Sustainability
Report
2019

**From sustainable ideas
to tangible results:
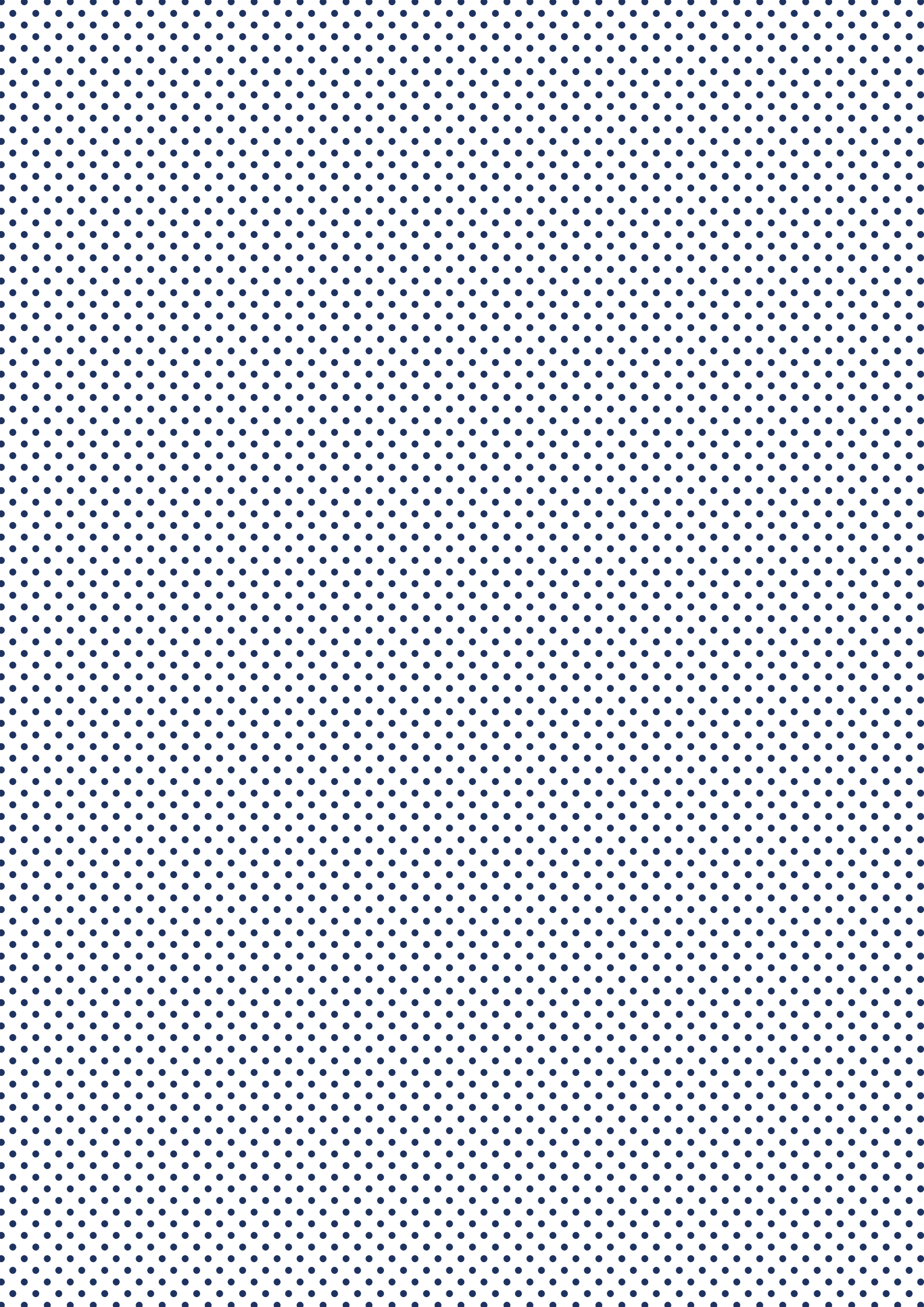the Green Team action**
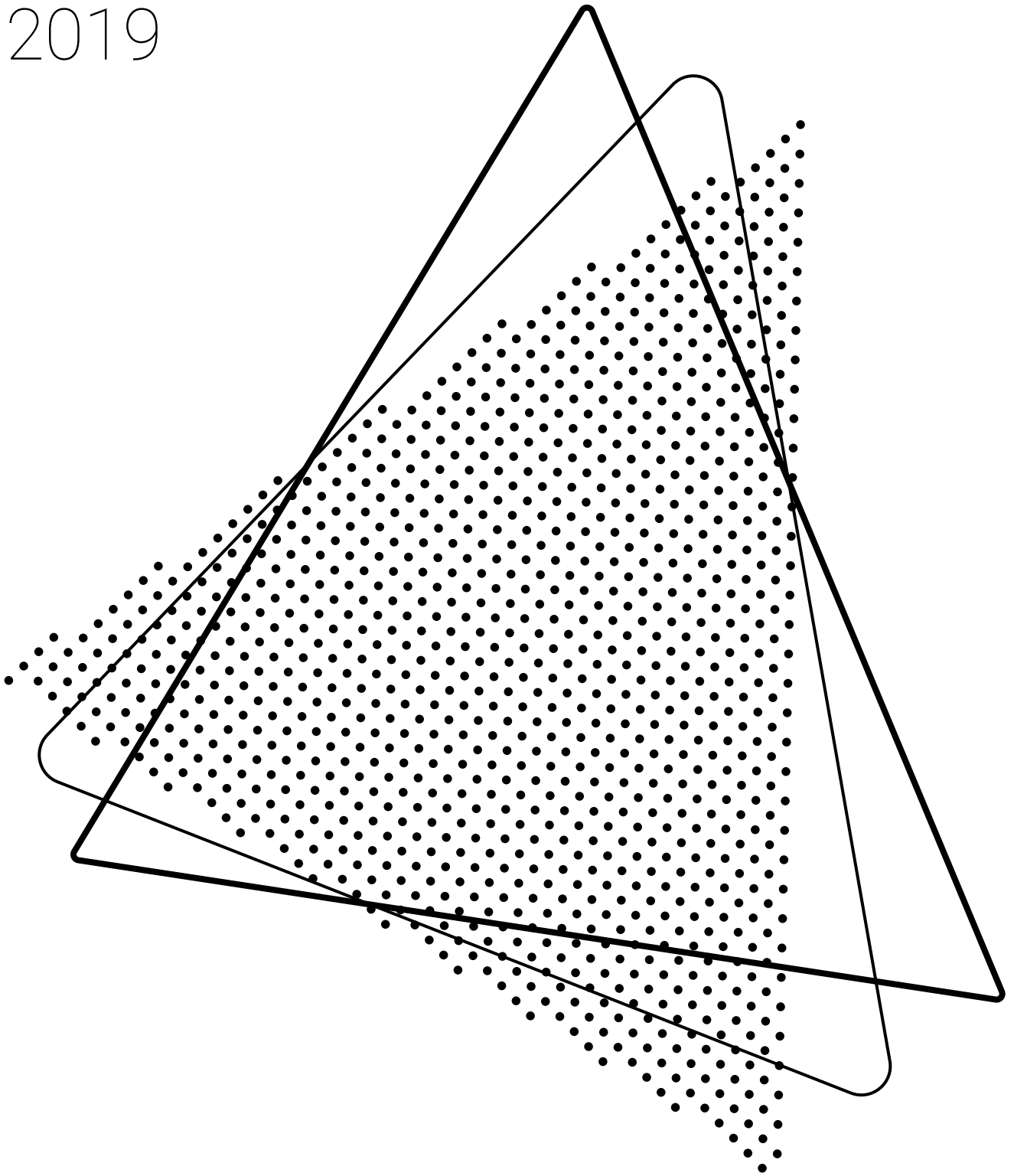
POLITECNICO
DI TORINO

sustainable
path

Sustainability
report
2019

a summary of the most
important actions and data
2017/2018 - 2018/2019

Forward by the Rector

Guido Saracco

Rector of Politecnico di Torino

The topic "sustainability" as described in our Strategic Plan can turn into a concrete shared action within our community if it becomes an opportunity for individual and collective thinking on personal and professional choices. This may lead to sustainable development in the technological fields we are involved in.

Furthermore, sustainability is a stimulus to help our students understand the major current trends, which support them in pursuing a path of autonomy and growth in skills inspired by the principles of creativity and sustainable innovation.

In order to implement these principles, since 2015, the Green team of Politecnico di Torino (GT) coordinates an integrated path, in order to translate these principles into sound actions for our University.

The Green team has thus become a pattern of acknowledged best practices both at local, national and international level, as shown by the awards that Politecnico di Torino has recently received in the framework of the Forum of Public Administration (Forum della Pubblica Amministrazione) and of some European networks. The GT plays the crucial role of attracting and gathering competencies and information on the sustainable development goals implemented in our University. In particular, it coordinates the promotion of sustainability at Politecnico in order to ensure that the Campus management activities is committed to the 17 SDGs of the 2030 Agenda as well as with its peculiar teaching and research activities both at national and international level.

Our University aims to confirm and enhance the actions of the Green team in order to have an impact not only on the sustainable campus, but also on the whole territory. In this regard, this Report shows the positive effects of this new course of action also in launching initiatives and providing solutions, by focusing on the great opportunities that a "green" and "inclusive" growth reserves for all the parties involved.

Moreover, we want to highlight the significant contribution of our participation in the task forces organized by the Italian University Network for Sustainable Development (RUS), which we are honored to coordinate since 2019. The sharing of good practices, competencies and experiences among universities will give support to the rise of a new society. This partnership among universities is going to be increasingly focused on environmental issues and will become a point of reference for the whole university community.

Forward by General Director

Ilaria Adamo

General Director of
Politecnico di Torino

In my role as Director General, I am very proud to introduce all the outputs and results of the activities developed by the Green team of Politecnico di Torino in the last three years.

As the Rector pointed out, first of all, sustainability is to be considered as a social responsibility towards future generations; in this perspective, it becomes fundamental both developing a model of university based on the principles of sustainability implemented within the academic community's life, as well as with reference to the facilities provided in the campus and directing academic and managerial actions towards sustainable technological, economic and social development. This can be pursued by reviewing all the objectives, activities and results in accordance with the 17 sustainable development goals proposed by the United Nations for the Agenda 2030.

Being these objectives so fundamental, a shared and a strong collaboration among all the actors involved in our University is required, as well. In this regard, it is necessary to focus the attention on the strategic role of our Green team, in particular on its coordination action on environmental sustainability and social responsibility, as conceived as a "in-house innovation engine" and point of reference, also at a local level, for the 2030 Agenda's goals.

Politecnico's administrative and technical management organization has been strongly integrated at different levels in the implementation of the university strategies for sustainable development. In particular, this is pointed out through the detailed description of data collected and actions performed, included in this Report.

Thinking and looking at the future in a different way is primarily a cultural challenge in which everyone has to be committed; a profound change in the way we face and deal with the problems around us must be brought, as well. Therefore, it is necessary that such cultural approach must become more and more a paradigm of our actions, even in our professional life, and a visible element shared by our whole community.
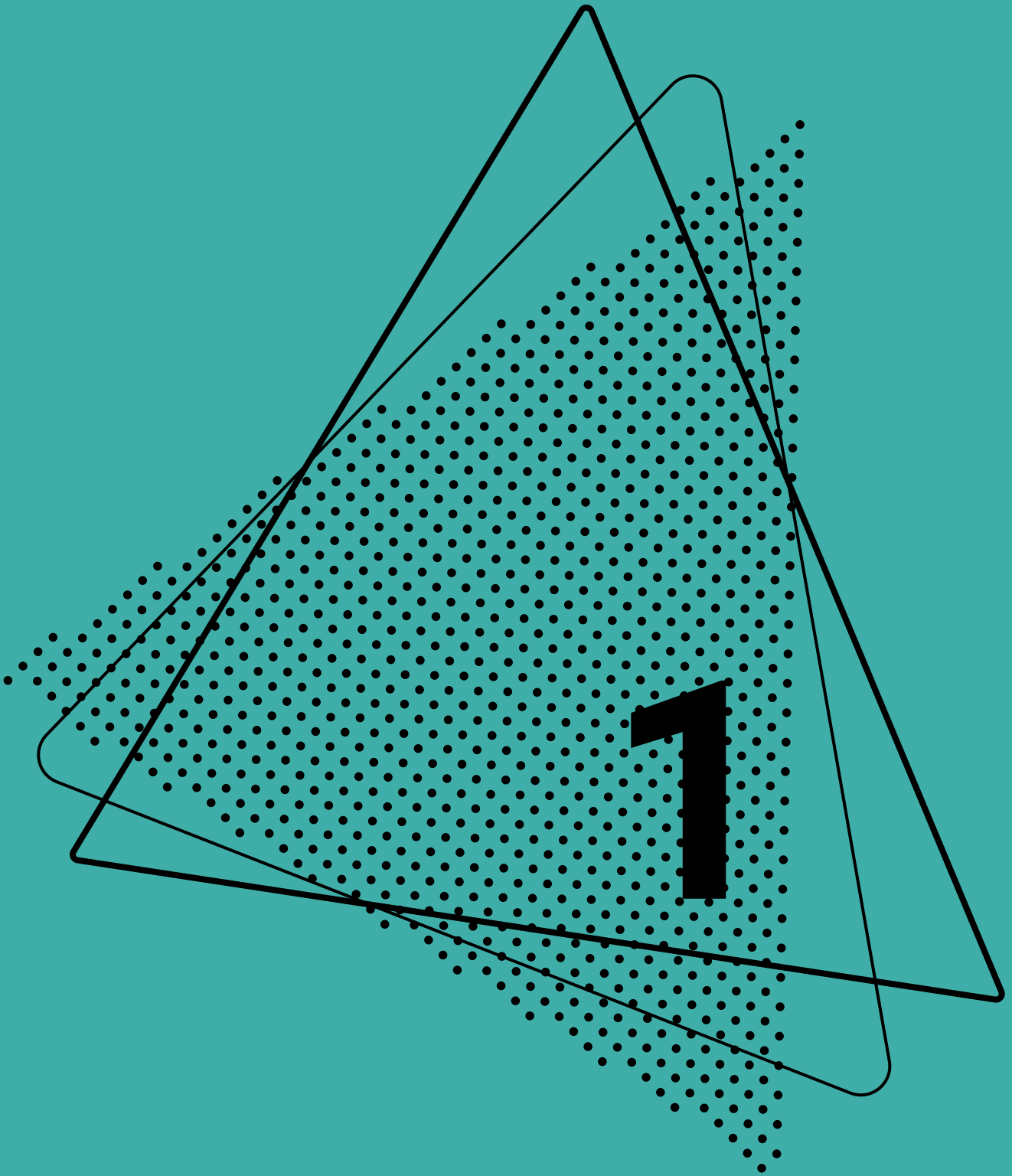
I would like to thank all my colleagues for their professionalism and for the attention they put every day into their activities while implementing these actions and I thank all the staff of all offices and departments for their growing attention towards the goals proposed in the UN 2030 Agenda and developed by our Green team.

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Introduction

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Developing a sustainable strategy to disseminate environmental awareness and sustainability culture

Patrizia Lombardi

Deputy Rector of Politecnico
di Torino, Green team
coordinator and President
of the Italian Network
of Universities Towards
Sustainable Development

Today we act and live as if Earth resources were limitless. Energy transition strategies and resource consumption reduction are on the table of the latest political debates all over the world, while the population is continuously increasing. City metabolism is pushed to its limit by our consumption styles so that being sustainable has become not only a matter of urgency but also a duty for a public administration willing to pave the way toward post-carbon society.

On 25 September 2015, the UN Summit adopted the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), organized in 169 targets to be reached by 2030. We can consider it as a historical event because it expresses a clear judgment of our current development model, not only on the environmental level but also on the economic and social level. Indeed, one of the innovative principles of the Agenda is the integrated view of the dimensions of sustainability and the recognition of synergies and trade-offs among the goals.

The challenge for complex, polycentric and multi-stakeholder organizations, such as universities, is to seize the opportunities of the Agenda 2030 to promote new governance mechanisms, coherently steering internal decision-making process, allocating resources, redesigning the organization and the system of incentives for teaching and research. In this perspective, the UN 2030 Agenda and the 17 Sustainable Development Goals represent an innovative framework for developing strategic planning and corporate social responsibility. This is an integrated approach for giving expression to the impacts of government action in terms of economic growth, social inclusion and environmental protection.

Higher Education Institutions play a key role in the education of future generations, in the development of scientific research which has to be able to meet societal goals and in the dissemination of knowledge inside society, also in relation to the capacity of fostering sustainable development, defined as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". [1]

Politecnico di Torino (PoliTO) introduced the concept of sustainability since 2012 and in 2015 a dedicated team, called Green team, was created to support a transition towards a low-carbon academic community. In 2017, the Green team published a Programmatic Document ("Documento Programmatico - Green team") which offers clear decision-making criteria for the enhancement of multidisciplinary heritage

in planning new training initiatives and policies for encouraging research on SDGs. **[2]**
For PoliTO, Sustainability is about "futurity", critical and value thinking and long -term environmental and social accountability. It represents an extraordinary journey and an opportunity to develop a strategy for disseminating environmental responsiveness and sustainability culture across society.
As the top international universities, PoliTO aims to increase the awareness of its social role in the city and the whole, as individuals and institution are able to drive the change toward a more sustainable future. The new Strategic Plan of Politecnico di Torino "PoliTO 4 impact" published in 2018, highlights sustainability objectives and SDGs in its strategic vision across all the main fields of Education, Research, Technology Transfer and Knowledge Sharing. **[3]** The Strategic Plan places people and the community at the heart and aims at creating a new sense of community based on a shared sustainable and participated vision of the University. The Plan recognizes the social role played by the University and pinpoints the importance to improve our ability of addressing the Sustainable Development Goals of the UN 2030 Agenda. The inclusion and specific reference to the 17 Sustainable Development Goals and the Agenda 2030 in the PoliTO Strategic Plan represents a political drive and an opportunity for individual and collective reflection about personal and professional choices that can contribute to enhance natural, built, human, social and intellectual capitals. In particular, as far as Education is concerned, the Plan encompasses a number of strategic objectives related to sustainability, which include the following:
> to include the Sustainable Development Goals (SDG) of the UN 2030 Agenda in our curricula;
> to innovate our teaching approach with the aim of fostering students' critical thinking, social responsibility, problem-setting and problem-solving abilities, capacity for innovation as well as soft skills;
> to recognize the importance of human and social sciences and an interdisciplinary approach as an educational value.

Even the research of next years will be guided by SDGs and Agenda 2030, which will also be the basis of the five priority clusters of Horizon Europe. Within this framework, university research will have to be coherent with the SDGs and support multi- and trans-disciplinary activities, promoting the creation of interdepartmental centers.
This is the second PoliTO Sustainability Report. The first Sustainability Report was published in 2016 and a preliminary report was developed in 2015 for the ISCN network. The previous report showed robust evidence of the commitment of PoliTO

in the field of sustainable development which includes: the establishment of a living lab for monitoring energy consumption inside offices and classrooms; the choice of using 100% green renewable energy; the establishment of renewable sources of energy production; the promotion of public transportation for staff instead of the use of private cars; the refurbishing of historical buildings for educational purposes; the continuous improvement of leadership and innovation in sustainable technologies, providing students and staff with skills for environmental awareness; the strategic partnerships with R&D departments of businesses and local authorities, focused on the ongoing sustainable revolution; the development of new campuses encompassing parklands, UNESCO heritage sites, and former industrial environments, and many other actions not labelled as green but very much talkative about the wise resources use as a central sustainability paradigm, just to mention a few.

This second Sustainability Report represents a critical reflection on sustainability actions undertaken from 2017 to 2019 by the PoliTO community and coordinated by the Green team. The actions of the Green team are reported and mapped on the guidelines defined for each action field in the above mentioned Programmatic Document for the 2018-2020 period.

In addition to the initiatives developed in each action field of the Green team aiming at increasing the global sustainability performance of the university, this new report presents three cross-cutting initiatives: the first consists of mapping activities of SDGs in university initiatives and scientific production and it is aimed to raise awareness on SDGs in the research environment; the second is the #myPoliTObottle campaign; while the third one is about a pilot study on ecological footprint, developed on 2017.

The report is organized in the following sections. Section 2 provides a synthetic description of the actual organization of PoliTO campus and the Green team. Sections 3 reports results achieved so far in relation to the programmatic document published in 2017. Section 4 illustrates two cross-cutting initiatives: #myPoliTObottle and the ecological footprint study. Section 5 is about the mapping exercise and the questionnaire related to SDGs. Finally, Section 6 shows the main networks and the results of two international sustainability rankings GreenMetric and THE impact.

[1] Brundtland report, 1987

[2] The Green team Programmatic Document is available at www.campus-sostenibile.polito.it/output

[3] The Strategic Document "PoliTO 4 impact" is available at http://www.pianostrategico.polito.it/en/objectives

About us

2
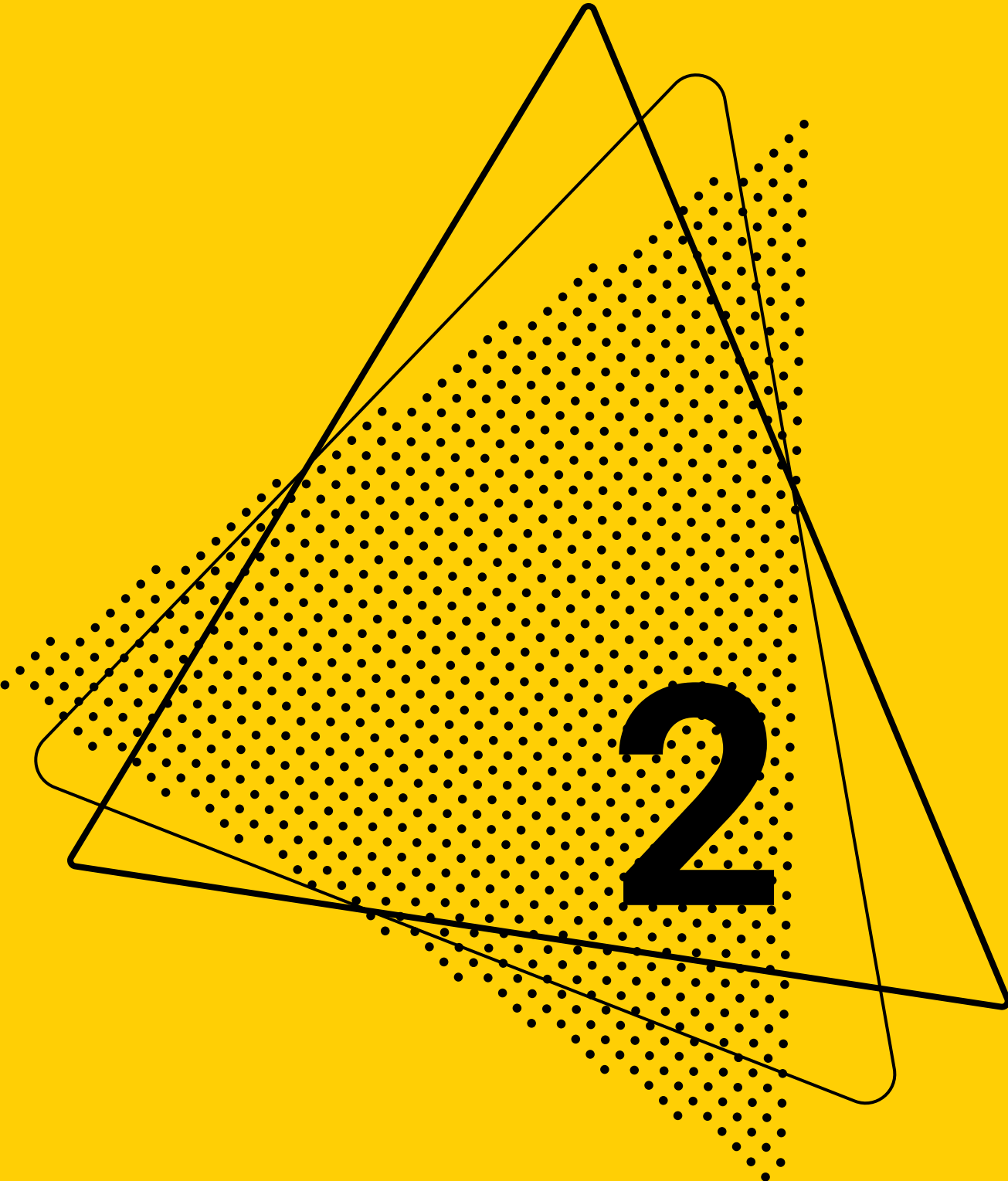
160 years of "civic"
institutional commitment

Politecnico di Torino is an international university where education, research, technology transfer and knowledge sharing create synergies and generate innovation and positive impact on society.

It is a 160-year-old institution. It was the first Italian engineering school founded after the technical and scientific innovations, which gave rise to the most prestigious polytechnic schools in Europe in the mid-19th century. Nowadays, PoliTO is one of the most prestigious technical universities for education, research and technology transfer both at national and international level. It is one of the top 45 world Universities, for Engineering & Technology, based on QS Ranking 2019.

Our university

PoliTO has four main campuses in Turin with great architectural, urban, and functional diversity and with multi-purpose facilities for teaching, basic & applied research, as well as student services. Moreover, Politecnico has a metropolitan and a regional network of technology platforms and campuses (Alessandria, Biella, Mondovì, Verres) for research, technology transfer, specialized training and local services. The metropolitan platforms include interdepartmental centers, laboratories and research centers related to:
> Manifacturing 4.0
> Energy & Water
> Circular Economy & Environmental Technologies
> Digital Revolution
> Mobility 3D
> Urban & Territorial Regeneration

The historical building of the University, located on the banks of the Po River, is the Castello del Valentino, included in the UNESCO World Heritage List and one of the Savoy residences in the XVII century. Most Architecture programmes are taught on its premises. The main campus is located in Corso Duca degli Abruzzi and houses the Engineering Departments. It was opened in 1958 and now it is extended to the Cittadella Politecnica, a developing area next to the main building located in Corso Castelfidardo; it is a modern campus with areas developed in the 90s and dedicated to students, research, technology transfer and services. The Cittadella of design and sustainable mobility is located in the Mirafiori campus, a redeveloped Fiat industrial site; the Specializing Master's programmes and Lifelong Learning School is currently based at the Lingotto campus. There are 35.000 students, 25.000 m^2 of classrooms and 850.000 m^2 of research facilities.

Our Green team

The Green team was established in 2015 with the aim to plan and implement sustainability actions at PoliTO. It is composed by faculty members, students, administrative staff and researchers that encourages PoliTO to address environmental and social challenges. The team aims at guiding PoliTO toward sustainability transition through comprehensive integration of sustainability into research, teaching, third mission and activities that prepare students, faculty and staff to be leaders in their professional and personal life also in the fields of sustainability. [4]

The Green team is the executive board for any strategic decision about sustainability in the PoliTO campus. It is the consultancy board for the Rector and the General Director on matters related to sustainability as well. It also supports university departments, inter-departmental centres, student teams and staff willing to contribute with ideas or projects to a more sustainable campus, a better community, a shared vision.

The Green team has its own data monitoring centre (the "Living Lab") which collects and elaborates data streams from on-site sensors in order to monitor trends and support decision-ma-

king for energy and resource management. The data managed by the Living Lab focus on:
> Energy consumption
> Energy production
  (Photovoltaic),
> Water consumption
  (overall and drinking),
> Other campus resources.

Green team activities

The Green team activities are articulated in five different vertical action fields as follows:
> Energy and buildings,
> Mobility and transport,
> Urban outreach,
> Food, water and waste,
> Communication.

The action fields are supported by transversal and multidisciplinary communication and engagement, focusing to widen the impact on the third mission. This means, aiming at spreading sustainability in research and teaching, fostering internal and external dissemination, in the local community as well as in Italian and global networks.

The Green team has received a special award as Sustainable Public Administration by Forum PA Challenge on May 2018.
The Green team coordinator has been nominated President of the Italian Universities for Sustainable Development (RUS) for the next three years (2019-2021).

[4] The current composition of the board is available on the web site www.campus-sostenibile.polito.it/green_team

Our courses

🔻 Bachelor degree programmes

Architecture	3
Engineering	19

🔻 Masters degree programmes

Architecture	5
Engineering	23

🔻 Courses taught in English

	20

🔻 Specializing Master programmes

I level	5
II level	17
Interuniversity programme	1

🔻 PhD programmes

PhD programmes	16
in agreement with other universities	3
in agreement with other research organization	2

Our community

PhD students
684

Specializing
Master students
565

Students I & II level
35.000

*International
students*

Research fellows
519

Researchers
338

Associate and
Full Professors
641

Administrative
staff
894

Our international students

Perù
2%

Colombia
3%

Iran
8%

Uzbekistan
3%

Pakistan
7%

China
24%

Lebanon
2%

India
2%

Camerun
4%

Other countries
24%

Morocco
2%

Romania
5%

Turkey
2%

Spain
4%

Albania
4%

France
4%
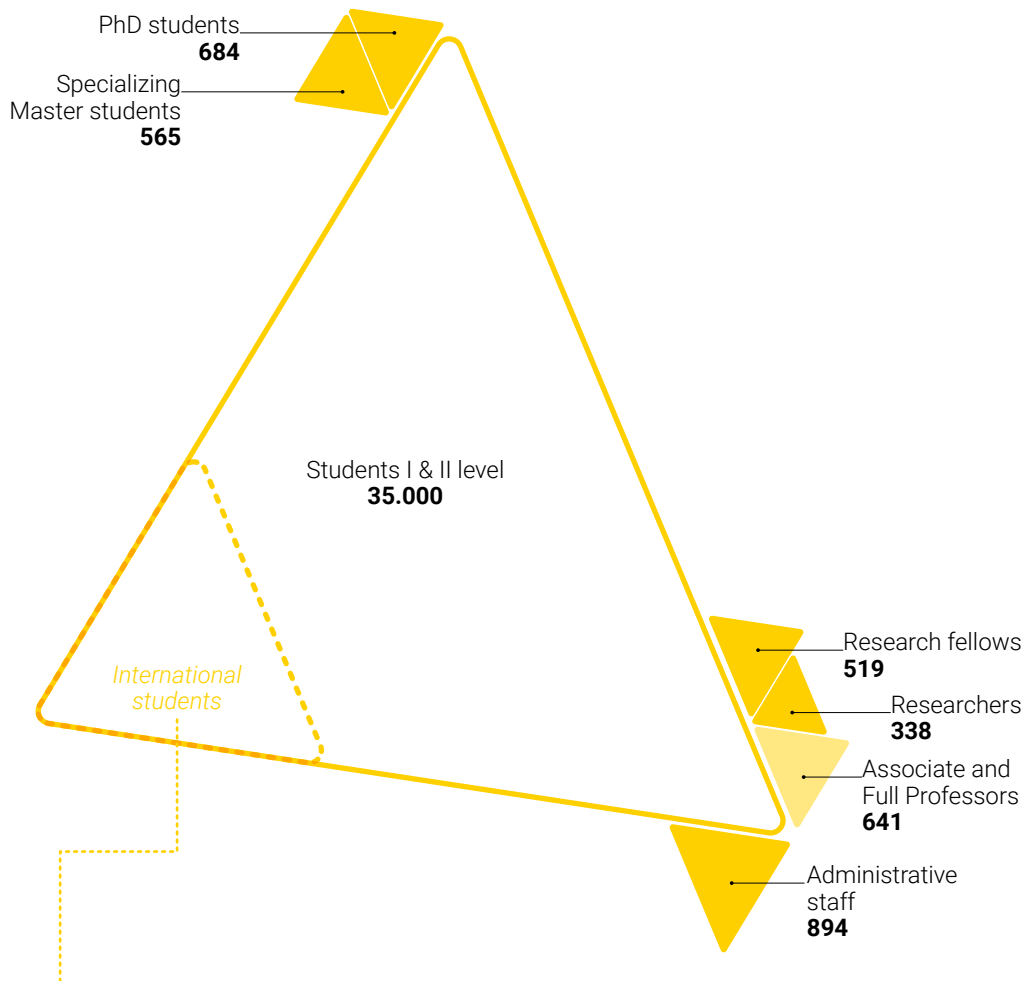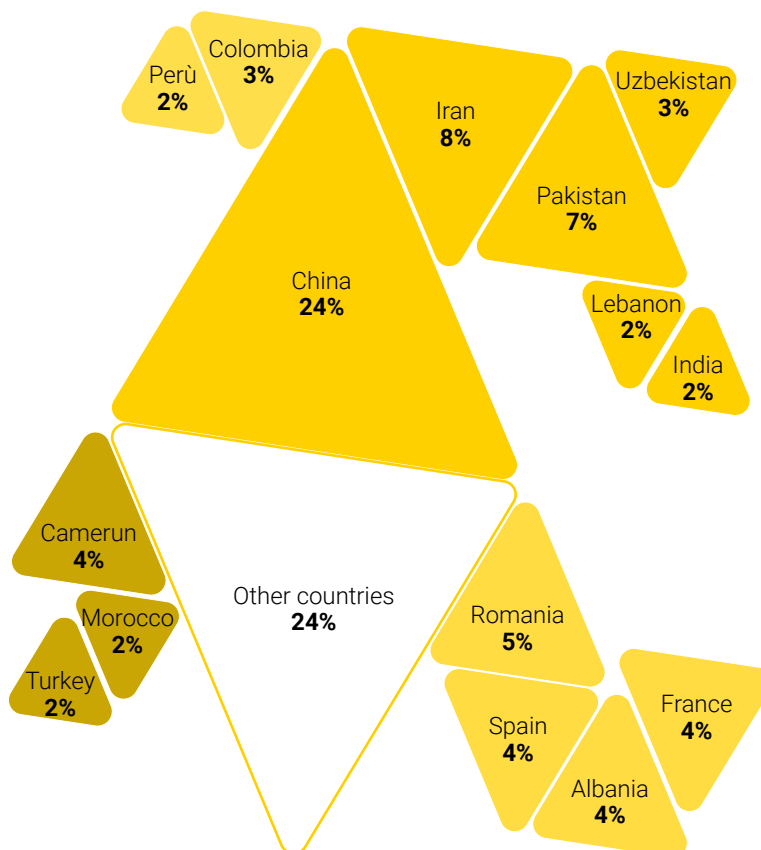
Our Campuses
and facilities

4 academic campus
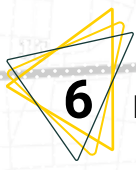
6 metropolitan platform

Platform:
Mobility 3D

bycicle parking

drinking fountain

photovoltaic plant

**Cittadella of
Design and
Sustainable
Mobility**

Platform:
Manifacturing 4.0
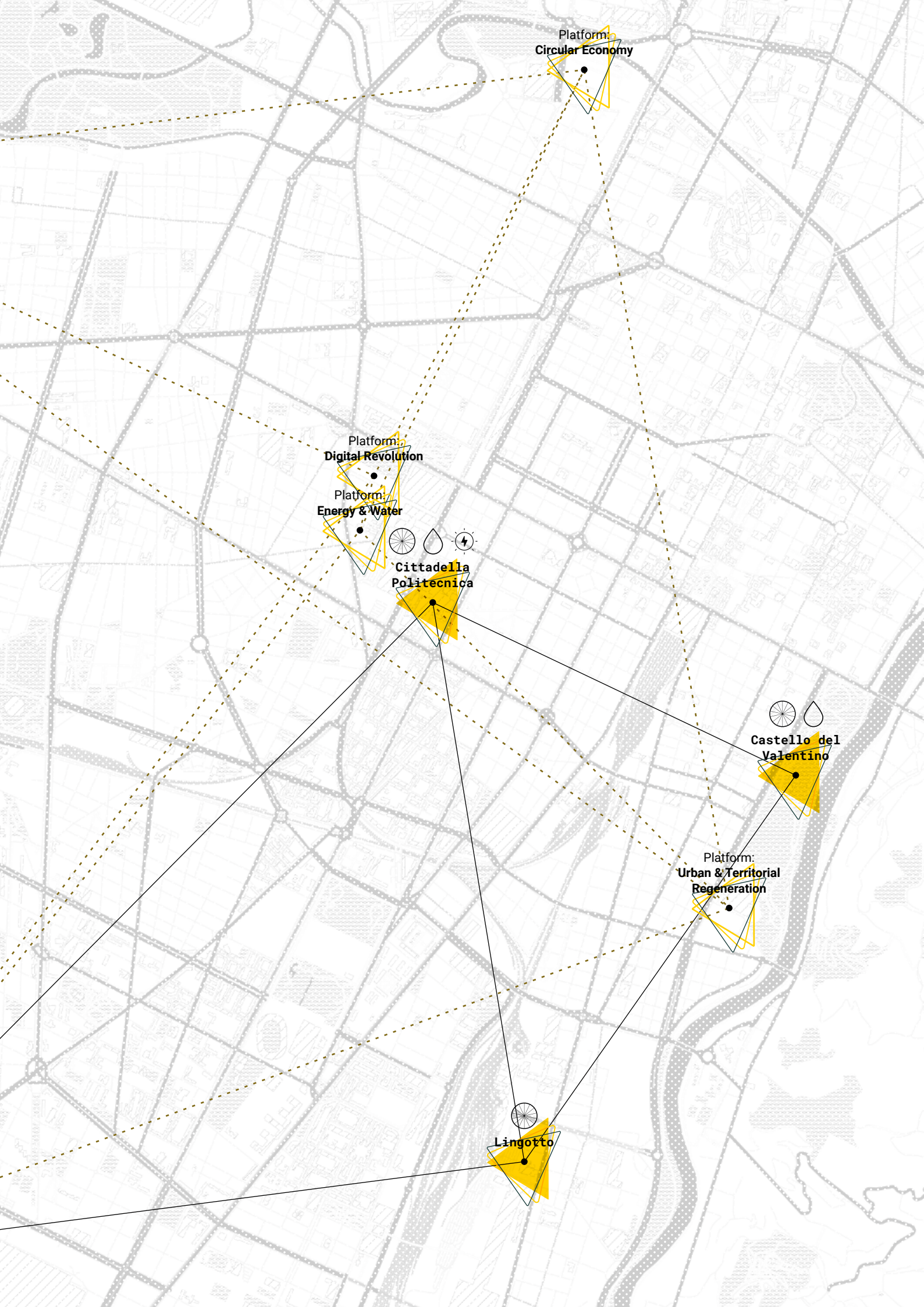
Platform:
Circular Economy

Platform:
Digital Revolution

Platform:
Energy & Water

**Cittadella
Politecnica**

**Castello del
Valentino**

Platform:
**Urban & Territorial
Regeneration**

Lingotto

Field
activities
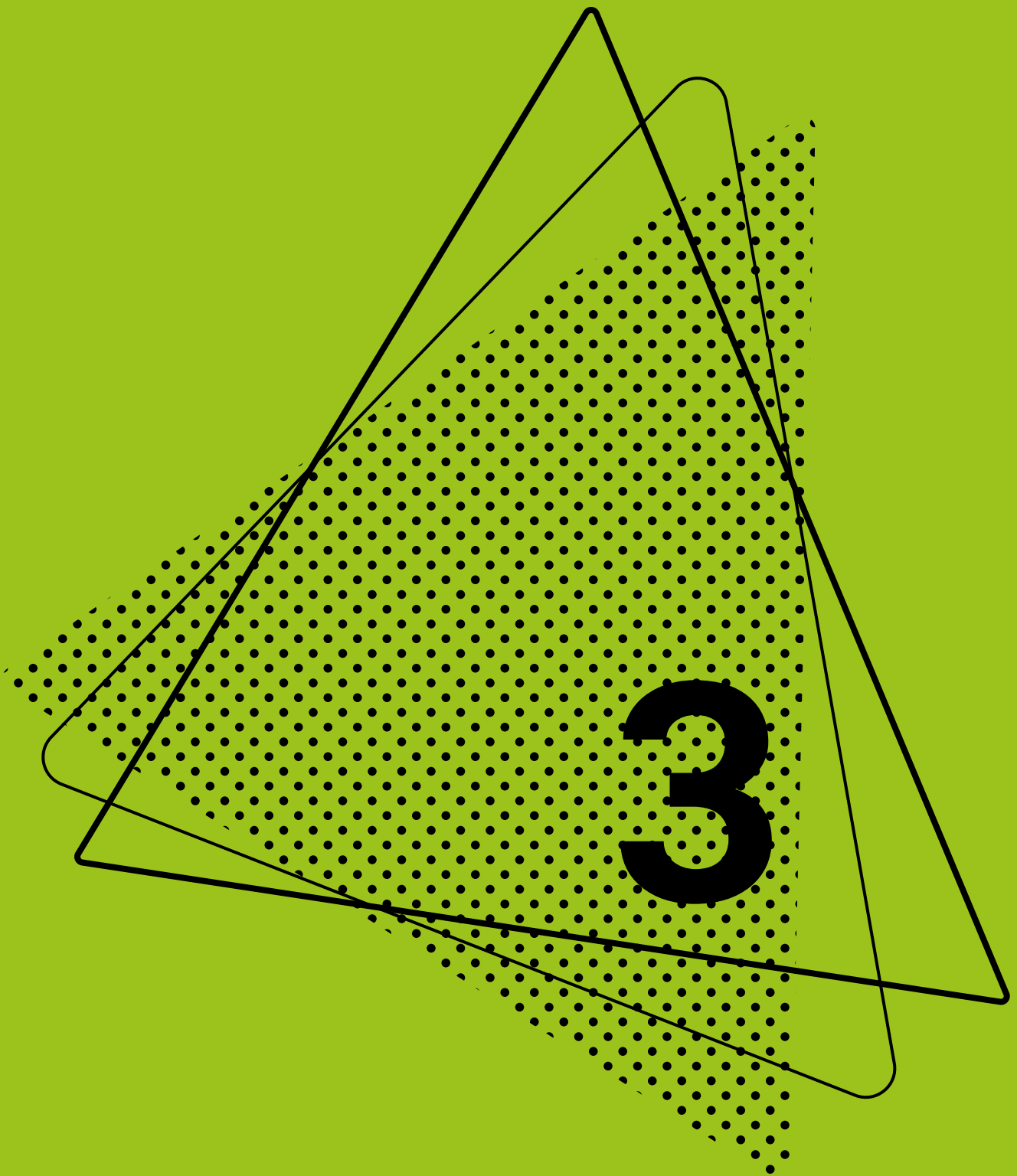
3

In this section, a number of objectives and achievements related to each action field are presented. These issues are grouped into main categories such as "internal community", "external community", etc. **[5]**
A number of these goals and outputs are connected with and require the contribution of local stakeholders and external actors. The Green Team is working with and it is supported by an internal and external community as shown in the figure on governance model.

[5] The activities are related to the Planning document published in 2017 and available at: http://www.campus-sostenibile.polito.it/it/output/report_e_documenti_programmatici

The governance model

Rector

General Director

Public and private companies

Regional and city councils

Associations

Piedmont Universities

RUS coordination

Masterplan team

Planning and special projects

University administrative offices

Green team
Coordinator
Managers
Student teams

Action fields
Energy and buildings
Mobility and transport
Urban outreach
Food, water and waste
Communication

Departments

Green team action fields & SDGs

The image shows the correlation between the action fields and the UN Agenda 2030 Sustainable Development Goals.

Energy and buldings

Mobility and transport

Urban outreach

Food, water and waste

Communication

Goal 17 Partnerships for the goals

Goal 16 Peace, justice and strong institution

Goal 15 Life on land

Goal 14 Life below water

Goal 13 Climate action

Goal 12 Responsible consumption and production

Goal 1
No poverty

Goal 2
Zero hunger

Goal 3
Good health
and well-being

Quality education
Goal 4

Gender equality
Goal 5

Clean water and
sanitation
Goal 6

Affordable and
clean energy
Goal 7

Decent work and
economic growth
Goal 8

Industry,
innovation and
infrastructure
Goal 9

Reduced
inequalities
Goal 10

Sustainable
cities and
communities
Goal 11

3.1
Energy and buildings

living and planning
the post-carbon campus

Goals and objectives

Results achieved

Campus: Buildings/facilities

To decrease electric energy consumption (a 10% reduction during nights and holidays).
To decrease thermal energy consumption (a 5% reduction in thermal energy consumption and electric energy for cooling).
To increase the efficiency of lighting by mapping equipment and substitute 50% of total installed capacity (a 20% reduction in annual consumption).
To monitor the energy consumption of PoliTO and create a workgroup dedicated to plan interventions in the medium/long run.

The potential reduction of electric energy consumption for lighting was quantified. Lighting systems of common spaces and outdoor spaces were mapped and a possible 50% reduction in energy consumption resulted by the substitution of lamps.
Furthermore, an additional 25% reduction in energy consumption can be achieved through the integration of additional light sensors and occupancy sensors in the corridors of the ground floor of the engineering campus. In relation to the reduction of energy consumption for heating and cooling, the realization of a database with monthly energy consumption data of the campus from 1990 until today is underway. Furthermore, the collaboration with CSI Piemonte was reinforced in order to create a new platform integrating energy data inside the information system in use at the university.
The installed capacity of photovoltaic plants has reached 680 KW that covers about 4% of the electricity consumption.
The project for the reduction of building energy leaks is progressing: during the last few years, almost 90% of the windows on the main campus have been replaced with heat cut, double glass windows. Preliminary measures about impact on energy savings are significant.

Internal Community

To plan communication and actions to raise awareness about the topic through the design of an informative package and the organization of events.

New exchanges with Student Teams working on sustainability awareness and dissemination were implemented. Furthermore, in the framework of this action field, the Green team coordinated the organization of the second edition of "M'illumino di meno", an event about energy saving issues.

External Community

To propose the creation of a round table with the City of Turin, the Metropolitan City and the Piedmont Region about sustainability.
To maintain the role of coordinator of the RUS Workgroup "Energy".

An informal roundtable was defined with the participation of energy managers of the local area in order to organize periodic meetings. The coordinator of the action field is also the coordinator of the RUS workgroup about energy.

Our energy consumption *

◀ Primary energy

4.964 tep

◀ Electricity

17,8 GWh

purchase from certified renewable sources	96%
our PV plants (680 kWp)	4%

◀ Thermal energy

15,8 GWh

High efficiency district heating	84%
Natural gas	16%

* FIRE declaration 2018

Electricity self-production (kWh)

740.770
647.959

28.457
28.450
26.557

2014   2015   2016   2017   2018
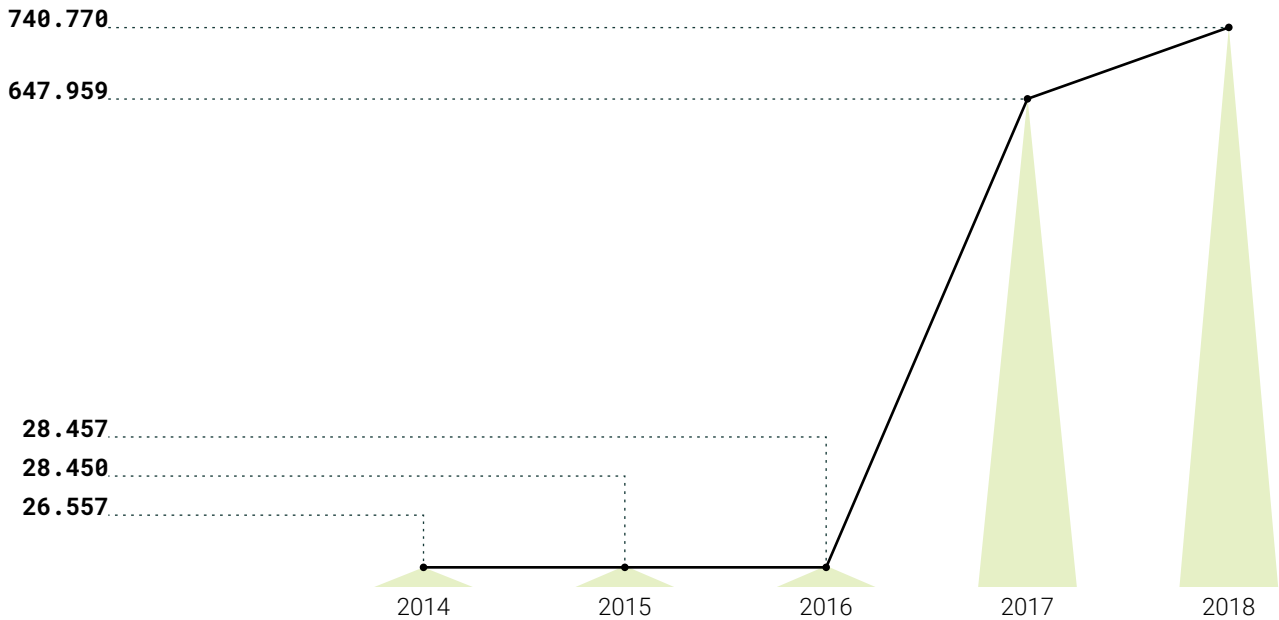
LED lights & sensors experimentation *

LED lights & sensors **5** kWh

fluorescent lights **23** kWh

1,4
1,2
1,0
0,8
0,6
0,4
0,2
0 kW

00:00   06:00   12:00   18:00   24:00
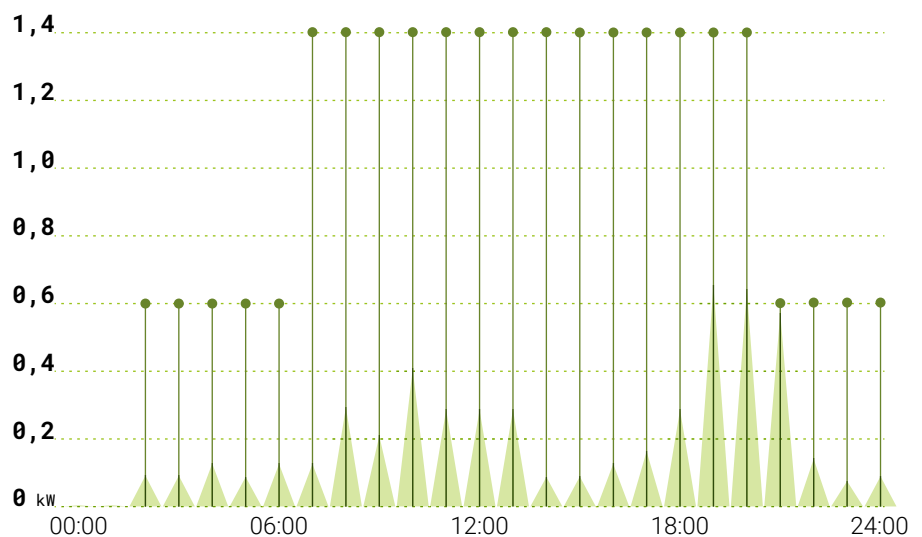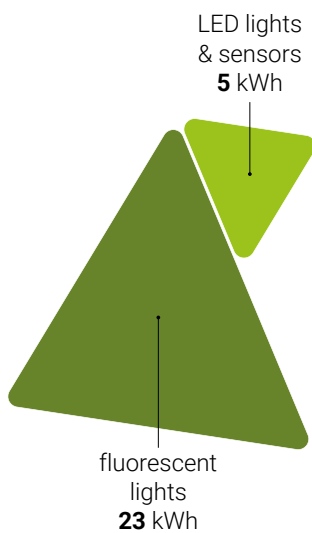
* daily consumption (kWh)

3.2
Mobility and transport

moving is a matter
of sustainability

Goals and objectives

Results achieved

Monitoring and Awareness

To realize two surveys in order to understand the needs of staff and students as far as mobility is concerned.

Two different surveys about commuting behaviours were carried out and results were presented to the Metropolitan City of Turin and to RUS.

Internal Community

To encourage the use of public transport, even through financial aid, and to stipulate new agreements with service providers for shared mobility.
To launch a monitoring system of a university car service, including security and analysis of energy consumption (fuel or electricity for plug-in vehicles).

Free yearly subscriptions to local public transport were provided to the employees who renounced their right to park the cars at Politecnico parking lots (around 25% of employees). New agreements were signed with Trenitalia, three car-sharing business operators and, in 2019, an electric e-scooter-sharing operator. A monitoring system of vehicles of one Department (DIATI) was activated, using black boxes installed on five shared vehicles and collecting information also about energy consumption, from the internal network of the cars (CAN).

Campus

To promote slow and active mobility, to improve bicycle parking facilities and recharging stations for plug-in vehicles, either electric or hybrid.

New bicycle racks were installed (improvements are still going on). In view of a new underground parking lot, the creation of smart charging spots for plug-in vehicles has been planned.

External Community

To interact and collaborate with companies and local institutions including the City of Turin and the Metropolitan City.
To create events and meetings on co-modal mobility with local stakeholders. To cooperate with international and national networks, as RUS.

Public presentations of survey results were organized. Some meetings with the City of Turin were carried out about a possible test of Maas services and about the realization of a reserved bicycle path along via Nizza in Turin between the two campuses of C.so Duca degli Abruzzi and Valentino; the traffic-light priority for bus line 16 between the main Engineering Campus and Architecture Campus has been implemented (the tramway n. 10 between the main Engineering Campus and the Automotive campus was already active). A specific web URL has been developed, including car-pooling options.

Students and staff mobility *

a.y. 2017/2018
351 employees

a.y. 2018/2019
608 employees

a.y. 2019/2020
522 employees

7.227 students

9.487 students

* students who obtained contribution for local mobility card and
  staff who obtained contribution for local mobility card and renounced to parking tag

Transport modality (2012 survey)

**By foot
33%**

**By public
transport
41%**

**By bycicle
28%**

**By car
40%**

everyday use	43%
urban transport	13 km/day
sub-urban transport	29 km/day

* 2012 survey mobility

Transport modality (2016 survey)

	Car	Bycicle	Bike sharing	Car pooling	Car sharing	Moto or scooter	Public transport	Train	By foot
Mirafiori									
Castello del Valentino									
Lingotto									
Cittadella Politecnica									

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

3.3
Urban outreach

it starts with you on campus, and outside

◢ Goals and objectives

◢ Results achieved

Active Role

To introduce SDGs in PoliTO activities and reinforce the role of Green team and PoliTO ranking in the field of sustainability.

Different mapping activities have been developed in 2018, focusing on both teaching and research activities in relation to SDGs (see section 5). Furthermore, the coordinator of the Green team became the Deputy Rector of PoliTO reinforcing the governance role on sustainable development topic. In 2018 PoliTO reached the 104 position in the GreenMetric global ranking (starting from position number 333 in 2015) and the 29 positions of the new THE impact ranking participating for the SDGs 11 (see section 6).

Internal Community

Reinforce teaching and research activities on sustainability issue in order to create new competencies on the topic. Activate student teams in the topic.

In the field of education, a special training course named "Talents" involved about 240 students from both the engineering and architecture/planning/design bachelor courses. The class focused on ecological footprint and sustainable campus with the aim of improving problem-solving skills and critical thinking in the field of sustainability. For internal training, the MOOC course "L'Agenda 2030 e gli obiettivi di Sviluppo sostenibile" developed by ASviS is now available for both the PoliTO staff community and all students. A strength connection with a student team was created, a new group of students (EcoPoli) was founded to promote sustainability good practices and a new link was created with other students teams. Six master thesis about sustainable campus were awarded during the 2018 sustainability week.

External community

To collaborate with leading networks, at the national and international level, through active participation in RUS workgroups and attendance at international conferences about Sustainable Campus.
To collaborate and organize events, at the local level, with local administrations, other local Universities and professional associations.
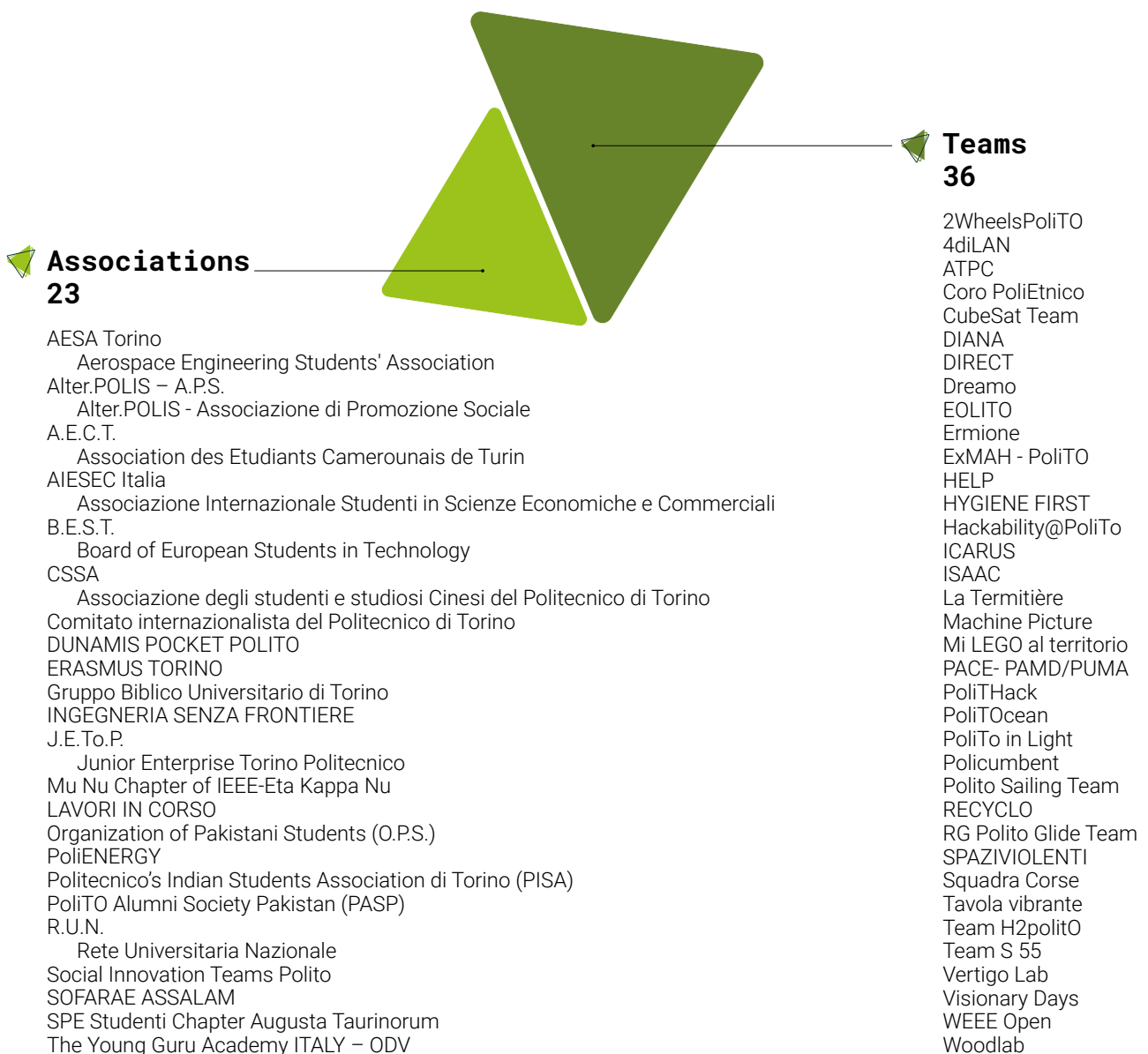
Different members of the Green team attended national and international conferences reporting PoliTO sustainable initiatives and researches about the topic. At a local level, the collaboration with public and private stakeholder was reinforced and a number of events was jointly developed. The collaboration with all the other universities of Piedmont Region was also reinforced and a regional RUS sub-network has been established.

Student teams

**Teams
36**

2WheelsPoliTO
4diLAN
ATPC
Coro PoliEtnico
CubeSat Team
DIANA
DIRECT
Dreamo
EOLITO
Ermione
ExMAH - PoliTO
HELP
HYGIENE FIRST
Hackability@PoliTo
ICARUS
ISAAC
La Termitière
Machine Picture
Mi LEGO al territorio
PACE- PAMD/PUMA
PoliTHack
PoliTOcean
PoliTo in Light
Policumbent
Polito Sailing Team
RECYCLO
RG Polito Glide Team
SPAZIVIOLENTI
Squadra Corse
Tavola vibrante
Team H2politO
Team S 55
Vertigo Lab
Visionary Days
WEEE Open
Woodlab

**Associations
23**

AESA Torino
    Aerospace Engineering Students' Association
Alter.POLIS – A.P.S.
    Alter.POLIS - Associazione di Promozione Sociale
A.E.C.T.
    Association des Etudiants Camerounais de Turin
AIESEC Italia
    Associazione Internazionale Studenti in Scienze Economiche e Commerciali
B.E.S.T.
    Board of European Students in Technology
CSSA
    Associazione degli studenti e studiosi Cinesi del Politecnico di Torino
Comitato internazionalista del Politecnico di Torino
DUNAMIS POCKET POLITO
ERASMUS TORINO
Gruppo Biblico Universitario di Torino
INGEGNERIA SENZA FRONTIERE
J.E.To.P.
    Junior Enterprise Torino Politecnico
Mu Nu Chapter of IEEE-Eta Kappa Nu
LAVORI IN CORSO
Organization of Pakistani Students (O.P.S.)
PoliENERGY
Politecnico's Indian Students Association di Torino (PISA)
PoliTO Alumni Society Pakistan (PASP)
R.U.N.
    Rete Universitaria Nazionale
Social Innovation Teams Polito
SOFARAE ASSALAM
SPE Studenti Chapter Augusta Taurinorum
The Young Guru Academy ITALY – ODV

Main dissemination activities

2017

February
27th **M'illumino di Meno** / Caccia al kWh

May
24th **Waste Mob**

July
10th **General Conference RUS**

September
21th **Giretto d'Italia** / Bike to work

November
30th **Green Storming** / creation of Green Team Student

September
19th **Giretto d'Italia** / Bike to work
25th **Signature of the Global Climate Emergency Letter**

July
19th **Climbing for Climate** / signature of the "Carta dell'Adamello"

Jul. 1st-2nd
Accelerating the implementation of Sustainable Development in research Programme
/ International Conf. organization

June
20th **Pilates with Piano** / CUS
4th **Circonomia**

May 29th - 30th
General Conf. RUS
/ Manifesto da "Le Università per la Sostenibilità" a "La Sostenibilità nelle Università"

May
22th **Waste Mob**
11th **Il prossimo passo** / Salone del Libro

February
28th **M'illumino di Meno** / Caccia al kWh

2019

sustainable path

2018

February
22th **M'illumino di Meno** / Caccia al kWh

May
23th **Sustainable Public Administration** / Award
25th **Implementing the UN Urban Agenda** / International Conference
27th **Waste Mob**

May 22th - Jun. 7th
Sustainability weeks #2

June
5th **Circonomia** / Festival of Circular Economy
29th **General Conference RUS**

Jun. 11-13th
ISCN / Conference

July
13th **ESOF 2018** / International Conference

Aug. 28th - 30th
4th World Sympos. on Sustainable Development
/ International Conference

October
1st **#myPoliTObottle** / launch of initiative

Dec. 10th - 12th
2nd Symposium on Sustainability
/ International Conference

September
12th **"Science for the future"** / International Conference

3.4
Food, water and waste

thinking carefully and
caring about what we eat,
drink, buy and dispose

Goals and objectives

Results achieved

Campus Water

To monitor the internal water supply in order to limit the consumption of drinking water.
To reduce the bottled water consumption by installing drinking fountains, distributing reusable bottles to new students and redefining contracts with owners of vending machines.

Seven indoor and seven outdoor drinking fountains were installed; water supply is constantly monitored on the engineering Campus. The installation of new water fountains on other campuses has been planned. Around 6.000 reusable steel bottles customized with the "PoliTO Sustainable path" logo were distributed to first-year students and all employees (see section 4). Contacts with the vending machines suppliers demonstrate interest on the topic. Water supply devices have been installed in the Student canteen.

Campus Waste

To intensify the recycle program by expanding the door-to-door system to all the campuses.
To reinforce the setting of collection points for special waste and WEEE for PoliTO community by reinforcing Student Teams engaged in research and actions on this specific issue.

With the support of the communication action field, an action plan was drawn up to identify weaknesses and actions to be implemented in 2019 with the aim of increasing the waste recycling programs. A new course inside the Young Talent Project ("Rifiuti, media e società universitarie" - Waste, media and society in Universities) was launched in 2018. A Student Team working on WEEE recycle reached 100 members and runs courses for the university community. The creation of the "Team Waste" Student Team was supported in order to enhance recycling on campus: the team selected new recycling bins and prepared a communication campaign that will be launched in the next future. The Young Talent Team worked in order to define actions to raise awareness of the Polito's community on waste issues.

Campus Food

To launch the Safe-food project to give answers to specific needs about food.

Food supply contracts were modified in order to fulfil specific needs for food. The new contracts introduced organic vegetables, local fruits, and seasonal products ("zero km") in daily meals. In the Young Talent Project a specific course ("Mens Sana/progetti intorno al cibo" Healthy mind/food projects), was launched in 2018. In the next future students will be able to take a look on the online menu and order specific meals in case of food allergies and special needs by using an app. By the summer of 2020, no plastic will be used in the Staff canteen.

Communication

To launch initiatives to increase awareness about waste production and to introduce best practices about waste management.

Bachelor's students in "Design and Visual Communication" created educational products and videos disseminating them to the university community using institutional communication channels. Activities like the WasteMob have been organized to raise awareness on the problem of waste littering.

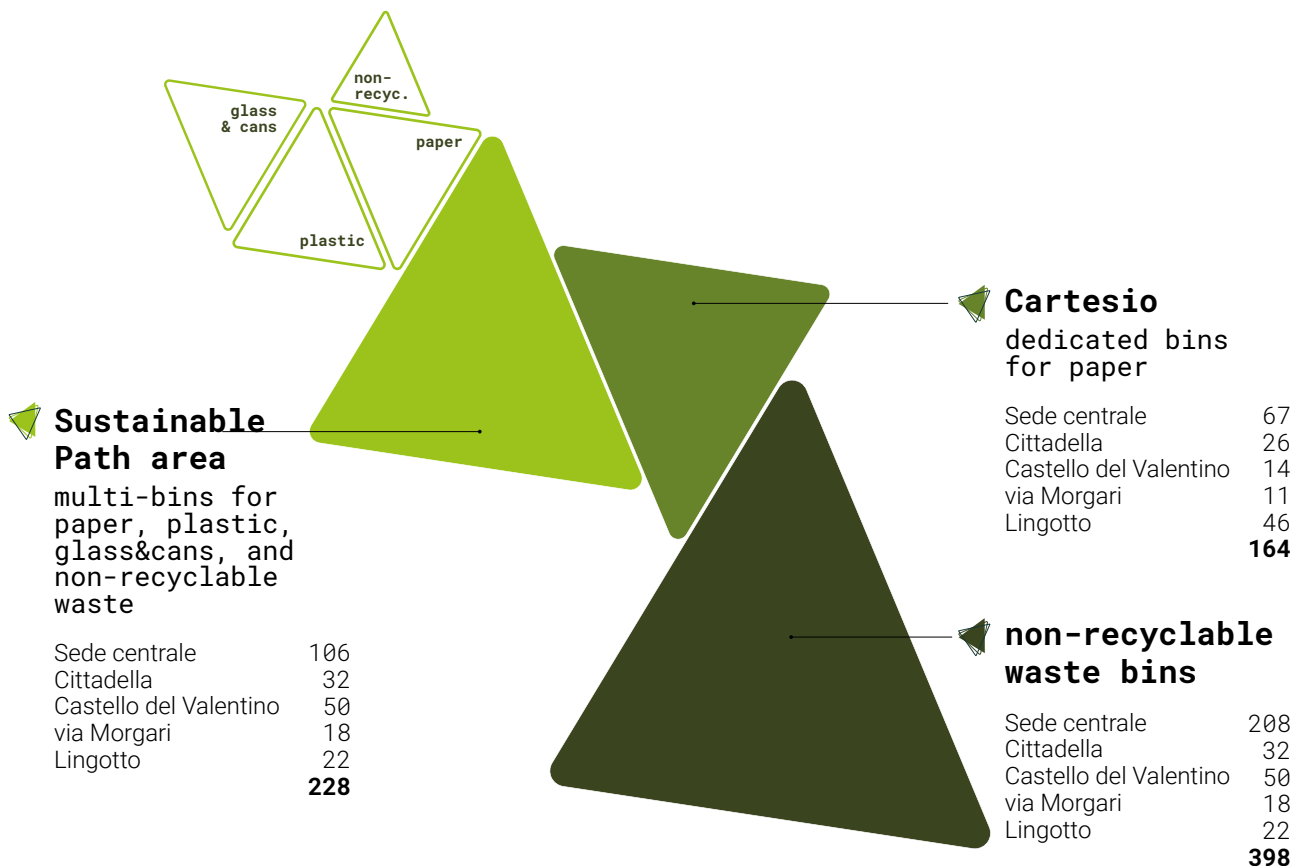## Goals and objectives

Results achieved

External Community
To reinforce the active participation in the waste work group of RUS, at national level, and to increase the cooperation with local leading stakeholders.

At a national level, the participation in the RUS workgroup about waste was confirmed. At a local level, the WasteMob was organized in 2017 and 2018 in collaboration with CUS and UniTO (more than 200 participants in 2018), involving also the local stakeholders (AMIAT, City of Torino, …) and in 2019 also UniUPO joined the organization of the event.

Separate waste collectors

non-recyc.

glass & cans

paper

plastic

Cartesio
dedicated bins for paper

Sede centrale	67
Cittadella	26
Castello del Valentino	14
via Morgari	11
Lingotto	46
	164

Sustainable Path area
multi-bins for paper, plastic, glass&cans, and non-recyclable waste

Sede centrale	106
Cittadella	32
Castello del Valentino	50
via Morgari	18
Lingotto	22
	228

non-recyclable waste bins

Sede centrale	208
Cittadella	32
Castello del Valentino	50
via Morgari	18
Lingotto	22
	398

3.5
Communication

[loo] tecnologia
too much

[loo] ci dovrebbe
essere un essere un
60%privacy e 40%
sicurezza

[loo] il senso
civico può vincere
su un sistema di
valutazione sociale
usato per la
sorveglianza? chi
decide cosa è
giusto e cosa è
reato? come vengono
dati i pu   agi?

a sustainable path to
share, connect, meet
and have fun

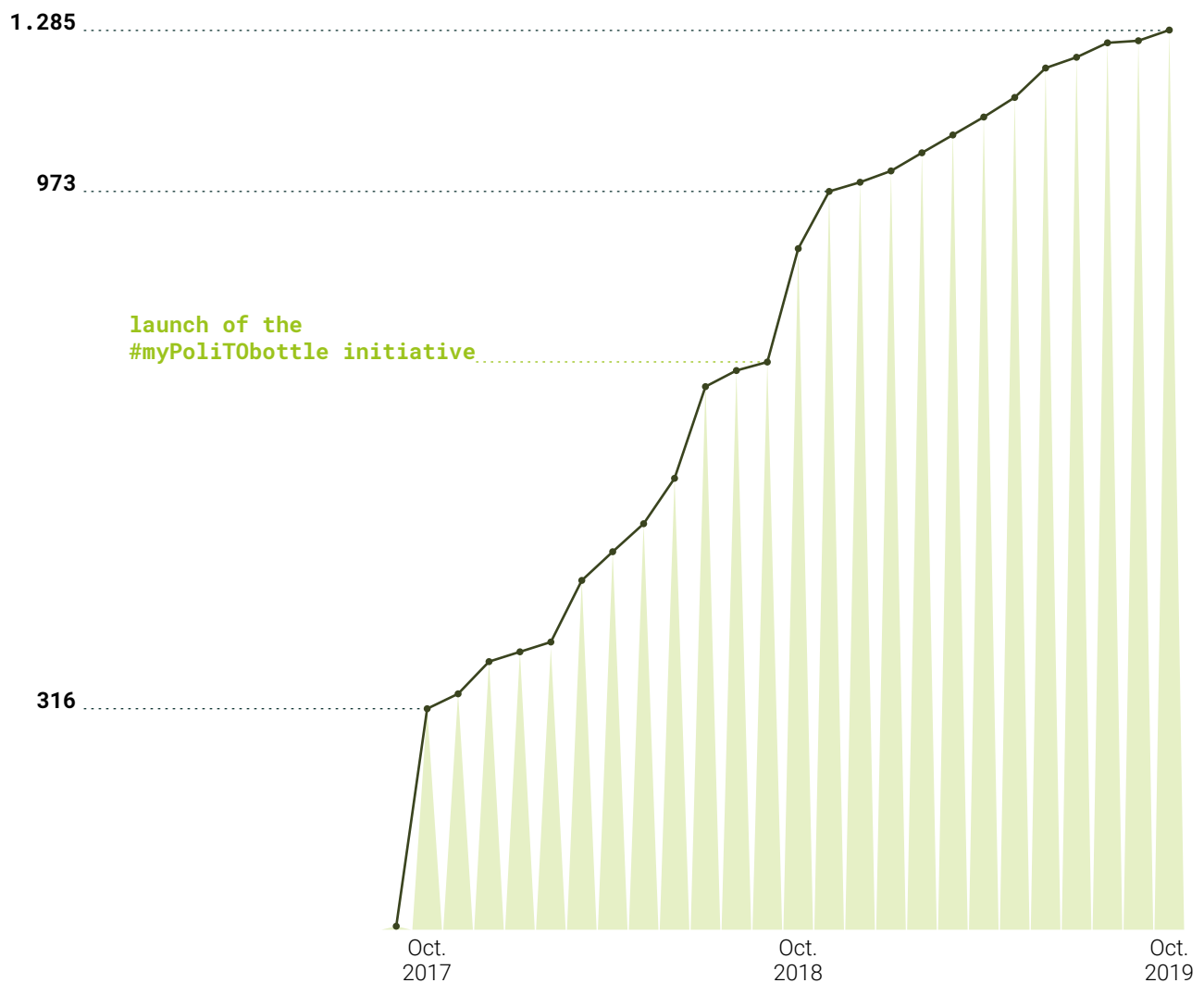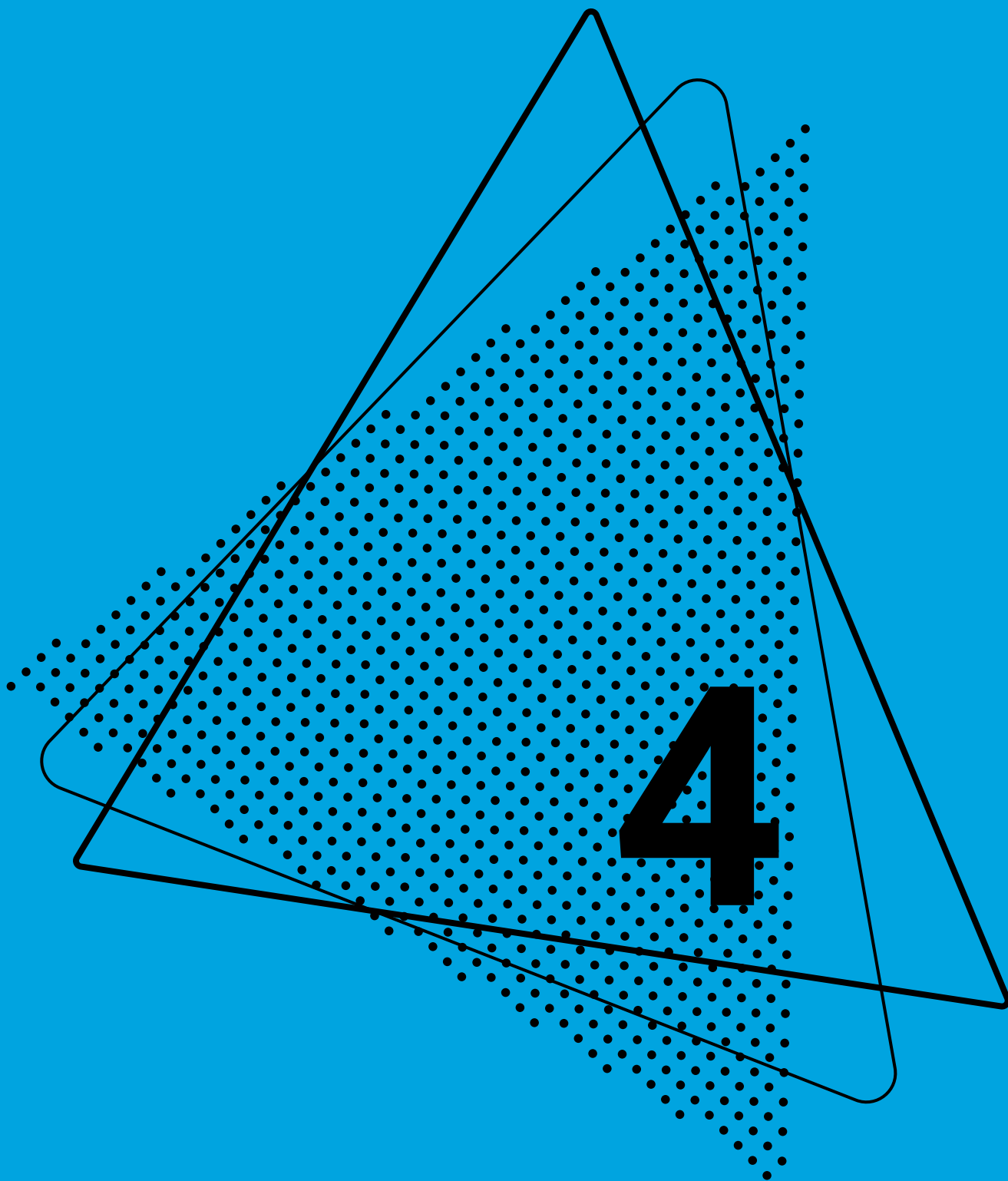| **Goals and objectives**	**Results achieved**
Internal Community	
To carry out communication initiatives envisioned by the other Green team action fields in order to increase awareness about sustainability actions.	The realization of the "MyPoliTObottle" initiative that aimed at increasing awareness of users, leaving at the same time space for customization (see section 4). The initiative was created in collaboration with the Living Lab and the Food, Water and Waste action field. Some projects about communication strategies of different action fields of the GT were developed with students of the Bachelor's degree programme in Design and Visual Communication and a Master's thesis that created a sustainability serious game was discussed in 2018.
To develop a Master's thesis about the topic of communication on sustainability.	
To distribute a survey in order to understand the actual level of knowledge about sustainability and PoliTO initiatives.	
Campus	
To realize a communication plan about the Sustainable Campus project in order to reinforce the sense of community and build a visual identity.	A new visual identity, that is coherent with the existing brand identity, was created and it was used for different products and information materials, even for the MyPoliTObottle initiative. The use of the social network was studied and planned using different contents for different platforms. Social networks were used also to communicate new initiatives of the Green team. The team organized several events in 2017, 2018 and 2019 in order to reinforce the sense of community and communicate how to act more consciously.
External Community	
To create a network of communication on sustainability among Italian universities.	As coordinator of RUS, PoliTO is in charge of re-designing the web site of the Network, which will enhance the communication among the partner universities.
	In addition, PoliTO is recognized as a "best practice": the ISCN – GULF "Educating with purpose" report has included the project "A Self Tailor Made Sustainability Communication Strategy" of the PoliTO Green Team among the 42 best cases of tangible sustainability in the management of university campuses.

Social media data *

Facebook

Followers	1.306
Likes	1.285

Post engagement **+ 75%**
(from sep. 2019 to oct. 2019)

* data as of 31 October 2019

Instagram

Followers	882
Posts	153

Post impressions **+ 50%**
(from sep. 2019 to oct. 2019)

Twitter

Followers	402
Tweets	289
Likes	958

Tweet impressions **+ 62%**
(from sep. 2019 to oct. 2019)

Social media presence (Facebook likes)

1.285

973

launch of the #myPoliTObottle initiative

316

Oct. 2017   Oct. 2018   Oct. 2019

Cross-cutting activities

4

"I want you to act as if your house
is on fire"
Greta Thunberg

4.1
#myPoliTObottle

With the aim of reducing the use of plastic bottles inside the campus and improving the waste management of a growing Sustainable Campus, the Green team coordinated an initiative called #myPoliTObottle. It concerned the distribution of reusable steel bottles and the creation of a new infrastructure of tap water distribution with the installation of drinking fountains. The main aim of the campaign is to increase awareness of PoliTO users about the reduction of plastic waste inside the campus and to help transition toward a "plastic free" campus.

Reusable bottles

In February 2018, some rules for the procurement of bottles were defined: to exclude plastic and aluminium bottles and use only steel bottles.
MyPoliTobottles were distributed on two different occasions:
> October 2018: more than 4.000 bottles were distributed to the first-year students,
> December 2018: around 2.500 bottles were gifted by PoliTO to his employees.
The communication campaign played a key role for the effectiveness of the initiative and five different requirements can be defined:
> diffusion in order to reach a high number of users,

> information about the quality of the supplied water in order to increase sense of security in the users,
> visibility of the drinking fountains,
> call to action for a real involvement of users and increase in the new sense of community identified in sustainability,
> the tangible distinction of our bottles in order to avoid problems related to the introduction of a serial product.
The focus of the communication project can be identified in the customization of products, involving the emotional aspect of users. In fact, a customized product can create a more intimate and emotional relationship with the user.
The strategy is "do it by yourself" that implies the use of simple tools. #myPoliTObottle is an object that each student can customize according to his/her preferences, inspirations using also a set of stickers.

Drinking water fountains

Firstly, indoor and outdoor fountains were installed in the main engineering campus:
> 7 internal dispensers with filtered and cooled water in the main corridors and near study rooms,
> 7 external fountains with potable public water and designed

as "toret", the typical drinking fountain displaced in Turin.
Between January and June 2019 more water fountains were installed in other venues of the University:
> 1 internal dispenser at the Energy Centre and 1 at the Mirafiori campus,
> 1 external fountain at the Valentino Castle
Water supply is constantly monitored by the LivingLab. Starting from the 1st October 2018, 245.045 litres of water were dispensed in the Engineering campus, of which 129.448 from external fountains and 115.597 from internal dispensers.
In a second phase, fountains were customized with an adhesive coating in order to connect them more easily to the #myPoliTObottle initiative.

The avoided purchase of plastic bottles means savings of about 319.000 bottles: 5,7 tons of plastic removed, while the savings in terms of CO_2 emissions, equivalent to the replaced bottles, is around 25,5 tons.

The sale of bottled water in vending machines decreased by 20% if comparing the same 5 months period of selling before and after the initiative.
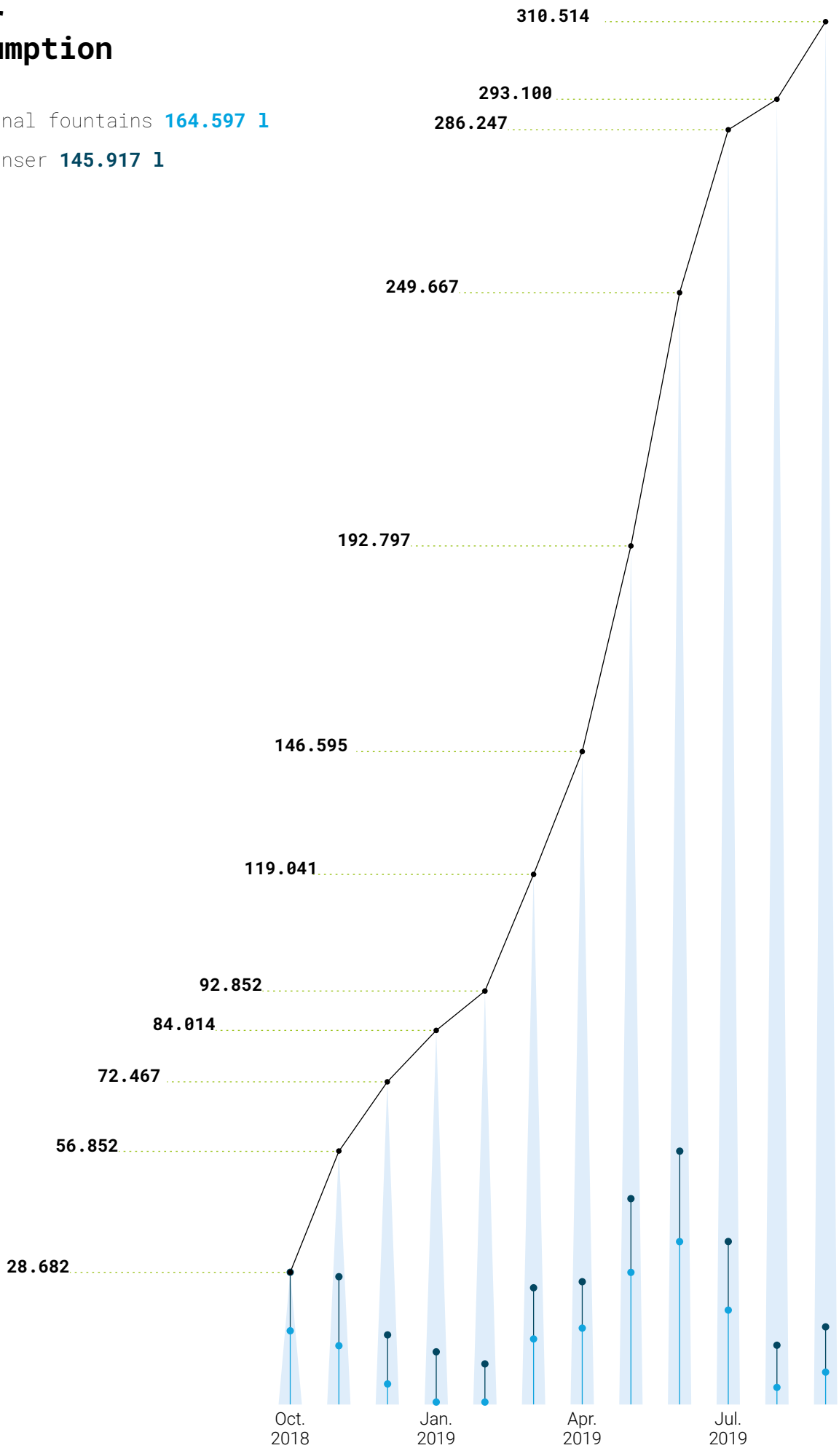
Initiative timeline

February 2018
Launch of the initiative.
Preliminary market survey about the procurement of reusable bottles and drinking fountains.

October 2018
First distribution of 4400 bottles to newly enrolled students.
Opening of drinking fountains in the engineering campus.

December 2018
Second distribution of 2500 bottles to administrative staff and academic staff.

March 2019
Opening of new drinking fountains in the campus.

Water
consumption

◀ external fountains **164.597 l**

◀ dispenser **145.917 l**

310.514

293.100

286.247

249.667

192.797

146.595

119.041

92.852

84.014

72.467

56.852

28.682

Oct.
2018

Jan.
2019

Apr.
2019

Jul.
2019

4.2
Ecological footprint exercise

The ecological footprint represents the pressure exerted by human activities on the ecosystem, the measure of the biologically productive surface necessary to produce resources and to absorb waste generated by the activities of a specific community.

In 2017 we evaluate the Ecological Footprint (EF) of PoliTO activities with the aim of creating an integrated overall view of the environmental performance of a University campus. In order to evaluate the EF, research, teaching, and subsidiary actions were considered and then translated into the consumption components for the calculation, which are: energy, water, mobility, use of land, waste, food. Successively, each component was connected to different land types on which they have an impact. Each component (except for the use of land) impacts on the "carbon uptake land" which represent the forest surfaces needed to absorb the CO_2 emissions directly or indirectly caused by different activities.

Given the uncertainty or incompleteness of some data sources, results must be intended to give an order of magnitude of the total EF breakdown that can serve as a basis for decision-making and policy-design processes. From the calculation, it can be estimated that the PoliTO would need a surface of about 6200 gha (global hectares) for being self-sufficient. If compared to the actual area occupied by the university (20 ha), PoliTO would require and area 310 times larger, corresponding to half of the total city of Turin. Mobility has the higher share, accounting both daily commuting and work trips. Whereas energy covered 40% of total EF, considering emissions related to thermal and electric energy.

Even if the work is a first exploratory attempt, it had a strong communicative impact, educational outcomes and reporting efficacy, both to the external partners and for administrative boards.
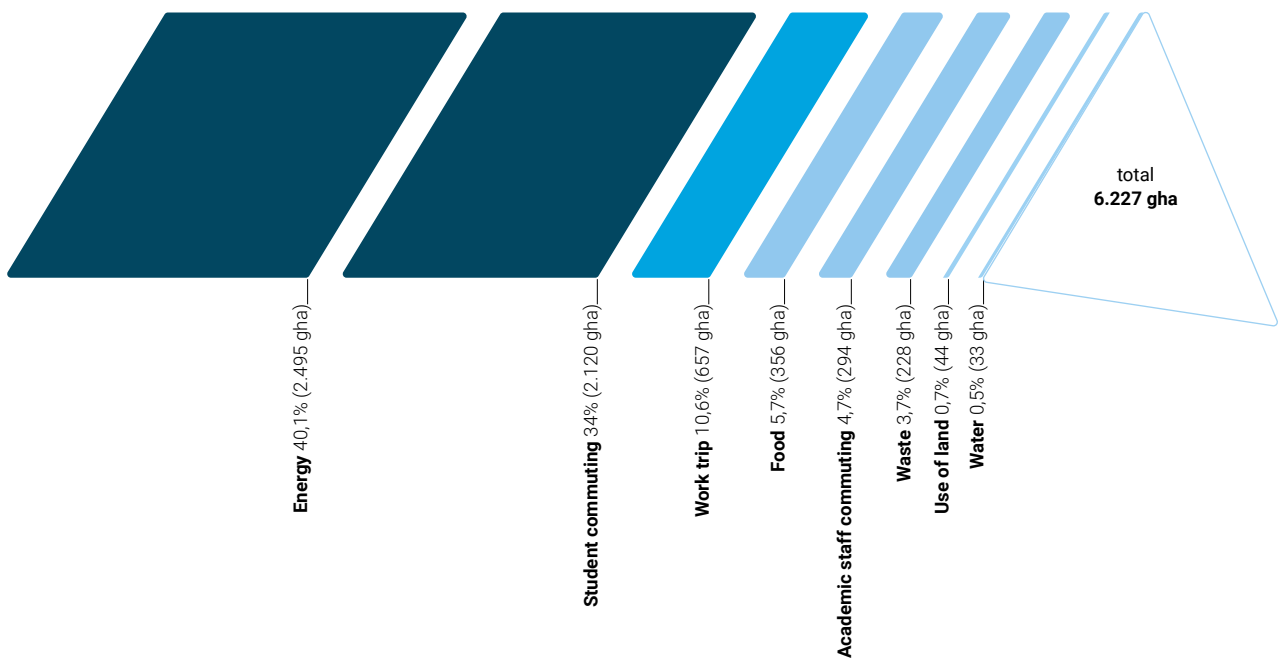
Ecological footprint land types related to consumption categories

Energy		Carbon uptake land
Water		
Mobility		Built-up landt
Use of land		
Waste		Cropland
Food		Grazing land
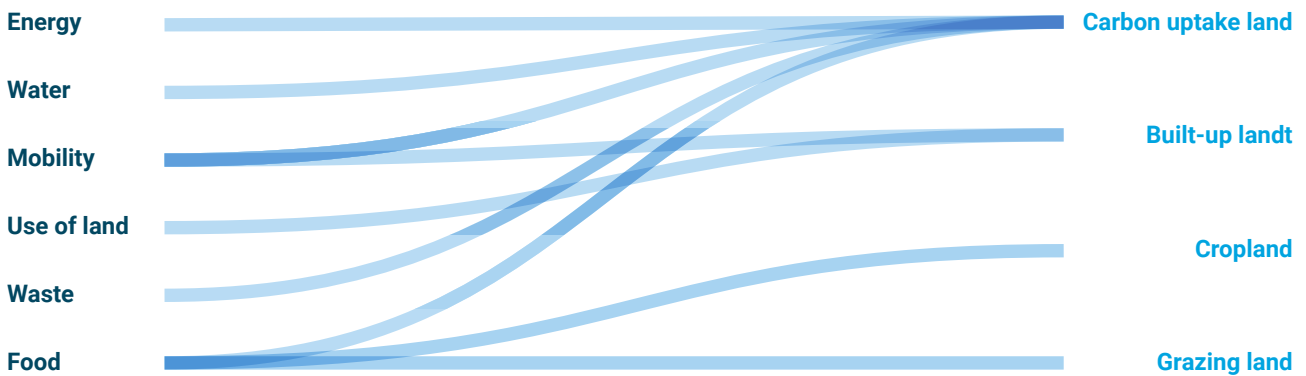
Ecological footprint consumption categories of PoliTO

total
6.227 gha

Energy 40,1% (2.495 gha)

Student commuting 34% (2.120 gha)

Work trip 10,6% (657 gha)

Food 5,7% (356 gha)

Academic staff commuting 4,7% (294 gha)

Waste 3,7% (228 gha)

Use of land 0,7% (44 gha)

Water 0,5% (33 gha)

Land occupied vs land "required" *

area occupied by
PoliTO campus
0.15%

area theoretically necessary
to support PoliTO activities
48%

area of the whole
city of Turin
100%

SDGs at PoliTO

5
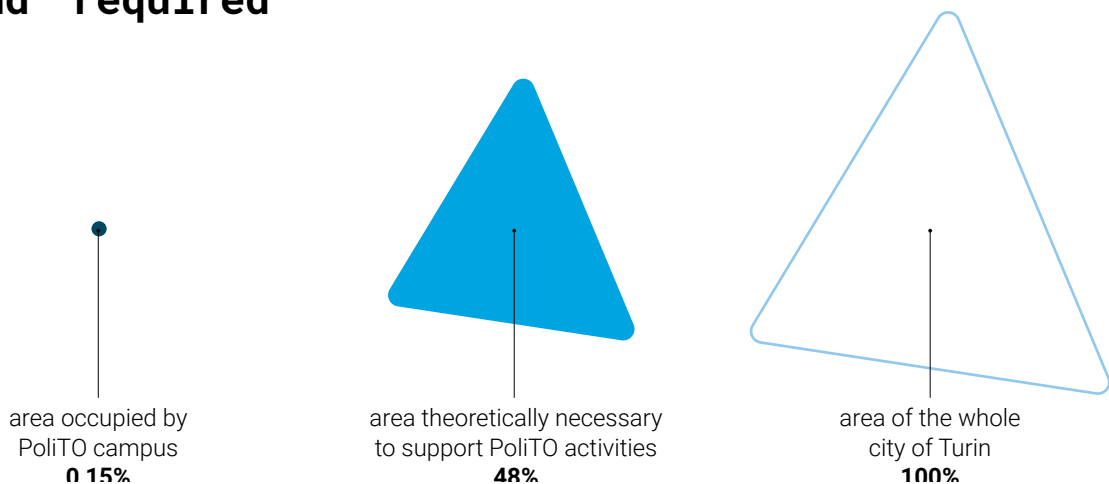
Green Team actions
toward a full
SDGs awareness at PoliTO

In order to align the vision of the Green team with respect to the Sustainable Development Goals (SDGs), Politecnico di Torino started to review its outputs of teaching, research, and third mission according to the 17 goals and the related 169 targets, proposed by Agenda 2030 of the United Nations.

This dual initiative (Education and Research) enabled the University to take ownership of the content and objectives of the Agenda 2030 and, progressively, to measure its contribution to the creation of a more sustainable society, which should be aware of our current resources and of the needs of future generations.

The main steps of this process are summarized as follows:

Timeline

May 2018
Launch of the initiative inside the PoliTO community with specific information on SDGs and Agenda 2030.

June-September 2018
Exploratory mapping exercise related to teaching courses and classification according to the 17 SDGs.

June-October 2018
Exploratory mapping exercise related to research outputs. Classification of research publications according to the 17 SDGs using "Machine Learning" tools.

November-December 2018
Survey about Agenda 2030 awareness and level of knowledge of the 17 SDGs among employees and students.

January 2019 - ongoing
Inclusion of scientific publications and research outputs on the IRIS platform. Identification of Classification of research products according to SDGs.

5.1
Education

SDGs in education

An exploratory mapping has been carried out between June and September 2018. All faculty members were asked to identify one or more SDGs for every course. A further check was conducted by the academic advisors of the degree programmes who approved the course or asked the faculty member to change it. The same activity was carried out last June 2019 and registered an increase in the number of courses included in this exercise: in 2018 these courses were around 2.300 while in 2019 the mapped courses were more than 3.500.

Each faculty member and lecturer has been asked to select a maximum of 3 SDGs for his/her course. As shown in the table below, the most popular SDGs are: Quality of education, Industry & Innovation, Sustainable cities, Responsible consumption, followed by Affordable energy, Decent work, Good health and wellbeing, Climate action and Life on land.

These are not unexpected results considering that PoliTO is a technical university focusing on engineering, architecture, spatial planning and design.

Courses vs
SDGs mapping 2018
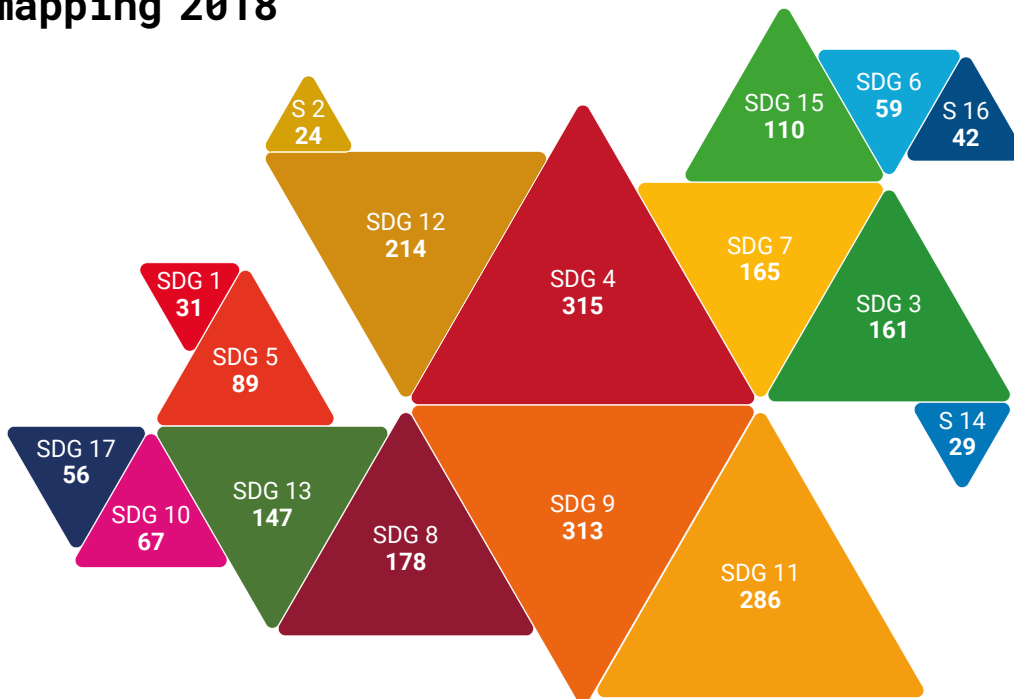
Courses vs
SDGs mapping 2019
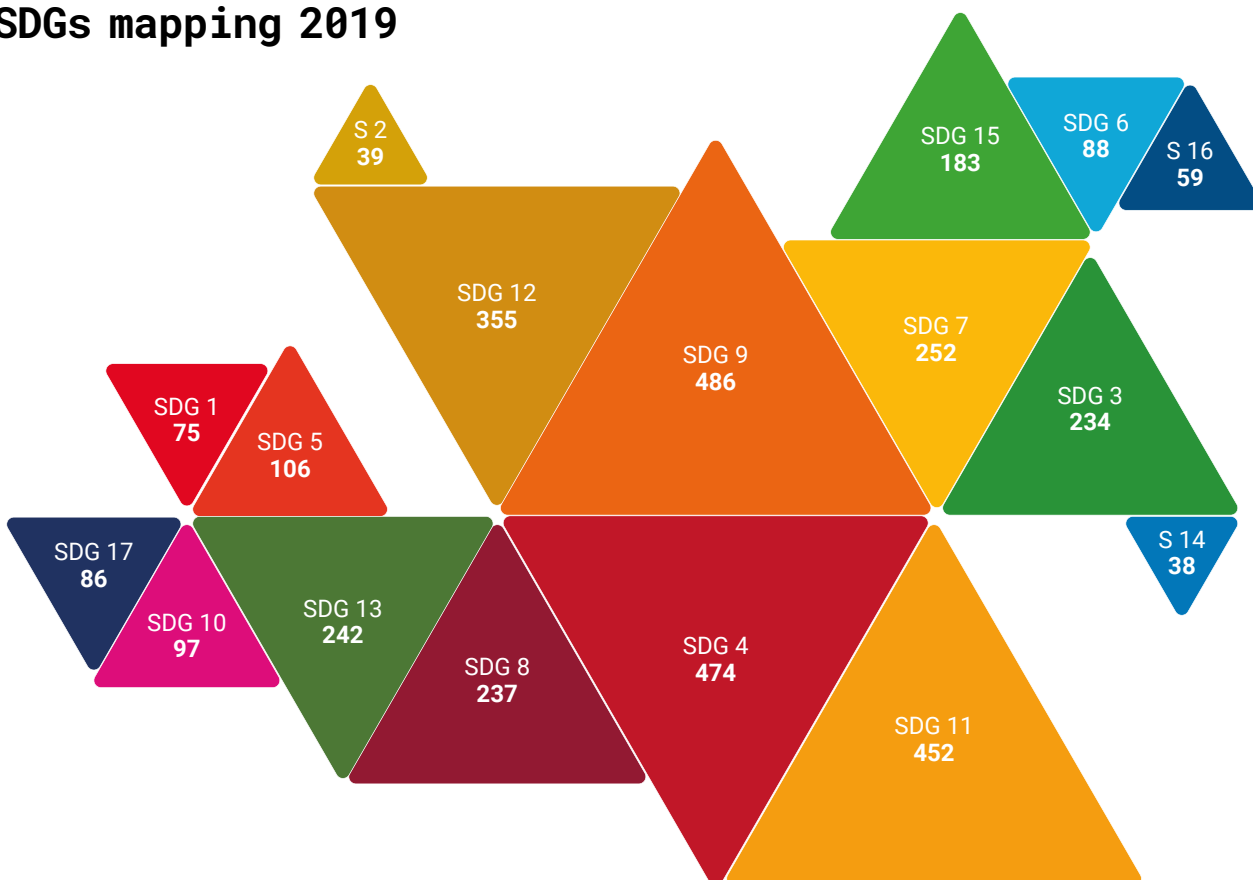
5.2
Research

SDGs in research

In the field of Research, the scientific production of the last three years has been classified according to the 17 SDGs. A first exploratory association was made with automatic tools of "machine learning", in order to identify polarizations on specific SDGs in the scientific production of Politecnico di Torino.

Research products of the last three years (more than 13.000 products) were analysed according to three different knowledge inputs:

1. definitions and description of each SDG,
2. abstract of five publications identified as the more pertinent to each SDG (according to Google Scholar),
3. SDG definition and pertinent publications selected by Green team members.

The results were then filtered according to language and level of confidence: only English products with a high level of confidence of the AI were then taken into account. By intersecting the results, we obtained more than 1.000 products, which were identified with the same SDG by the three different attempts.

The table below shows the percentage resulting from this analysis. As one can notice, SDGs 11 and 12 are popular in the scientific publications of the PoliTO community, as far as teaching is concerned. The SDG 7 on Affordable and Clean energy and SDG 3 on Good health and wellbeing are considered interesting fields by a large part of our community.

1 No poverty
2 Zero hunger
3 Good health and well-being
5 Gender equality
6 Clean water and sanitation
7 Affordable and clean energy
8 Decent work and economic growth
9 Industry, innovation and infrastructure
10 Reduced inequalities
11 Sustainable cities and communities
12 Responsible consumption and production
13 Climate action
14 Life below water
15 Life on land
16 Peace, justice and strong institution

Self classification

A new field has been introduced in the online IRIS catalogue of publications in order to identify the reference SDG for every publication. The initiative started in November 2018. Authors are required to select a SDG when they upload a new research product and can also identify one goal for their previous publication already included in the catalogue.

As for the previous exploratory activities, SDG 11 is the most representative of PoliTO research activities. This is followed by SDG3, SDG7 and SDG12. Although SDG9 (industry, innovation and infrastructure) has not been recognized as representative by the Watson tool in the previous exercise, several PoliTO authors have identified it as the key reference for their scientific output. We can imagine that this result is due to the fact that SDG9 can be seen as the most generally representative topic for a technical university.

In order to increase knowledge about each goal and avoid possible misunderstanding in SDGs selection in teaching and research outputs, the Green team developed explanatory materials and training programmes for all PoliTO Departments starting from January 2019. This initiative re-

ceived a very positive feedback, with an increasing interest demonstrated by professors, researchers and administrative staff. A number of administrative units has started to ask for short training sessions on SDGs and how they can be implemented in PoliTO activities.

The above-reported mapping is part of the ongoing SDGs classification, which is helpful for the identification of current fields of work in our University.
Starting from today, "third mission" actions and scientific projects of the PoliTO community have been classified according to the SDGs in order to support policy-making, implementation and evaluation of SDGs impact.

Product self-classification

	Goal	
	Goal **11**	729
	Goal **3**	401
	Goal **9**	332
	Goal **7**	298
	Goal **12**	271
	Goal **4**	254
	Goal **13**	138
	Goal **8**	108
	Goal **15**	65
	Goal **6**	49
	Goal **1**	32
	Goal **14**	26
	Goal **16**	26
	Goal **17**	23
	Goal **2**	21
	Goal **10**	20
	Goal **5**	18

5.3
Community awareness about SDGs

An internal survey about the level of knowledge and awareness of the PoliTO community (first-year students and academic and administrative staff) in relation to SDGs has been administered during the distribution of myPoliTObottles (see Section 4). The objectives of this survey are multiple:

> To investigate the level of knowledge about the SDGs of employees and students,
> To collect information about the values of the PoliTO community,
> To investigate fields of action, expectations and users' points of view.

20% of the individuals who were asked to answer the survey actually did it (754 students and 655 employees). Particular attention was paid to the introduction of specific reminders in order to create a sample similar to reality. The sample, in this case, is significant and reflects the PoliTO composition in relation to gender and role for employees and to gender and Degree programme for students.

The first introductory part of the survey was about the personal idea of sustainability. Each respondent was asked to list three words he/she considers connected to the concept of sustainability.

The result has been a list of thousands of different words that were then classified in common keywords.
It is worth noticing that students and staff have a similar idea of sustainability. The most frequent concepts are: recycling, environment, energy and ecology.

Survey
results

◤ teaching and administrative staff

Recycling/reuse	207
Environment	193
Energy	95
of which: clean, renewable	29
saving	83
of which: energy-saving	19
Ecology	75
Future	73
Economy	60
of which: circular economy	8
Reduction	33
Respect	32
wastefullness	32
social	30
Efficiency	30
of which: energy efficiency	6
Nature	27
Renewable	26
Development	26
Mobility/transport (sustainable)	26
Green	25
Pollution	24
Responsibiltity	23

◤ students

Recycling/reuse	312
Environment	191
Ecology	115
Energy	111
of which: clean, renewable	65
Respect	85
Future	79
Green	64
Saving	59
Clean	54
Nature	46
Reduction (pollution, wastefulness)	39
healthy, salubrity	39
Development	30
Economy	30
Innovation	27
Resource	25
Commitment	25
Life	22
Responsibility	20
Safeguard	20
Efficiency	20
Well-being	17

The second section of the questionnaire focused on SDGs. Respondents have been asked to identify which SDGs were important to them and which were supposed to be important for PoliTO, with the possibility to rank five different goals.

Even in this section, the answers given by students and the answers given by employees are similar. However, very different scenarios were identified in the definition of priorities. In the case of personal interests, there is more equal distribution of answers among SDGs with a slight convergence on GOAL2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture) and GOAL13 (take urgent action to combat climate change and its impacts). Considering Politecnico's priorities, respondents considered very important both GOAL4 (to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all), and GOAL7 (to ensure access to affordable, reliable, sustainable and modern energy for all).

The last part of the questionnaire was dedicated to the proposal of actions to be implemented by PoliTO, with the coordination and support of the Green team.
Both students and employees identified the area of Energy and Buildings as a priority action field, followed by Mobility and Transport.
The waste topic seems very important only for students that probably live the campus in a different way from staff and face more difficulties in recycling on campus.
1.441 proposals to implement sustainability inside our university were collected, the majority of them presented by employees, who are used to making proposals. The ideas presented were grouped in different areas according to keywords. The majority of these proposals are related to the Energy area and the Waste area (with particular regard to recycling programs and reduction of plastic use), Cultural sphere (in relation to awareness campaigns), Mobility and Water.
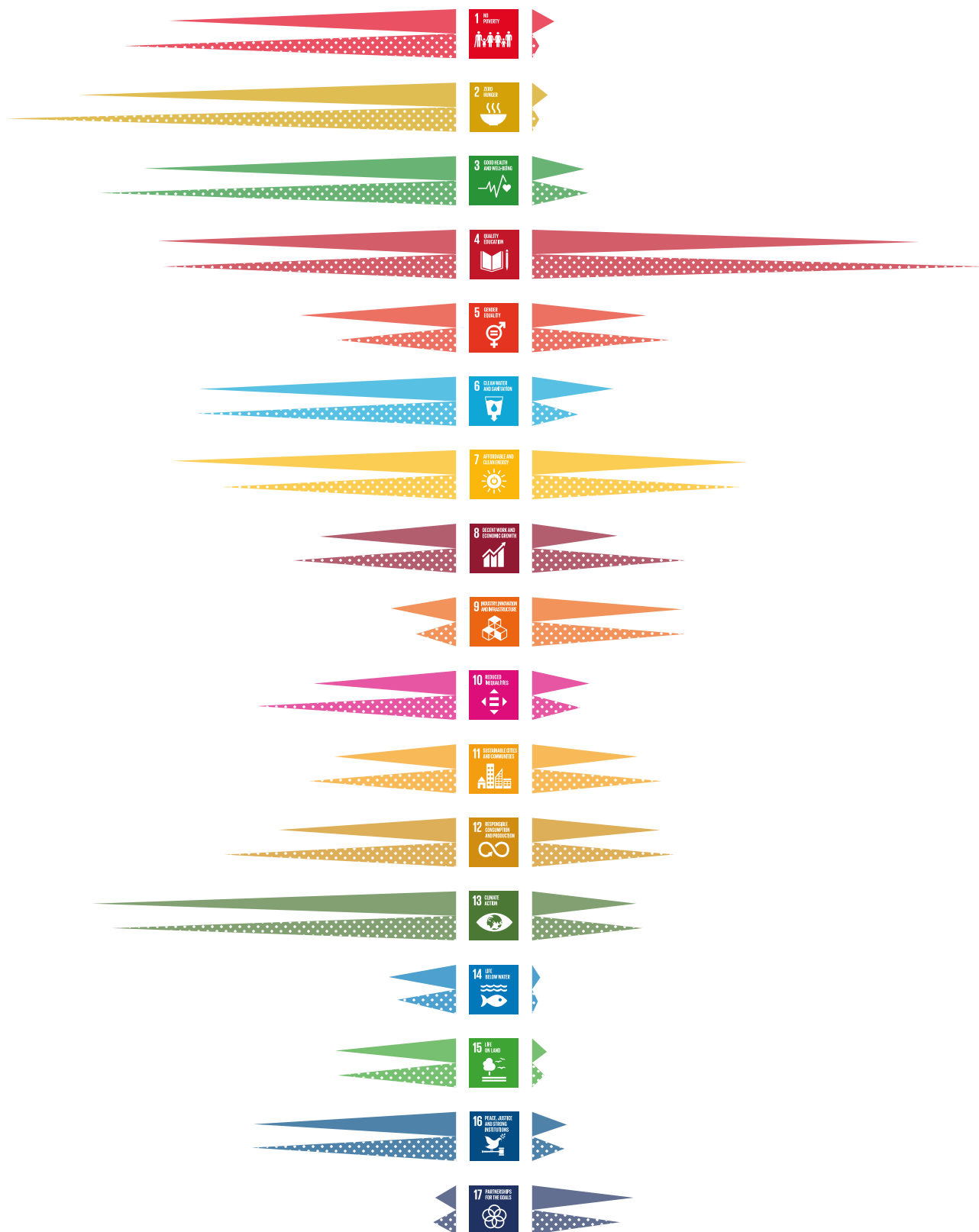
Perception of
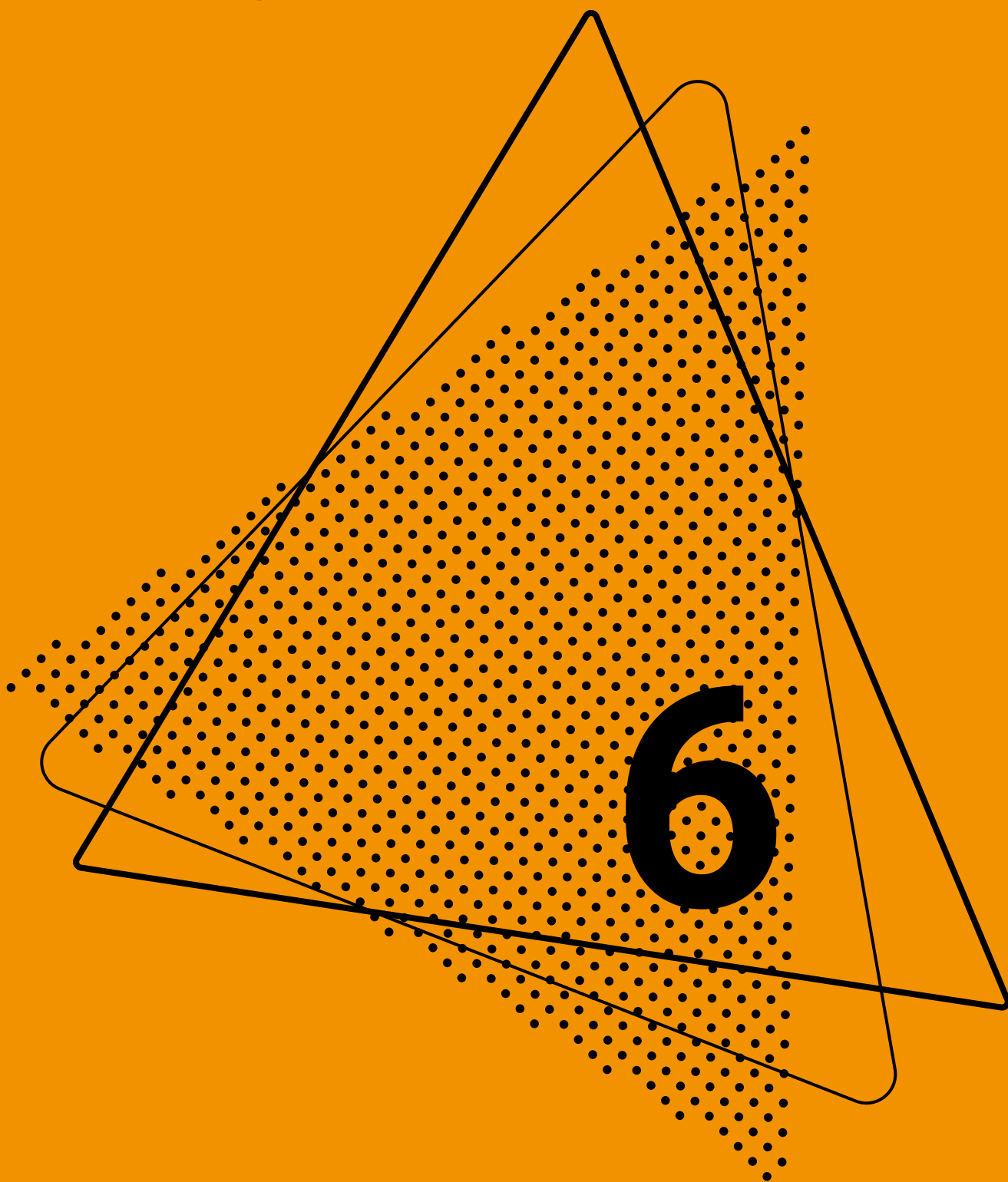# SDGs importance

◀ students

◀ staff

Which SDGs are more important
for you?

Which SDGs are more important
for PoliTO according to you?

Networks and rankings

6

PoliTO in the national and
international context

6.1
Networks

ASVIS

The Italian Association for the Sustainable Development (in Italian Alleanza Italiana per lo Sviluppo Sostenibile) was established in 2016 upon proposal of Unipolis and University of Rome Tor Vergata, in order to promote the issues of the Agenda 2030 and SDGs. This network is composed of more than 200 institutions among which many universities. PoliTO collaborates with the association in manifold initiatives and promotional events, the most important of which are: the "Festival dello Sviluppo Sostenibile", the "Rete delle Università per lo Sviluppo sostenibile" RUS (see below) and the Siena Summer School on Sustainable Development. [6]

IASS

The Italian Association for Sustainability Science was created with the purpose to gather major stakeholders in the development of the science of sustainability in Italy. The association is multidisciplinary by nature and its members are diversified stakeholders with a common focus on sustainable development. PoliTO was among the founders of the associations. [7]

ISCN

The International Sustainable Campus Network is a global forum that supports leading universities in the exchange of information, ideas, and best practices for achieving sustainable campus operations and integrating sustainability in research and teaching. In 2015 Politecnico di Torino wrote the ISCN-GULF Sustainable Campus Charter Report, taking the first step towards the ratification of the new course that was already embarked on. [8]

IUSDRP

IUSDRP (Inter-University Sustainable Development Research Programme) is a program that aims to establish a platform on which member universities may undertake research on matters related to sustainable development, according to a shared work plan and agenda. IUSDRP together with PoliTO organized the Symposium "Accelerating the Implementation of Sustainable Development in Research Programmes" which has been held at Polito's premises in July 2019. The Symposium focused on the means to integrate, promote or otherwise catalyse the implementation of research on sustainable development of higher education institutions, supporting them to implement the Agenda 2030 Sustainable Development Goals (SDGs).

RUS

The "Network of universities for the sustainable development" (in Italian "Rete delle Università per lo Sviluppo sostenibile" - RUS) was established in July 2015 as part of the CRUI (Conferenza dei Rettori delle Università Italiane – Conference of Rectors of Italian Universities) with the aim of promoting SDGs, culture and good practices of sustainability, and enhancing the value of the Italian experience at an international level. PoliTO was one of the promoters since 2013. RUS represents the first experience of coordination and sharing among all Italian universities involved in the issues of environmental sustainability and social responsibility. It is organized in six workgroups: Energy, Mobility, Waste (from January 2016), Climate change (from Mach 2017), Education (from September 2017), and Food (from December 2018). [9]
From January 2019 PoliTO is in charge of the general coordination and the organizing secretariat of RUS. Moreover, PoliTO participates in all workgroups, and the energy manager of the university is in charge of the RUS Energy Workgroup coordination. The Deputy Rector of PoliTO and

President of RUS, Patrizia Lombardi, attended many events at a national level.

RUS is partner of ASviS and has signed several Memorandum of understanding with entities as the international students association AIESEC Italia, the association "Nuova Economia per tutti - NExT", the association for the rights to university studies AN-DISU and the conference of the merit colleges CCUM.

RUS also signed the Global Climate Emergency Letter promoted by the UN Environment's Youth and Education Alliance which is signed by universities from all over the world and the Declaration named "Carta dell'Adamello" with the "Club Alpino Italiano" – CAI, the "Comitato Glaciologico Italiano" and several Italian universities.

SDSN

Joined by PoliTO in September 2019, the UN Sustainable Development Solutions Network promotes integrated approaches to implement the Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change, through education, research, policy analysis, and global cooperation. The network was set up in 2012 under the auspices of the UN Secretary-General. Much of SDSN's work is led by National or Regional SDSNs, which mobilize knowledge institutions around the SDGs.

SDSN Italy activities aim at raising awareness around the SDGs at all levels of Italian society. All the activities carried out within the network focus on enhancing problem-solving and decision-making both on a public and on a private level in order to reach the SDGs. The network also contributes, to promote the SDGs in the fields of education, experimentation and innovative practices in line with the international programs led by SDSN.

[6] asvis.it

[7] scienzasostenibilita.org

[8] international-sustainable-campus-network.org
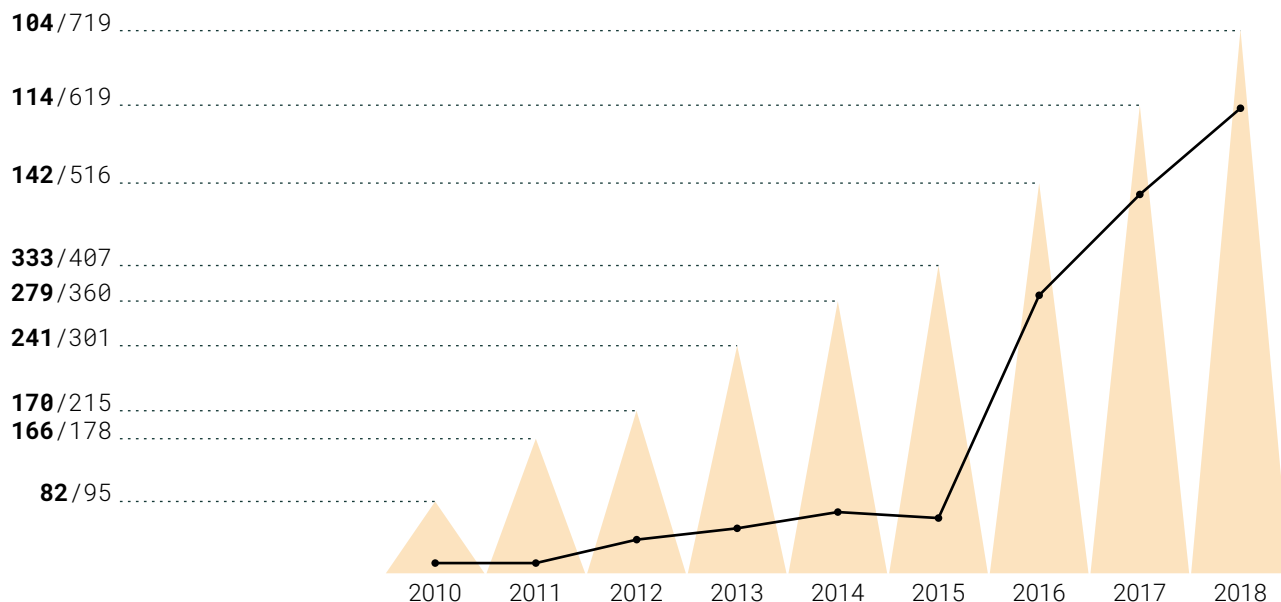
[9] reteateneisvilupposostenibile.it

6.2
GreenMetric ranking

PoliTO participates to GreenMetrics since 2010

The UI GreenMetric World Ranking is one of the most popular rankings in this field. It was launched by Universitas Indonesia in 2010. The aim of the ranking is to provide the results of a survey regarding the current condition and policies related to Green Campus and Sustainability in universities all over the world. The survey tests six parameters: sustainability of education, policy and energy management, infrastructures, mobility, water management, and waste treatment.
PoliTO is in this ranking from 2012 and its position is constantly increasing. PoliTO performance is shown in the picture below.

It is worth noticing that in 2015, before the Green team started its work, PoliTO ranked 333. In 2018 the university reached the 104th position of the global ranking.
For the 2019 ranking, the GreenMetric Steering Committee has adopted the Smart Building standard defined by the Energy group of the Italian network of universities for sustainable development (RUS) coordinated by PoliTO. This shows the important role played by our institution in defining sustainable development standards at an international level.

World ranking

104/719									
114/619									
142/516									
333/407									
279/360									
241/301									
170/215									
166/178									
82/95									
	2010	2011	2012	2013	2014	2015	2016	2017	2018

6.3
Times Higher Education (THE) impact ranking

Times Higher Education is a periodic journal that creates international rankings of universities and higher education institutions every year. In 2018 the association has launched the first edition of THE Impact, an innovative ranking that evaluates economic and social impact of universities on the basis of Sustainable Development Goals. PoliTO ranked 29 among over 290 universities for the SDG 11 (Sustainable Cities and Communities).
This great result proves the key role played by PoliTO in enhancing cultural heritage, developing sustainability education and an inclusive and aware community.

29th

Impact Rankings
Sustainable cities and
communities 2019

101–125th
European Teaching Rankings 2019

501–600th
World University Rankings 2020

Waste Mob 2019

Green Storming 2017

M'illumino di meno 2019

Climbing for Climate 2019

Circonomia 2019