



# Plastic and circular economy: The role of the university in changing use. Politecnico di Milano approach

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# Be the change - INDEX

- Problem statement
- Policy on different scales
- Reflection and role; What does the Politecnico Community do?
  - With the hands – actions and projections
  - With the pen – policy, research and measurement
  - With common sense – awareness and proactivity



# Problem /subject



Single use plastic bottles and cups do not fit in the concept of circular economy.

- Materials
- Collection
- Habits

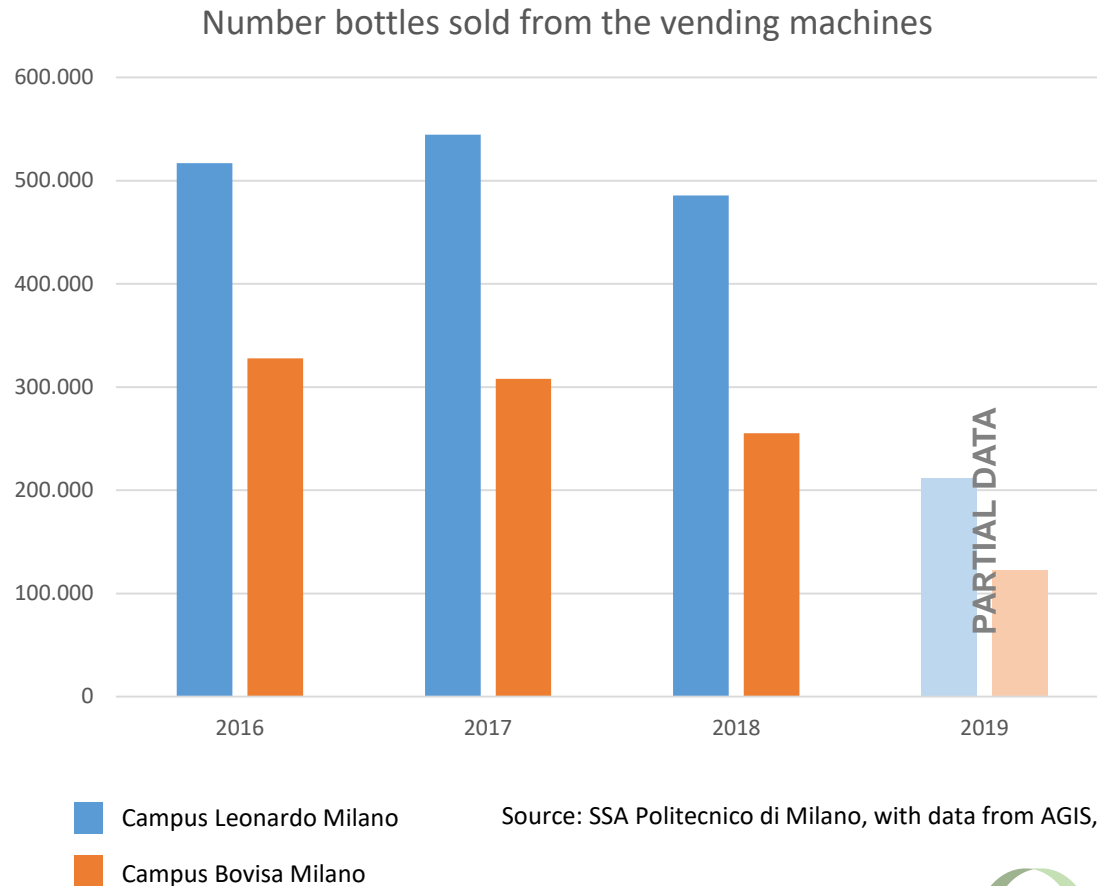


# Numbers: plastic bottles

To indicate the size of the problem:

2 Milanese campuses: 800.000  
bottles per year

Trend is not yet a clearly  
decreasing one



Source: SSA Politecnico di Milano, with data from AGIS, 2019



# Numbers: plastic cups

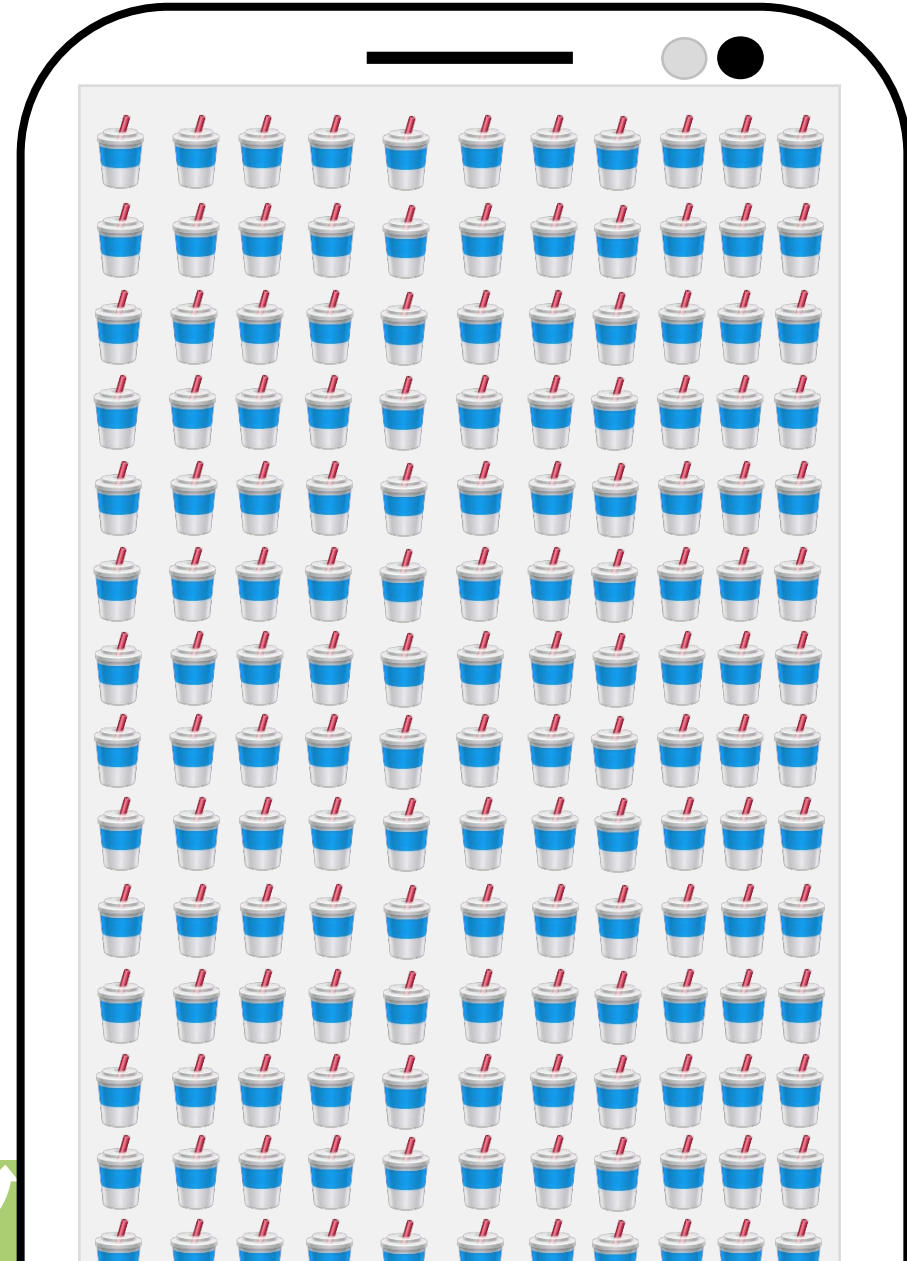
To indicate the size of the problem:

- 10,000 students per day
- 1.2 drinks in plastic cups per day
- A week/5 days: 60,000 cups

Source: SERIM/Ucup,2018

Quantification in your hands

- 11 per row, 21 rows in a full screen
- in a screen 231
- Swipe down 52 screens full for the use of only one day
- 260 screens full/swipes for a week





# Policy, from global to the university



Particular focus on objective 12: Responsible consumption and production

Ban and concept: circular economy

Another concept: the 4Rs

MareVivo, Ministry of Environment

Among other initiatives: Letter and commitment CRUI

***“Commitment to operate, including the involvement of students, for the regeneration of places and to take a leading role.”***

Source quote: Manifest CRUI 2019: From "The Universities for Sustainability" towards "Sustainability in Universities"

# Reflection: What can/should/will we do?

Why should the university?

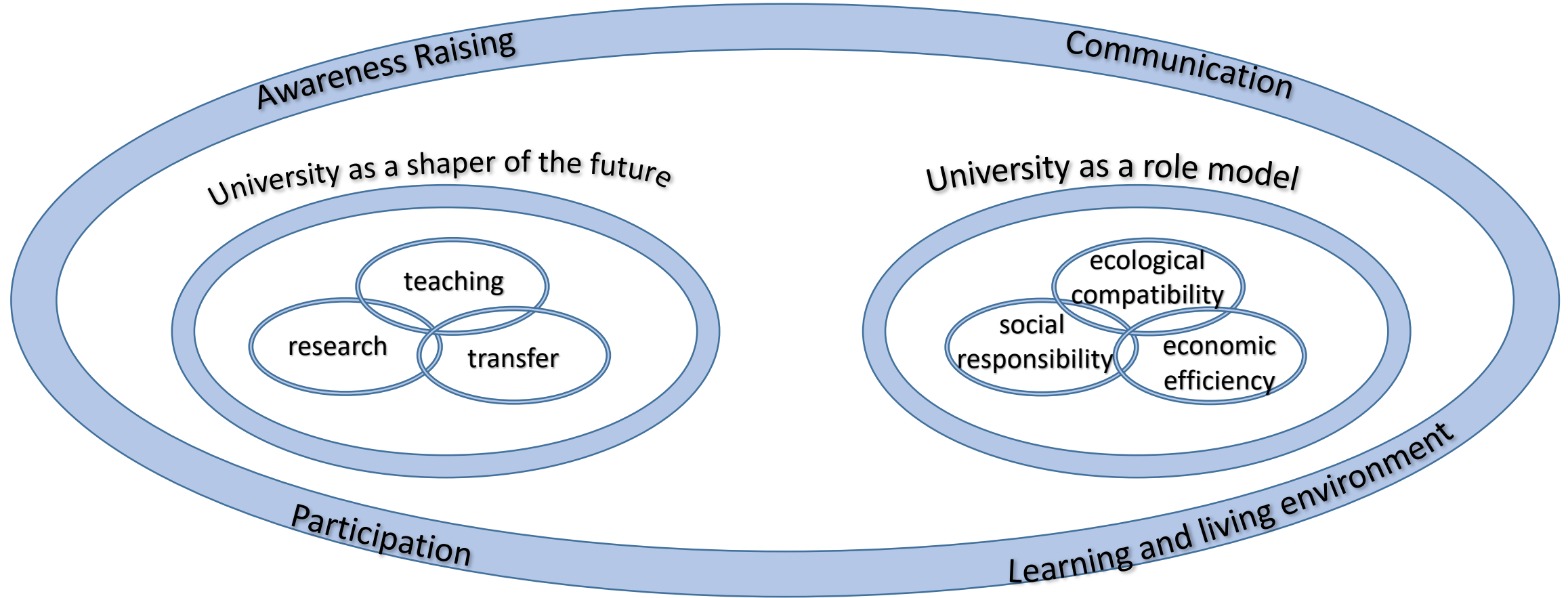
- Scale
- Aim group; reachable and sensitive for the subject
- Role: Interactive education

In which direction?

- **With the hands:** Actions and projections
- **With the pen:** Policy, research and measurement
- **With common sense:** Awareness, communication and pro-activeness



# Towards a change

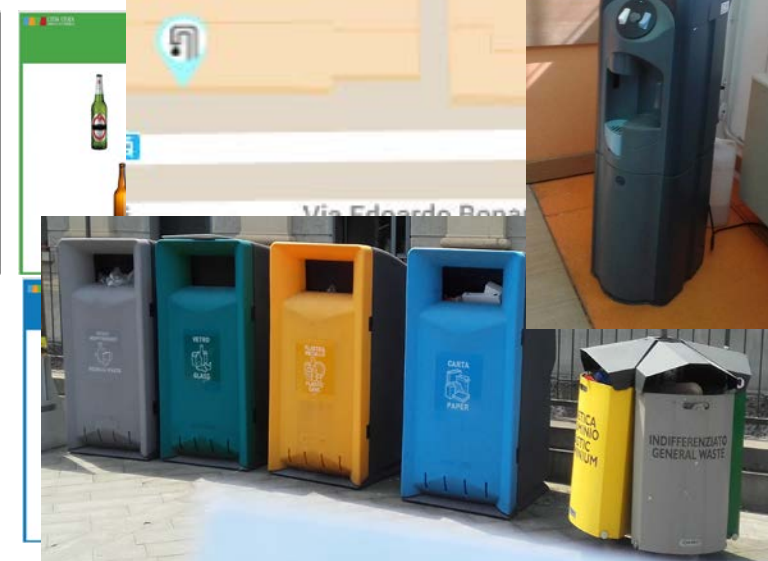


Source: SSA Politecnico di Milano / University of Basel

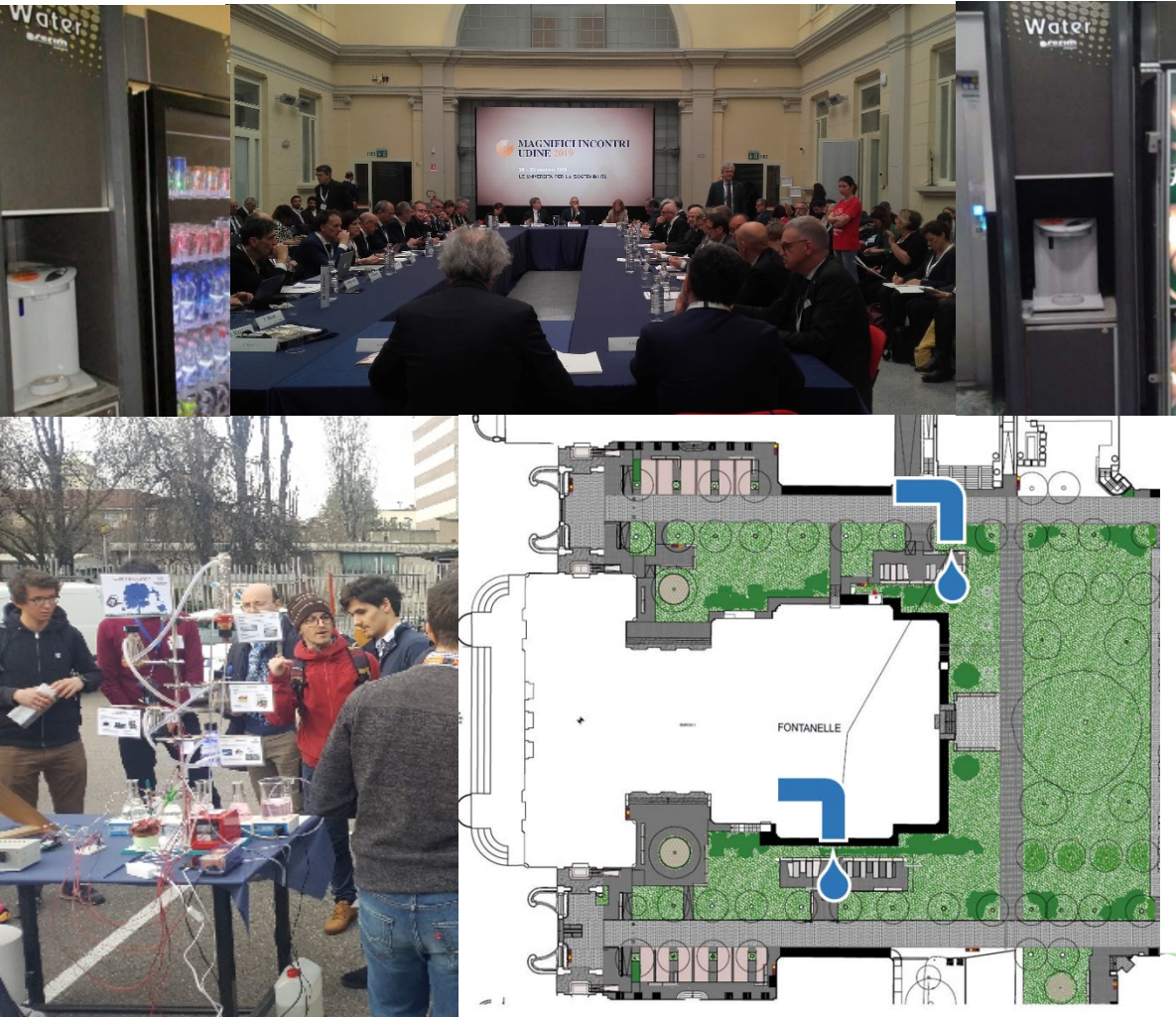


# Actions and projections

- Aluminium bottles: distribution for free during events by the Sustainability Office and sales in Official Merchandise (Green Collection)
- Water dispensers: from 19 to 39 in 2019
- Water house: water used in MM casetta : 285.218 lt in 2018 (Metropolitana Milanese Spa, 2019)
- Separation of waste: recycling more than 75%, differentiated plastic collection (AGIS, Politecnico, 2018)
- Use of compostable materials in the canteens
- New vending machines with no-cup option
- Inform and map locations of water alternatives (<http://www.campus-sostenibile.polimi.it/cartografia1>)
- Sustainable events: no plastic use in catering and seminars



# Policy, measurement and research



- Include objectives and rules in the university policy. Commit and cooperate with other universities
- Include plastic free or limiting rules in calls and plans, and reuse plastic in a visible way
- Agreements and consistency on monitoring internally and with distributors.
- Use the knowledge of the institution for projects and competitions.



# Results questionnaire water use on the campus

- **Where:** How is the current use and where do we take/use it?
- **How** to reduce the use of single use plastic bottles

## Where do you get your water from and how often?

	vending machines	from shops (e.g. bars or supermarket)	I bring water from home in my own re-fillable bottle	I bring (plastic) bottles with water from home	I drink water from the tap in the campus or fountains close by	I refill bottles with water in the campus (toilet tap, filtered water tap, fountain...)
Usually or always	59	43	178	116	83	161
Occasionally	157	134	73	109	111	105
I never consider doing this	129	171	67	117	142	55
I'd love to do this but not yet	8	5	35	11	17	32
	353	353	353	353	353	353

Source: SSA Politecnico di Milano: Salvia & Buurste, 2019



# Results questionnaire water use on the campus

## Why do you not use the alternative reusable bottle? %

<b>None, I normally do it</b>	<b>25</b>
I want to see what I drink but I cannot see through the reusable bottle	3
I do not trust the material of the refillable bottles (plastic or aluminium)	3
Refillable water bottles are NOT sufficiently hygienic for me	3
<b>I forget to bring the reusable/refillable bottle with me</b>	<b>15</b>
I do not trust or I do not like tap water in public places or on the campus	5
I prefer sparkling water	3
It is annoying to bring the bottle with me	5
I prefer not to commute with the bottle of water in my bag	3
<b>There are not enough water dispensers in the campus</b>	<b>21</b>
<b>They are too expensive</b>	<b>13</b>

- **Where:** How is the current use and where do we take/use it
- **How** to reduce the use of single use plastic bottles?

Source: SSA Politecnico di Milano: Salvia & Buurstee, 2019

# Be the change: awareness and pro-activity

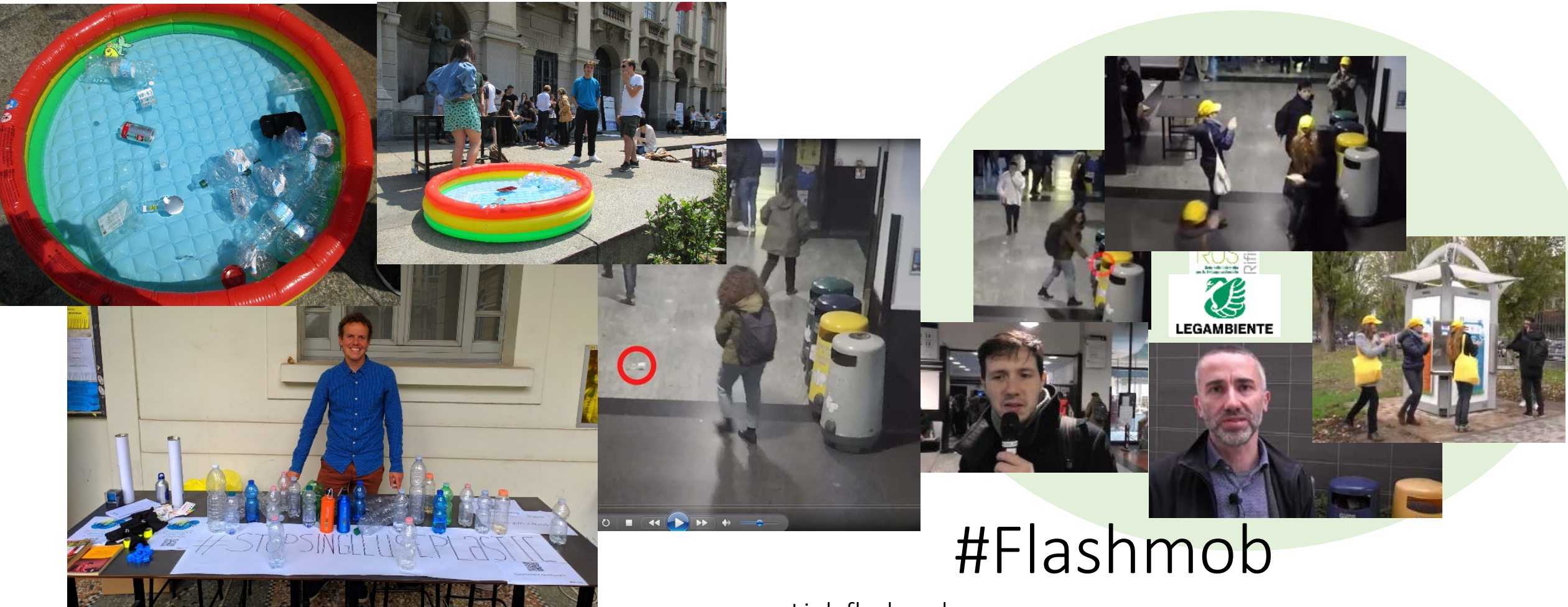
In compliance with The Third Mission of Politecnico di Milano

- Focus on sensitization: great part of the change comes from the individual.
- Exists in many shapes: hot topic in commercials, news, other universities etc.
- Involvement of citizens
- Focus on behavioural and educative motives
- Little incentives, eye openers, communications in social media





# Be the change: awareness and pro-activity



## #Flashmob

## #stopsingleuseplastic

Link flashmob:

<https://youtu.be/eniVR7wHMnU>



**POLITECNICO**  
MILANO 1863



**CITTÀ STUDI**  
CAMPUS SOSTENIBILE



**SUSTAINABLE  
DEVELOPMENT**

**GOALS**

**ECOMONDO**  
THE GREEN TECHNOLOGY EXPO

# Thank you for your attention

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The role of the university in change

