Smart mobility at Politecnico di Milano

Sustainability Unit - Giada Messori, Eleonora Perotto

3rd February 2020
Sustainability@Polimi

Sustainability at Politecnico
Quality of life, health and well-being

International policies

Networks and collaborations

Sustainability Unit

Polisocial
Multi Chance Poli Team

Politecnico Energy Commission
Politecnico mobility strategy

Main SDGs involved in our activities:
Politecnico mobility strategy

Facilitations and agreements
Funds for staff PT subscriptions, agreements for shared mobility services, ...

Infrastructural interventions
Bike shelters, recharge stations, structural renewal and redesign of open spaces

Awareness raising campaigns
Events and seminars, test drives, citizen science projects, experimentations ...

Networking activities
Working groups at local, national and international level (RUS, U-MOB, ...)
Politecnico activities for smart mobility

**Techno-centric smart mobility**
- E-car for duty travels
- Recharge stations

**Consumer-centric smart mobility**
- Info desks and events
- Bike repair workshop
- Shared mobility
- Citizen science
- Test drives
- Contests
- Driving courses
- Car Pooling

**Integrated smart mobility**
- Public transport
- Bike shelters
- Bikes and kick scooters
- Requalification of open spaces
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E-car for duty travels

An electric car was available for staff duty travels for 9 months, accustoming people to e-cars and to shared services relying on an app while avoiding the use of traditional cars.

- **90 rents**, 2.730 km travelled in 670 hours
- **453 kgCO₂** not emitted in the atmosphere

available only for half month in August and December (holidays)
E-car for duty travels

«I hope the agreement will be renewed and I’ll be able to use again the fabled Leaf»

Today triple driving experience: electric, automatic and shared. An experience completely shared with Nicola, otherwise I’d still be at the parking lot trying to understand what to do. Thanks to Campus Sostenibile for the agreement between Ubeego and Politecnico di Milano, and to Eleonora Perotto for her suggestions.

«Comfortable, smart and silent!»
Recharge stations for electric cars

3 recharge points are available inside the Politecnico campuses.

According to the Polimi Mitigation Plan (2019), more should be installed shortly taking advantage of the many construction sites.
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Info desks

Info desk held at least twice a year, during the Sustainable Development Festival and the European Mobility Week, to:

- **Raise awareness** on sustainable mobility and encourage sustainable behaviours
- Promote the various **ongoing initiatives**

[https://festivalsvilupposostenibile.it/2020](https://festivalsvilupposostenibile.it/2020)
[https://mobilityweek.eu/home/](https://mobilityweek.eu/home/)
Shared mobility

2017-18: 6 companies under agreement
2018-20: 16 companies under agreement
- 6 car sharing
- 1 bike sharing
- 4 scooter sharing
- 5 bus/shuttle services

Advantages to both Politecnico students and staff when using one of these services

http://www.campus-sostenibile.polimi.it/convenzioni
Shared mobility

**Information desks** for each company to:
- explain the importance of shared mobility
- present its service and fleet
- let people try driving their vehicles
- promote complementary initiatives
Test drives were open to everyone during shared mobility events to:

- **engage** more people
- get rid of the “**fear of the new**”
- show **how easy** it is to drive electric vehicles
Bitride – Hybrid bike sharing

Partnership between Politecnico and a start-up for the testing phase of a new hybrid free-floating bike sharing service. The bikes could be used in 3 different ways: completely muscular, completely electric or as hybrids.

Actively taking part in the project was effective and engaging

- N. of candidates: **623**
- N. of people actively involved: **147**
- N. of bikes deployed: **32**
- N. of rents: **425**

“I actually use the bicycle more than before!”
Bitride – Bike ride to Parco Forlanini
In 2019, Politecnico participated in the “Best Practice Award”, a contest promoted by the European project U-MOB Life, and was among the finalists. A video and a poster were used to present the activities on shared mobility during the II° European Conference on Sustainable Mobility at Universities in Krakow.

https://u-mob.eu/best-practices-award-results/
Driving courses

Thanks to the GAI association, two driving courses were held in 2019, one focusing on hybrid cars and the other on full electric cars.

The aim was to teach Politecnico staff and students:
- technical features and costs of this vehicles
- how to recharge and how long does it take
- how to drive to better exploit the electric motor

Both theoretical and practical sessions!

https://gruppoacquistoibrido.it/
Bike repair workshop

Launched in 2014, Policiclo is the Politecnico bike repair workshop (open also for citizen). It is managed by students and offers a free bike repair service, while teaching people how to take care of their bikes.

Some numbers:
- Students involved: **8**
- Weekly openings: **2**
- Customers for opening: **7-8**
Citizen science projects

Together with *Citizens for Air*, an association fighting to defend the right to breathe cleaner air in cities, in 2018 we held a bike relay to measure Milan air quality (PM) as perceived while riding a bike.

The PM concentrations measured during the relay, mapped and presented during the *ECOMONDO* exhibition, show the strong difference between cycling in busy main roads or on less frequented ones.

Citizen science projects

We are now involved in a new project developed by *Citizens for Air, NO₂ No Thanks*, which aims at involving citizens in measuring air quality next to their houses, schools and work places.

Politecnico bought 20 sensors, to be installed in each departments and in other strategical places to map the air quality around the campus. The measuring campaign should start 8\textsuperscript{th} February.
Milano Bike Challenge

Politecnico participates every year to the Milano Bike Challenge, a friendly competition aimed at encouraging employees to cycle to work. Our University took 3rd place in 2015, 2nd place in 2017 and 2018 and first place in 2019.

https://www.lovetoride.net/milano?locale=it-IT
“Leave the car at home” contest

Contest reserved to Politecnico staff, held every year and aimed at encouraging employees to come at work without using their cars. Together with various prizes, winners also receive the title of “Polimi ambassador for Sustainable Mobility”.

http://www.campus-sostenibile.polimi.it/alpolisenzaauto17settembre2019
U-MOB video contest

As partner of the U-MOB Life project, Politecnico launched a video contest on accessibility and sustainable mobility.

The aim is to have participants reflect on mobility in the framework of the Sustainable Development Goals and share their ideas in a creative way.

http://www.campus-sostenibile.polimi.it/umob2019
We would like to test a Polimi car pooling service in 2020, we already selected the company through a notice, the agreement should be signed soon.
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**Politecnico activities for smart mobility**
Facilitations for subscription to public transport for the Polimi personnel. Further Politecnico subsidy: 35% of the subscription for the technical-administrative staff.
A new integrated ticketing system has been launched in July 2019.

It allows people to travel between 200 Municipalities with a single subscription valid on all public transports (train, subway, bus, ...), with different fares depending on the distance from the city centre.

Networking activities with Regione Lombardia to improve the system.
Today, Politecnico provides a supply of around **80 bikes** for staff internal travels and **4 kick scooters**, given by the Sustainability unit to those who request them.
Bike shelters

Politecnico offers **1,485 bike parking spots**.

4 new covered bike shelters were installed in 2018 and more should be installed according to the Mitigation Plan.
Requalification Projects

2 active projects for the structural renewal of the campuses, aiming at improving their liveability and quality: **VIVI.POLIMI** and **Renzo Piano**.
- less cars inside the campuses
- more study spots and benches
- more green areas
Piazza Leonardo da Vinci

Yesterday
VIVI.POLIMI

Integration

Città Studi

Bovisa
Renzo Piano

Yesterday
Tomorrow
Conclusions

Wide spectrum of mobility strategies:
- strictly mobility related actions,
- physical redesign of spaces,
- educational and behavioural change initiatives.

Providing a wide range of mobility alternatives and delivering high quality projects that facilitate good practices can change people attitude and habits.

Future activities

Enhance current policies, like:
- bike related services;
- agreements for public transport and sharing mobility;
- liveability of open areas;
- engagement campaigns;
- monitoring;
- networking with stakeholders.
Conclusions

Main results of the 2017 survey:

- widely used public transport, both alone or with private transport;
- private vehicles mostly used by staff;
- high share of active mobility.

Very different commuting patterns between Milanese campuses and regional ones.
Thanks for your attention!

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