



# THE ROLE OF UNIVERSITIES IN THE PROCESS OF DECARBONIZATION OF URBAN AREAS



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# THE ROLE OF UNIVERSITIES



## INTERNAL

Living Lab  
Strategy|Plan  
Supply Chain

## EXTERNAL

Research  
Innovation  
Awareness

The role of universities in the process of decarbonization of urban areas / COP28 Dubai



# CAMPUS AS LIVING LAB

The University of Genoa is carrying out several demonstration activities at its facilities to implement the **Living Lab Smart City** in order both to reduce the carbon footprint and to show a real application of the Smart City concept to students, local citizens and external stakeholders.

In particular, the Savona Campus is managed as an example of urban district for the development of policies for “smart cities”.

The Campus is a center for the testing and experimentation at the national level of the technologies for sustainable energy in the city of the future.

(a) the garden near the canteen and students' accommodations; (b) the photovoltaic plant and the solar thermal collectors above the Smart Energy Building; (c) part of U-trail, a 1 km outdoor fitness trail, with one training station at the top right of the photo.



(a)



(b)

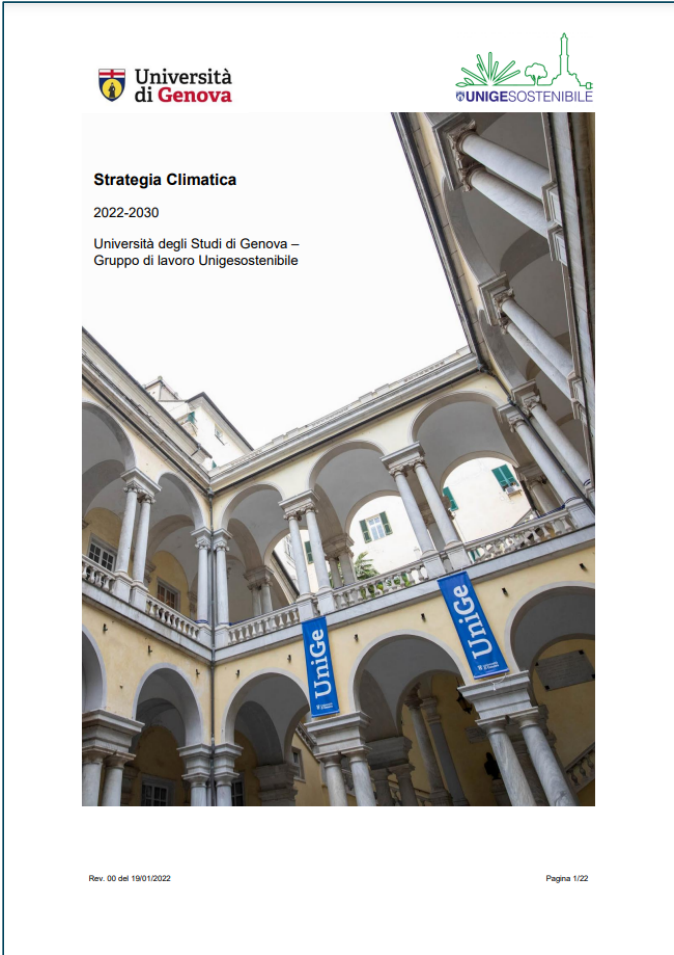


(c)



# CLIMATE NEUTRALITY STRATEGY

The University of Genoa has made a strong commitment against climate change, accounting and validating its carbon footprint since 2014, committing to being **climate neutral by 2030**, joining the United Nations global campaign **Race To Zero** for Universities and colleges (<https://www.educationracetozero.org/>), and systematically managing sustainability through the Environmental Sustainability Commission and the Unigesostenibile Working Group.



# CLIMATE NEUTRALITY PLAN

**SCOPE 1-2** - UniGe is working to reduce its energy consumption by 30% thanks to efficiency interventions, has planned thermal interventions (thermal insulation, replacement of thermal power plants) to reduce the energy demand and currently purchases Renewable Energy Certificates (RECs).

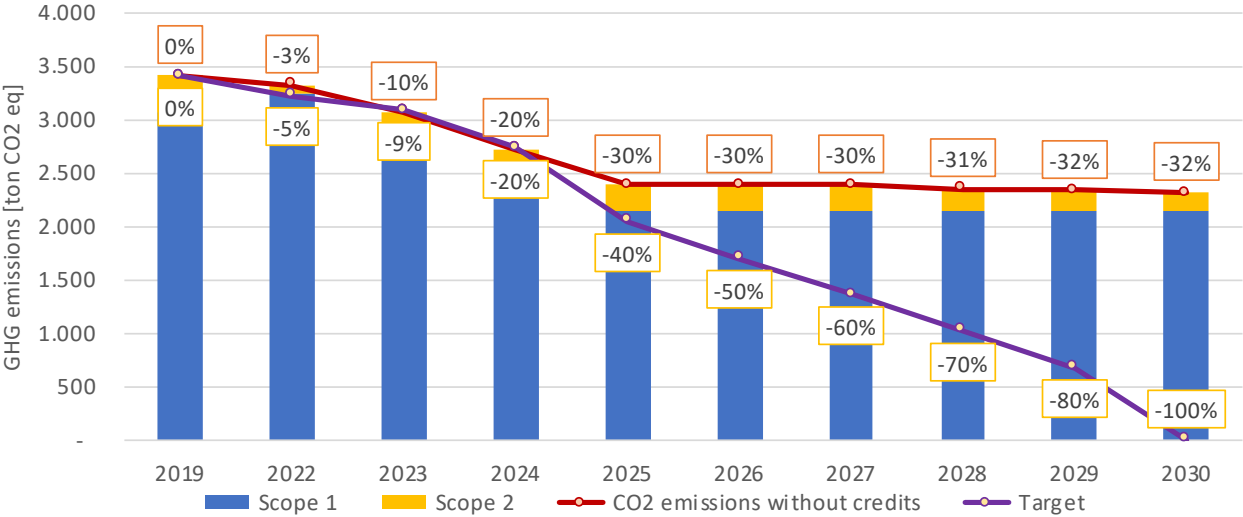
**SCOPE 3** – UniGe cooperates with its supply chain to reduce the footprint of Mobility, Logistics, Goods and services, Waste, and Capital goods.

**Main targets on decarbonisation pathway (against baseline)**

**FY23** -10% on Scope 1&2 GHG emissions

**FY24** -20% on Scope 1&2 GHG emissions

**FY30**  
-30% in electricity consumption  
-30% in thermal consumption  
**0 net CO<sub>2</sub> emissions in Scope 1&2**



# RESEARCH - CIRCULAR CITIES | DECARBONIZATION

EXTERNAL

Bogotá  
(Colombia)



Glasgow  
(Scotland)



Milan  
(Italy)



Genoa  
(Italy)



Impact of circular measures to reduce urban CO<sub>2</sub> emissions: An analysis of four case studies through a production- and consumption-based emission accounting method

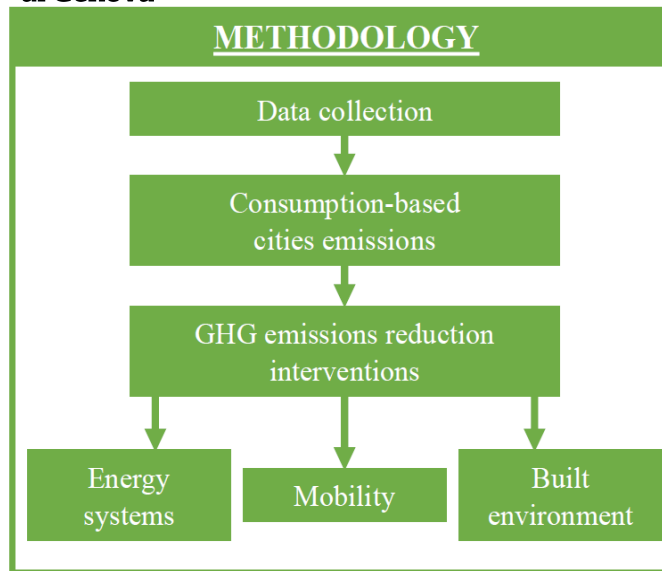
Del Borghi, A., Gallo, M., Silvestri, N., ...Croci, E., Molteni, T.  
*Journal of Cleaner Production*, 2022, 380, 134932



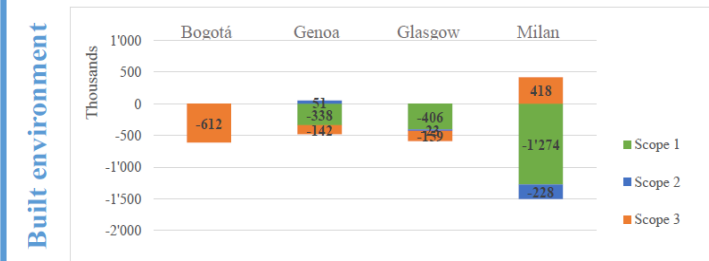
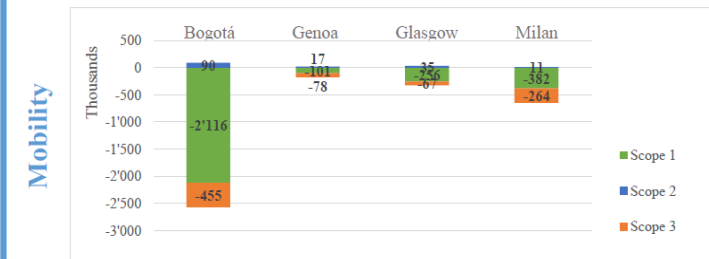
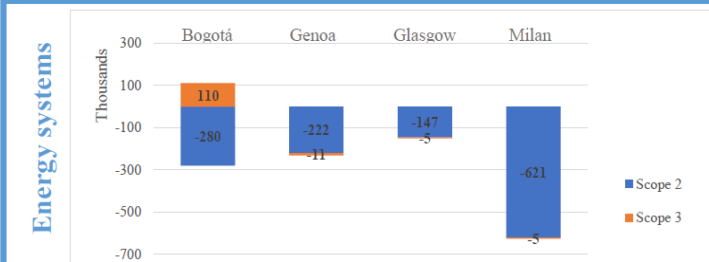
Università di Genova



## METHODOLOGY



## RESULTS



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# INNOVATION – TECHNOLOGY TRANSFER ECOSYSTEM

EXTERNAL

Robotics and AI for Socio-economic Empowerment

**Type of project:** National | **Start date:** 01/10/2022 | **End date:** 30/09/2025

The RAISE project aims to support the development of an innovation ecosystem based on the scientific and technological domains of **Robotics and Artificial Intelligence (AI)**, focusing on the needs of a specific regional context: the Liguria Region. The project aspires to evolve into a highly attractive ecosystem for companies, investors and researchers at national and international level.

**The RAISE ecosystem represents a sort of 'engine' to rewrite the foundation of industrialisation through Robotics and Artificial Intelligence (AI) with specific application in the domains of logistics and ports, sustainable cities and territories, health and environment.**

RAISE is organised according to the *Hub & Spoke* governance system and consists of 25 Spokes and Affiliate partners as follows:

- **13 Research Institutions, Research Foundations and IRCCS:** CNR, UNIGE, IIT, ENEA, INGV, INFN, Fondazione CIMA, AISM, Fondazione Don Gnocchi, IRCCS San Martino, IRCCS Giannina Gaslini, Ospedale Galliera, Associazione Festival della Scienza
- **4 Small and Medium Enterprises:** Aitek, Circle, AlgoWatt, Infosolution
- **8 Large Companies:** Leonardo, Ansaldo Energia, ETT, Esaote, Philips, Engineering, Fincantieri, Movendo Technologies



**Robotics and AI for socio-economic empowerment**  
Ecosistema dell'Innovazione della Liguria  
PNRR – M4C2 – I1.5

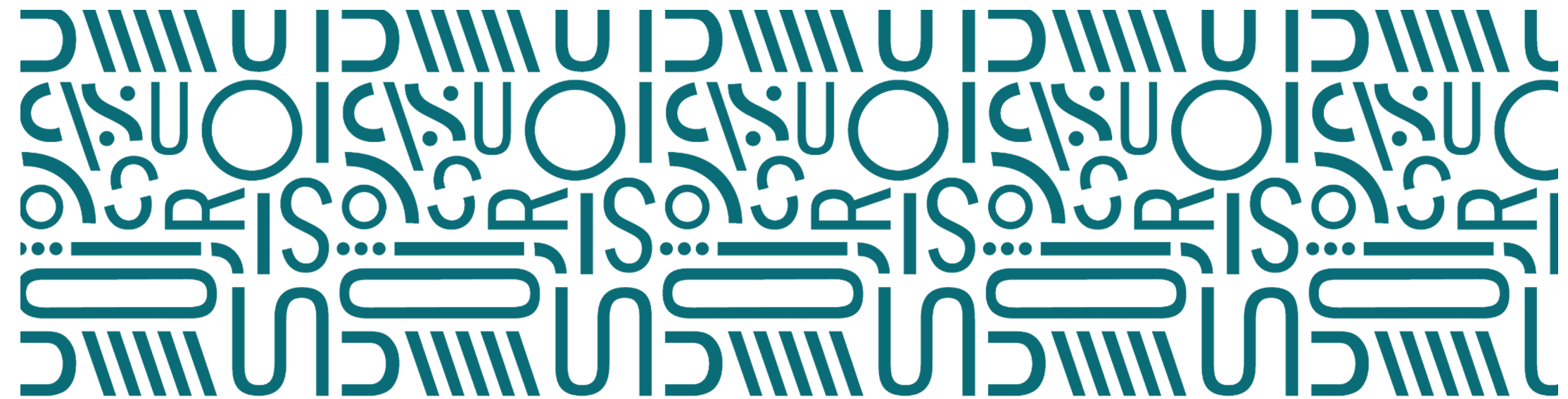
**Acronym:**

RAISE

**Funding programme:**

NRRP (National Recovery and Resilience Plan)

<https://www.raiseliguria.it>



## CONTATTI E INFORMAZIONI

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