

# Plans for Environmental Sustainability: the role of the Environmental Sustainability Unit

# PoliMI in figures (1)

### Community (December 2024)

- 51.583 Students
- **8.243** academic and administrative staff

Total: 59.826



#### 6 campuses in Italy

- Milano Città Studi
- Milano Bovisa
- Cremona
- Lecco
- Mantova
- Piacenza

### 1 campus in China

- Xi'an (since 2019)





# PoliMI in figures (2)

#### 4 Schools

School of Architecture Urban Planning Construction Engineering School of Design School of Civil, Environmental and Land Management Engineering School of Industrial and Information Engineering

#### 12 Departments

- Architecture and Urban Studies
- Architecture Built Environment and Construction Engineeting
- Chemistry, Materials and Chemical Engineering
- Design
- Electronics, Information and
- Bioengineering
- Energy

- Physics
- Civil and Environmental Engineering
- Management, Economics and Industrial Engineering
- Mathematics
- Mechanical Engineering
- Aerospace Science and Technology



## PoliMI in the international rankings





1° 98° in Italy

6° 7° 21°

Art and Architecture Engineering and Built and

Environment

Technology

Green Metric World University Rankings GreenMetric Rankings (2024)

6° 66° in Italy

Best results in **Waste Management** (1,800/1,800 points) and **Transportation** (1,750/1,800 points).

POLITECNICO DI MILANO

### **PoliMI - Affiliations**

International Sustainable Campus Network







The Italian Network for Symbiosis

Digital Sustainability Foundation





Strategic alliance between five European universities of science and technology







First experience of information sharing and coordination among all Italian Universities committed to the topic of environmental sustainability and social responsibility.

# THE NETWORK OF UNIVERSITIES FOR SUSTAINABLE DEVELOPMENT

Officially established in 2016 by CRUI (Italian Conference of Rectors), but active since 2013 through a bottom-up approach.

Spreading the culture and good practices of sustainability

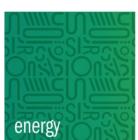
#### **Thematic Working Groups**

















# "Sustainability@PoliMi

#### SUSTAINABILITY GOVERNANCE

WIDESPREAD INNOVATION
AND ENGAGEMENT

Working group on Sustainability

Network of delegates/ sustainability manager in the Departments

Networks and collaborations



EXECUTIVE RESPONSIBILITY

Rector

Management
Academic Networks
on SSI topics

**EXTERNAL RELATIONS** 

Communication and

Coordination table
On Sustainable
Development and
Impact

Technicaladministrative areas of the University

Working group of sustainability

Accessibility
Reuse of materials and waste management
Gender and inclusion policies
Food waste

Sport and wellness

Sustainable purchasing
Digital sustainability

Energy saving
Sustainable mobility
Behavior change

Relations

Institutional

SUSTAINABLE DEVELOPMENT GALS

International policies



Sustainability at the PoliMI

Quality of life, health and well-being

**Sustainability Task Force** 

Equal Opportunities Unit Innovation and Social Responsibility Service

CITTÀ STUDI CAMPUS SOSTENIBILE

Polisocial

Multi Chance Poli Team

COMITATO
UNICO DI GARANZIA

UNICO DI GARANZIA VIVI.POLIMI.

POLIMI

**Energy Commission** 

Sustainability Communication and Cultural Activities Service

**Environmental Sustainability Unit** 

Managers of sustainability

## Environmental Sustainability Unit - ESU (1)

2013

2022

2025

The Environmental Sustainability Unit (ESU) was created in 2013 to support the "Città Studi Campus Sostenibile" project, as a general administrative department office.

Since January 2022, ESU is a Unit within the Supplies & Facility Management Division

#### ESU Staff:

- Eleonora Perotto Head of Environmental Sustainability Unit and Mobility Manager
- Paola Baglione Climate Change referee
- Chiara Minerva Sustainable Mobility referee
- Maria Licia Zuzzaro Communication referee
- Melissa Paris Circular Economy referee (internship)



PURPOSE: to contribute to the university's environmental sustainability strategy and manages the process aimed at improving environmental performance and creating a «sustainable campus».









# Environmental Sustainability Unit - ESU(2)

#### Main Areas of Responsibility (1):

- support for the definition of the University's general policies and objectives in terms of sustainable development, with particular reference to the issues of i) the reduction of CO<sub>2</sub> emissions ii) the promotion of sustainable mobility and iii) the sustainable management of waste, according to the principles of the circular economy and responsible consumption";
- management, in collaboration with the Mobility Manager, of activities aimed at improving sustainable mobility and writing the Home University Commute Plan (HUCP);
- management of relationships with municipalities and control bodies;
- management and monitoring of the University's CO<sub>2</sub> emissions inventory and definition of the contents of the Mitigation plan and Adaptation plan;

# Environmental Sustainability Unit - ESU(3)

#### Main Areas of Responsibility (2):

- organization of events and training course to raise awareness and promote environmental sustainability;
- collection and processing, where available, data used for the environmental characterisation of the University (e.g. mobility habits, energy consumption, ...), also for participation in national and international networks (e.g. RUS, ...);
- support to University structures for mapping and managing activities with direct environmental sustainability implications, with particular attention to: atmospheric and noise emissions, spills, water, energy and resource consumption, induced traffic, waste management from a circular economy perspective, management of green areas, "green" purchasing;
- mapping of the environmental aspects linked to the activities carried out at the University having direct environmental sustainability implications and definition of guidelines for carrying out the activities considered most significant from the point of view of environmental implications.

# Environmental Sustainability Unit - ESU(4)

### and... MUCH MORE...

- support in writing the sustainability report;
- support the identification of indicators for monitoring environmental aspects;
- participation in relevant sustainability projects (national or international);
- participation in conferences/seminars/workshops;
- support to colleagues, upon request, on sustainability topics;
- collaboration with student and environmental associations, public service providers (water and waste management, etc.), other universities, etc.

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#### POLITECNICO DI MILANO





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### **Environmental Sustainability Unit and Strategic Plans**

01

CO<sub>2</sub> Emissions Mitigation Plan



Paola Baglione Giulia Cavenago Francesco Silvestri Samuel Tolentino



02

Climate Change Adaptation Plan



Eugenio Morello Rachele Radaelli Doruntina Zendeli



03

Home-Work/University Commute Plan

### **CO<sub>2</sub> Emissions Mitigation Plan**

2019 First edition of the Plan

2024 Updated edition of the document

A "light" version is currently being drafted

#### Based on Politecnico's CO<sub>2</sub> emission inventary

#### Two main focus areas:

- energy emissions
- mobility emissions

#### INDEX

- 1. Introduction and Purpose
- 2. Methodological Aspects in Defining Emission Reduction Commitments
- 3. Methodological Aspects in Estimating Emissions
- 4. Implementation of the 2019 Plan as of 2022 (PdM, 2019)
- 5. Proposed Actions for Achieving Decarbonization Targets
- Summary Framework of Potential Reductions by 2025 and 2030



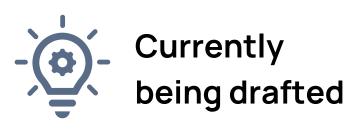
Paola Baglione Giulia Cavenago Francesco Silvestri Samuel Tolentino



### Cimate Change Adaptation Plan (first edition)

#### **INDEX**

- Introduction: urgency and positioning of the Plan within the University
- 2. Analysis of the Climate Context
- 3. Assessment of Climate Risks for Politecnico di Milano
- Toward an Adaptive University: Goals, Strategies, and Integration
- 5. From Strategies to Actions
- 6. Governance and Community Engagement
- 7. Priority Actions
- 8. Integration of Adaptation into Academic Activities
- 9. Monitoring and Evaluation
- 10. Conclusions





Eugenio Morello Rachele Radaelli Doruntina Zendeli





### Home University Commute Plan

### 4 Key Areas of Action



#### Agreements and Benefits

Funds for staff's public transport passes, agreements with sharing mobility services, carpooling, ...



#### Infrastructure improvement

Installation of bike racks and electric charging points, redesign of open spaces, ...



#### **Communication and Awareness Campaigns**

Events and seminars, workshops and pilot projects, test drives, citizen science projects, ...

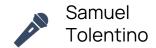


#### Networking Activities

Participation local, national, and international working groups (RUS, U-MOB, ...)



→ Modal share is important to identify actions 🎤





### PoliMI Mobility Strategy - 1



### Modal share

Overall modal share

External ring: student

Internal ring: workers



### How do people move? Overall modal share

#### Widely used local public transport (LPT):

- Exclusive use: 49% students; 47% staff;
- Combined use: 25% students; 13% staff.

Private vehicles used primarily by staff: 20% (students 9%)

**High percentage of active mobility** (especially for the Città Studi campus), with staff using bicycles twice as often as students:

- Walking: 10% students; 9% staff;
- Bike/scooter: 6% students; 11% staff

9% 10% 9% 11% 13% 47% 49% Go on foot

**Public** 

**Private** 

[POLIMI Mobility survey 2024 – expanded data]

Traspol Lab

**Bicycle** 

Private + Public



### PoliMI Mobility Strategy - 2



### User habits

### Why POLIMI users move in this way?



#### MOTIVATIONS FOR MODAL CHOICE

- Speed: for those who use cars and/or bicycles;
- Affordability : for those who use public transport, bike or go on foot (PS: also for car users living in M3 and M4 bands, in relation to smart working);
- Autonomy: especially for those who use the car, and to a lesser extent also for those who use the bicycle or go on foot;
- Health: for those who use the bicycle or go on foot;
- Comfort: for those who use the car.
- There are no alternatives: for those who use the combination private + public trasport



### PoliMI Mobility Strategy - 3a



### Propensity to change (1)

### Are POLIMI users open to change their mobility habits?

> OPEN TO USE THE BIKE...

SAFETY

- In the presence of an increase in cycle paths (requested by approximately 30% of respondents)

- Highlighted with decreasing percentages is the request for:

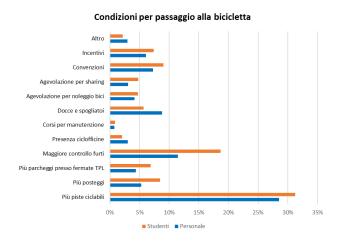
- more control over thefts (especially students)

  Bike stations
- -more agreements and parking spaces (especially students)
- -changing rooms and showers (especially staff)
- -mobility incentives/credits (especially students)

New bike parking spaces

...Bike to Work

Collaboration with the Municipality, AMAT, Metropolitan City, and the Region is fundamental



The presence of the UNIVERSITY BIKE REPAIR CENTER is also an incentive, especially for the staff.







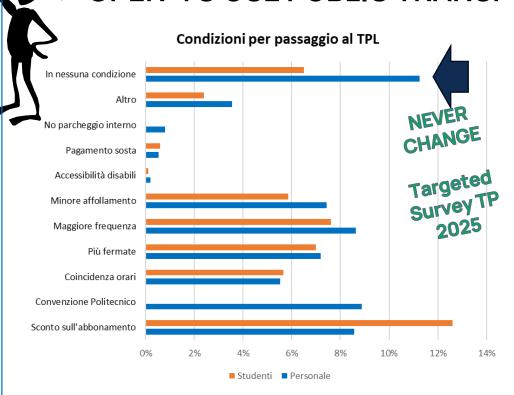
### PoliMI Mobility Strategy - 3b



### Propensity to change (2)

### Are POLIMI users open to change their mobility habits?

#### **OPEN TO USE PUBLIC TRANSPORT**



**Approximately 50% of staff** (half of whom use private transport) **and 40% of students** (a quarter of whom use private transport) **expressed willingness to shift to public transport**.

In particular, the following improvements were requested:

- to improve quality and accessibility of the service, especially in terms of:
  - less crowding (staff and students);
  - more stops (staff and students)
- to increase the frequency of the trips/passages;
- to pay more attention to transport timetable connections;
- to introduce/increase discounts, especially for students.

Traspol Lab

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### Home University Commute Plan

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#### Networking Activities

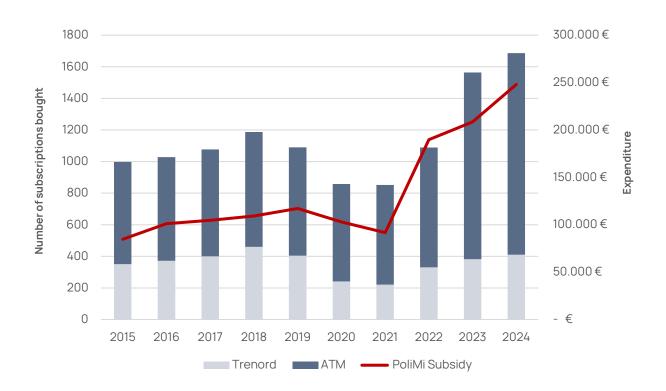
Participation local, national, and international working groups (RUS, U-MOB, ...)

### Agreements and Benefits

#### Public transport operators (PTO)







#### Sharing mobility services

- Bicycles
- Segways
- Cars
- Electric scooters
- Vans













cooltra

#### Agreements with:

- Railway operators (Trenitalia)
- Bus operators Flibco & Flixbus

### Infrastructure Improvement (1)

Three main bike stations:

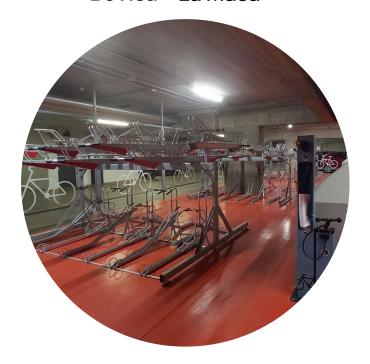
Città Studi - Leonardo



Bovisa - *Durando* 



Bovisa - *La Masa* 



Coming soon:

«Marie Curie» residence hall (end of October) // Campus Bassini - Building 41

### Infrastructure Improvement (2)

Over the past year, ESU has removed outdated bicycle facilities and installed modern infrastructures across the Milan campuses of Città Studi and Bovisa.

As part of the 2024 POLIMI HUCP, approximately 800 new bicycle parking spaces are being installed.

Construction is ongoing in the Bovisa-Durando and Città Studi-Bassini campuses.

In July 2025 the works have been completed at Bovisa-Lambruschini, & La Masa, Città Studi-Bonardi & Golgi Campuses.

> ~1280 bicycle parking spaces

200 will bicycle parking spaces spaces



### Communication and Awareness Campaigns

A few examples

### **European Mobility Week 2025**

16th-22 th September 2025





Safe mobility



Visit to the DriSMi -Driving Simulator Lab

Seminar on sustainable mobility at the Bovisa District @Policiclo

+

Handover of a refurbished bike



Seminar on road safety with contributions of two Polimi Professors and the Mobility Manager, in colaboration with ACI Milano, AC Milano, and Sara Safe Factor Project





### **Networking Activities**

#### A few examples

Sustainable mobility POLIMI Working Group

↓

«Cities for sustainable mobility» project.

→ aims to identify policies and measures to promote sustainable urban mobility by establishing permanent working groups and scientific observatories dedicated to specific issues (i.e. transport safety and service quality).







Periodic initiatives concerning *road safety* and *sustainable mobility*, in collaboration with **ACI Milano**, **Regione Lombardia**, **INAIL**.



Partecipation in the mobility working group of RUS



# TOGETHER FOR THE CHANGE WE WANT!



# Thank you for your attention!

AND SPECIAL THANKS TO CHIARA MINERVA FOR THE SUPPORT IN PREPARING THE PRESENTATION





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