européen de la recherche **3,4 Mds€**

Élargir la participation et propager l'excellence

Réformer et consolider le système européen de R&I



Le cluster 5 du Pilier 2

- Favoriser l'action en faveur du climat
- Améliorer la compétitivité de l'industrie de l'énergie et des transports

Neutralité climatique d'ici à 2050

Accord de Paris

Pacte vert européen

Plan européen de relance économique

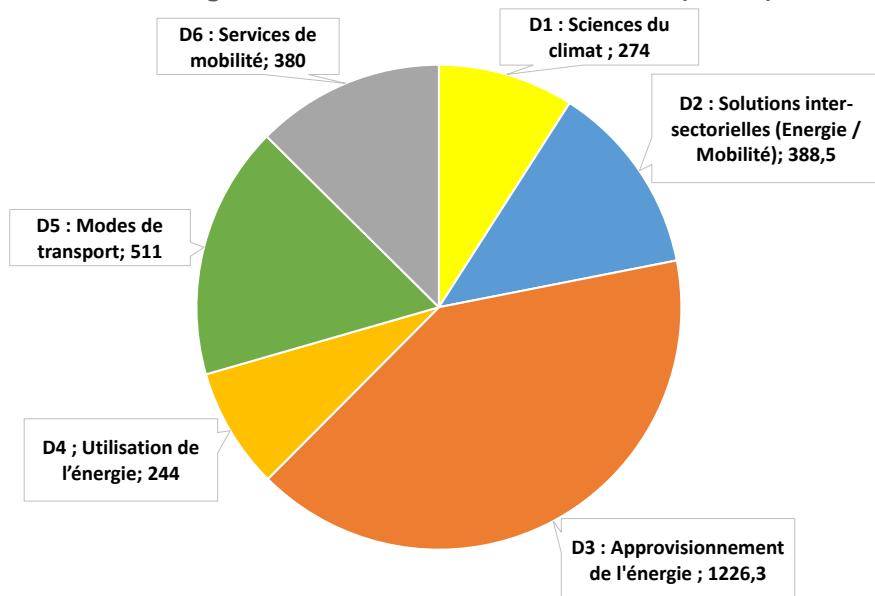


Via des actions qui devront :

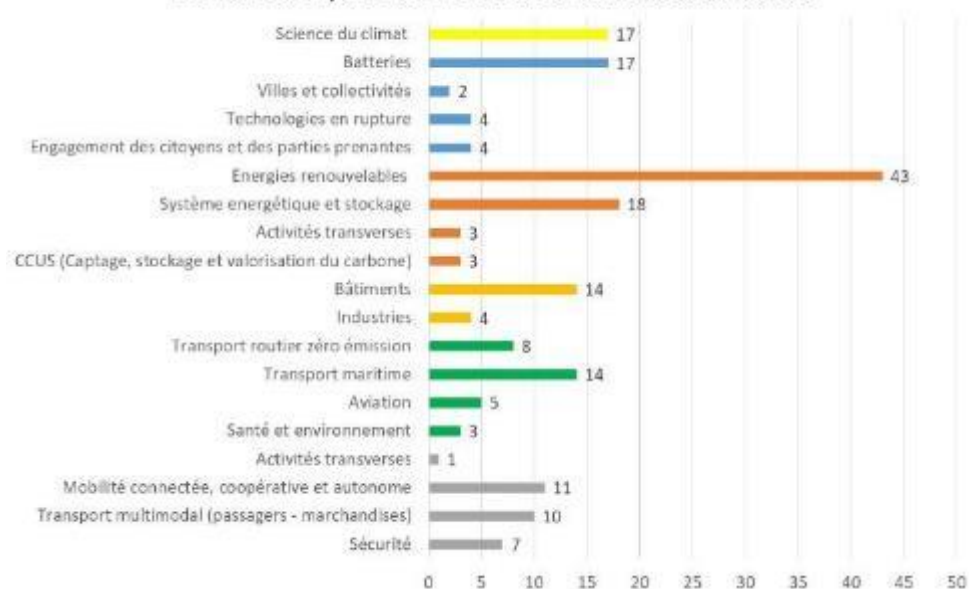
- créer des emplois plus nombreux et de meilleure qualité ;
- accélérer la transformation industrielle et la numérisation ;
- générer une croissance fondée sur l'innovation et l'inclusion.

Budgets par destination et sous-destination

Budgets 2021 - 2022 selon les Destinations (en M€)



Nombre de topics 2021 + 2022 selon les sous-destinations



Cluster 5 : partenariats

Institutional Partnerships

- Transforming Europe's rail system
- Integrated Air Traffic Management
- Clean Aviation
- Clean Hydrogen

Co-funded Partnerships

- Driving urban transitions to a sustainable future (DUT)
- Clean Energy Transition

Co-programmed Partnerships

- Built4People | People-centric sustainable built environment
- Towards zero-emission road transport (2ZERO)
- Batteries: Towards a competitive European industrial battery value chain for stationary applications and e-mobility
- Zero-emission waterborne transport
- Connected, Cooperative and Automated Mobility (CCAM)

Cluster 5 : missions

(en relation avec les villes et territoires)

Mission Adaptation au changement climatique et aux transformations sociétales

Objectifs à l'horizon 2030 : préparer l'Europe à faire face aux perturbations climatiques, accélérer la transition vers un avenir sain et prospère dans des limites planétaires sûres et mettre en place des solutions de résilience qui déclencheront des transformations dans la société.

Mission 100 villes climatiquement neutres d'ici 2030 - par et pour les citoyens

Objectifs d'ici 2030 : soutenir, promouvoir et mettre en valeur 100 villes européennes dans leur transformation systémique vers la neutralité climatique d'ici 2030 et faire de ces villes des pôles d'innovation pour toutes les villes, au bénéfice de la qualité de vie et de la durabilité en Europe.



Merci de votre attention !





Annexe :

Les missions en relation directe avec le Cluster 5



EUROPEAN UNION



EU MISSIONS

CLIMATE-NEUTRAL & SMART CITIES

Concrete solutions for our greatest challenges



#EUmissions #HorizonEU #MissionCities



OBJECTIVES OF THE MISSION

1

Deliver at least 100 climate-neutral and smart European cities by 2030;

2

Ensure that these cities act as experimentation and innovation hubs to put all European cities in a position to become climate-neutral by 2050.

Actions to deliver climate neutrality will bring massive and more visible co-benefits: better air quality, less road congestion, more livable spaces



A NEW APPROACH TO URBAN CLIMATE ACTION

Demand-driven and innovative process based on the needs of the cities

Systemic change via research and innovation actions across sectors

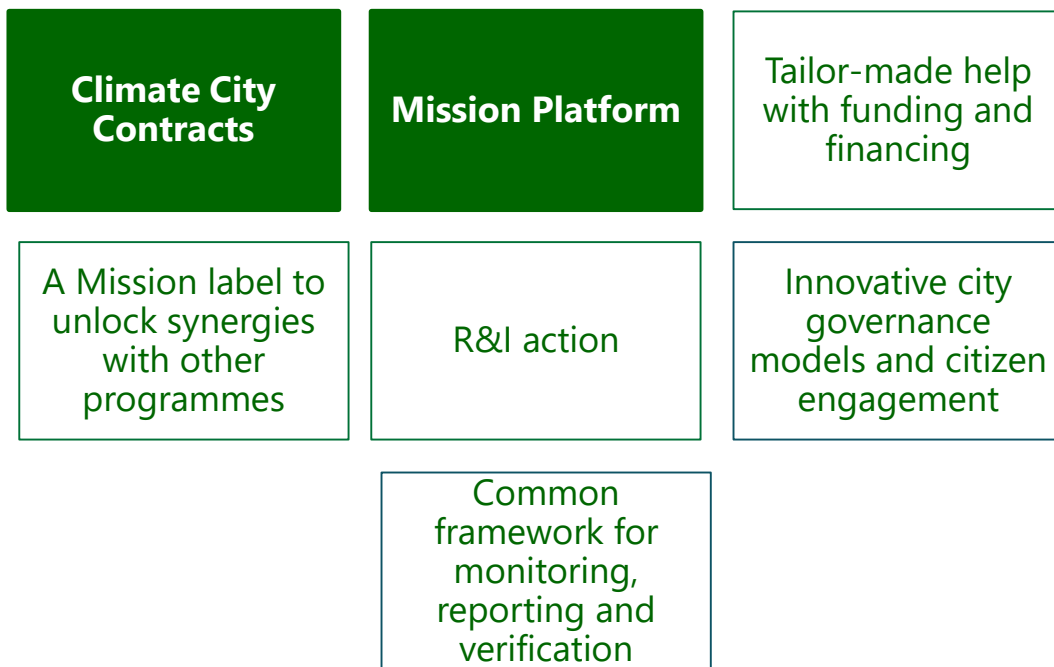
Multi-level governance linking local, regional, national and EU levels

Support for accessing funding and finance on a large scale

Citizens involved in the design and implementation of the Mission



MAIN ELEMENTS OF THE MISSION





MISSION PLATFORM

Run by the NetZeroCities consortium who started work at the beginning of October

Co-creation of **Climate City Contracts** with citizens, stakeholders and authorities

Tailor-made **investment plans**, project preparation and financial advice

R&I pilots and demonstrators: launch calls for proposals for pilots in lead cities that will twin with and mentor other cities



FUNDING AND FINANCING

Overall contribution from **Horizon Europe** 2021-23: €359.3 million

Support expected from different **EU funding programmes** (“**Mission label**”)

Cooperation with the **European Investment Bank Group** and national Promotional Institutions (e.g. financial advisory, possibly Blending Facility)

Private investors (individuals, private companies, commercial banks)

EU sustainable finance agenda offers new opportunities to encourage investors to invest locally

WORK PROGRAMME 2021/2022

Rationale for selected topics:

- Direct relevance to Mission objectives
- Due to limited budget, focus on a reduced set of topics in key areas with major impact
- Aligned with Member State priorities as expressed in the cluster 5 Shadow Programme Committee

BUILDING BLOCKS

- **Mission Platform**
- Development and scaling up of **R&I activities**
 - Urban planning and design for just, sustainable, resilient and climate-neutral cities by 2030
 - Unleashing the innovation potential of public transport as backbone of urban mobility
 - Positive Clean Energy Districts
 - Designing inclusive, safe, affordable and sustainable urban mobility
- **International cooperation and outreach** (Global Knowledge Centre, support to global Mission on Urban Transitions under Mission Innovation)

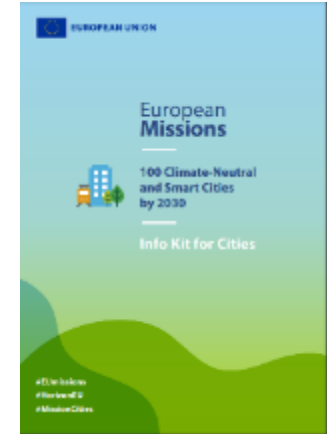


**CALL FOR EXPRESSION OF INTEREST
TO JOIN
THE CLIMATE-NEUTRAL AND SMART CITIES
MISSION**

Info Kit for Cities published on 29 October along with FAQ document and possibility to pre-register for the Call

Available at:

https://ec.europa.eu/info/news/mission-climate-neutral-and-smart-cities-info-kit-cities-now-available-2021-oct-29_en



Webinar “The Climate-Neutral and Smart Cities Mission”

1 October 2021

Webinar recording:

https://ec.europa.eu/info/events/climate-neutral-and-smart-cities-mission-webinar-2021-oct-01_en



WHO CAN APPLY?

Entities of more than **50 000 inhabitants**.

Participation of cities with at least **100 000 inhabitants** is especially encouraged.

For entities from Member States with five or less cities above 100 000 population, a lower threshold of **10 000 inhabitants** will apply.

HOW WILL THE APPLICATION PROCESS WORK?

October 2021: Publication of Info Kit for Cities to help cities prepare for the Call

November 2021: Publication of Call for Expression of Interest addressed to cities (questionnaire)

(December 2021: Adoption of amended 2021/22 Work Programme)

January 2022: Call for Expression of Interest closes

By March 2022: Selection of participating cities

As of mid 2022: Mission Platform works with first cities to develop Climate City Contracts



EUROPEAN UNION

EU MISSIONS



Concrete solutions for our greatest challenges

A European mission on Adaptation to Climate Change





EUROPEAN UNION

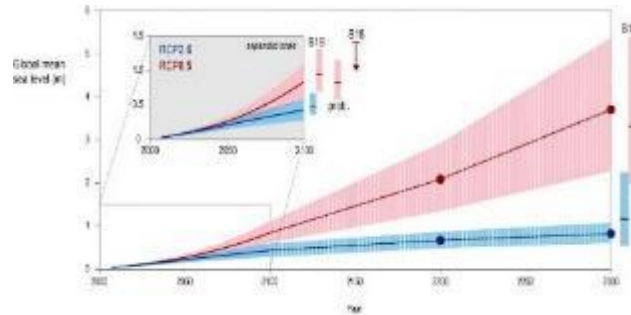


EU
MISSIONS

Impacts are already here...

...affecting every region in the Europe...

...and even in a best case scenario, these impacts will remain!





Climate change

temperature records

drought

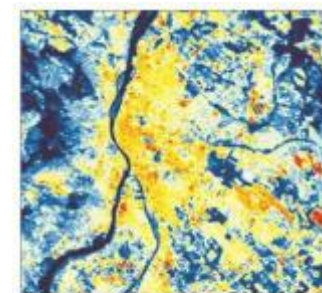
wildfire

floods

water shortages, etc.

Impact on

- agriculture
- drinking water
- tourism
- biodiversity
- livelihood
- life
- economy, etc.



Surface temperature of Budapest, 1 August 2005, 9:39 CET
Temperature (°C)
-15 16 19 22 25 28 31 34 35 38 39 40 43 >45





Mission on adaptation to Climate Change

Adopted by European Commission on 29 September 2021



To:

foster Europe's resilience to climate change at local and regional level while engaging citizens help prepare for unavoidable climate impacts and accelerate Europe's transformation into a climate-resilient continent.



Climate Change Adaptation Mission Objectives

Overall objective: to help at least 150 European regions and communities towards climate resilience by 2030



The Mission approach:

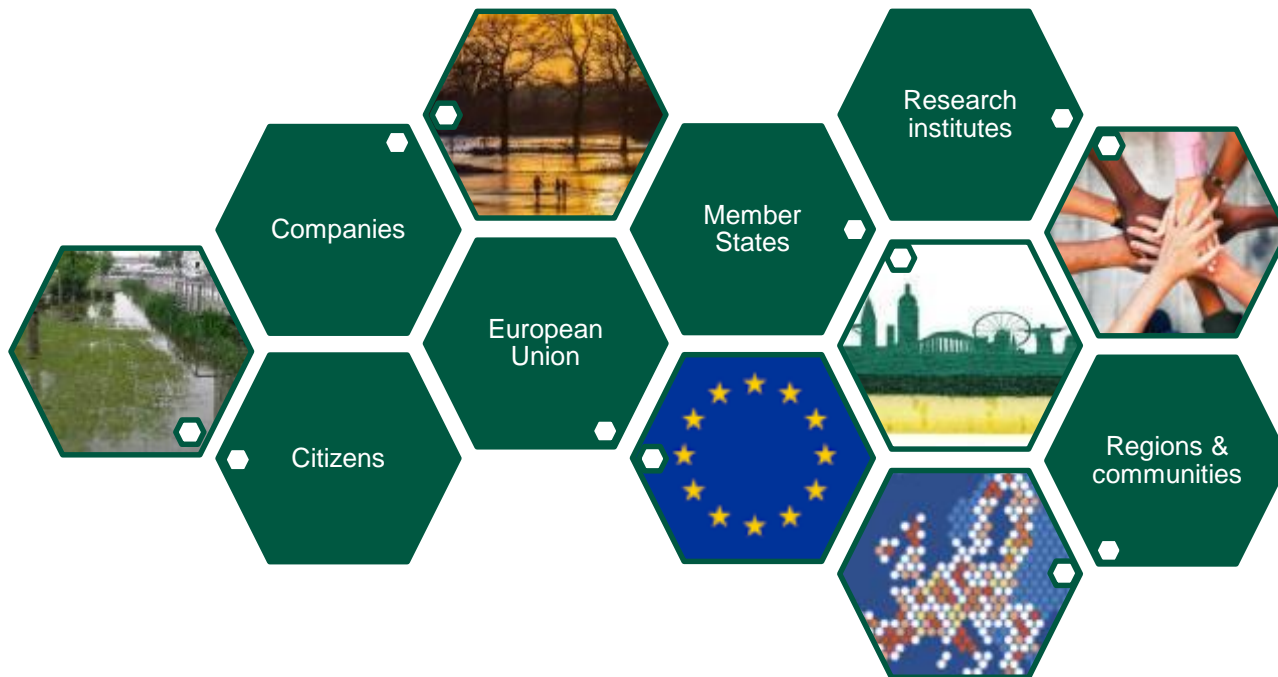
A **place-based approach**, taking into consideration the different level of climate vulnerability and preparedness, level of ambition, and innovation needs of each region;

A **systemic approach**, bringing together thematic research on several areas of innovation to improve resilience of key systems with developing the enabling conditions for the transformation to take place;

An **inclusive approach** that brings together all relevant actors, such as public administrations, the private sector and civil society, and in particular citizens.



Inclusive approach



Regions and communities

To help at least 150 European regions and communities towards climate resilience by 2030



- help regions better understand, prepare for, and manage their climate risks and opportunities
- stimulate EU regions leading in climate adaptation to share their experience and guide all regions in finding solutions tailored to their own climatic situation and economy
- support innovative climate resilience solutions and help regions source additional investments.

Selection of regions

In the first Horizon Europe calls, the participation of regions will depend on which grants will be selected for funding. Any region can decide to participate in consortia applying for funding. There will be no region specific selection criteria.

In addition, « cascading » projects will be set up where regions will also be able to apply for participation

For the 1st Mission WP, participation of regions is thus bottom-up

Depending on outcome of the bottom-up approach, later work programmes might be specifically designed for geographical balance or for certain climate risks.



Citizens

All citizens have a say and can act on climate change:

Citizen science to engage in climate adaptation: platforms eu-citizen.science or [Citizens Observatories](#) gather great examples of citizen science in Europe

[European Climate Pact](#): people, communities and organisations can participate and build a greener Europe. Connect and share knowledge and develop and scale up **solutions**

[Become a Climate Pact Ambassador](#) to inform, inspire and support climate action in your communities and networks.





Translating the Mission IP into HE WP

Actions on **all the 3 objectives** will be started

Setting up the supporting structures to provide services over the duration of Horizon Europe (i.e. the **Mission Implementation Platform**)

Covering the Mission **building-up phase** (2021-2023) and providing first deliverables for mid-term review

Scaling up and embedding into the Mission, pilot actions already started (e.g. under the Green Deal H2020 call), allowing a fast ramp up of the Mission



Timeline

Horizon Europe WP 2021 Amendment final draft

Adoption and Publication by end December 2021

Opening of First calls in January 2022 and closing by mid April 2022

Signature of First grants and start of projects by end 2022

Horizon Europe WP 2022 Amendment FIRST DRAFT in Nov 2021

Work Programme 2021 Amendment

Topic	Action description	Type of action	Budget In millions EUR
HORIZON-MISS-2021-CLIMA-02-01	Development of climate change risk assessments in European regions based on a transparent and harmonised Climate Risk Assessment approach	RIA	20 with 60% cascading funds
HORIZON-MISS-2021-CLIMA-02-02	Support to the regions in developing pathways towards climate resilience and corresponding innovation agendas	RIA	30 With 70% cascading funds
HORIZON-MISS-2021-CLIMA-02-03	Adaptation Asset level modelling	RIA	5
HORIZON-MISS-2021-CLIMA-02-04	Large scale demonstrator of climate resilience creating cross-border value	IA	50
HORIZON-MISS-2021-CLIMA-02-05	Local engagement of citizens in the co-creation of societal transformational change for climate resilience	RIA	5
Other actions	Public Procurement for Climate Adaptation Mission Implementation Platform for the Mission building phase	Procurement	10
Other actions	EEA support to the Mission in developing the monitoring and tracking system and visualisation of the progress in the resilience building, expanding ClimateADAPT	Service Level Agreement	2