

# SDGs@Polimi 2022



**POLITECNICO**  
MILANO 1863

# SDGs@POLIMI

2022



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MILANO 1863

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# SUSTAINABLE DEVELOPMENT AT POLITECNICO DI MILANO

Politecnico di Milano promotes the culture of sustainable development in all its institutional activities, in teaching and research. Working in partnership with society and helping it to achieve Sustainable Development Goals at global, national and local levels is an integral component of the University's mission, firmly embedded in both the relevant community context and the international academic setting. At Politecnico we face the challenge of sustainable development, strengthened by our identity and values as a polytechnic school. Indeed, we believe in the value and effectiveness of the contribution that the design and creative culture as well as the problem-solving ability, typical of a polytechnic approach, can give to the urgent and global challenges posed by the United Nations 2030 Agenda.

We have been doing this with growing commitment for many years, and relying on the significant results obtained in 2021 (the publication of sustainability reports "SDGs@Polimi" and "University Environmental Sustainability Report", the launch of a dedicated Sustainable Development webpage, accreditation in authoritative international sustainability rankings), we set out to increase the effort and lay the ground for the development of an extensive and cohesive sustainability programme, with a primary focus on those areas of sustainable development that were found to be in need of greater attention and effort. The 2022 Programme for Sustainability at Politecnico di Milano was thus set in motion, led by a new governance and organizational model developed with the aim of facilitating organizational change.

## The new governance for Sustainability

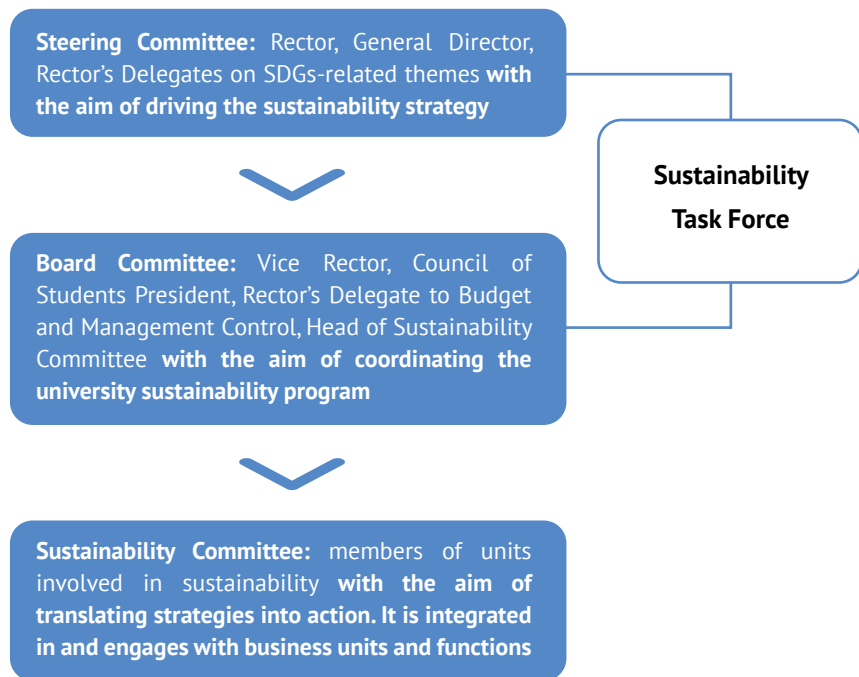
The new organizational model for sustainability at Politecnico di Milano aims at operating a paradigm shift within the university organization, adopting sustainability as a principle to guide decision making, analysing the impact on short, medium and long-term on all stakeholders. It was developed based on the following principles:

- The multidimensional aspect of sustainable development calls for "designing by topic" instead of trying to act towards sustainability "as a whole".
- Consequently, the importance of understanding priorities and guiding investment of resources on sustainability topics which are strategic for the university requires the establishment of an executive board to define the vision of the programme.

- Sustainable development is a dynamic and changing framework: it is therefore important to create a flexible, heterogeneous organizational structure which can intercept, develop and spread good practices effectively in all business units.

The organizational model is structured as follows: it is guided by a Steering Committee involving the Rector, General Director and Rector's Delegates, it is managed by a Board Committee chaired by the Vice Rector and participated by a representative of Politecnico students; the programme activities are then developed by a Sustainability Committee, supported by the Sustainability Task Force established within the General Management, with the function of coordination and liaison between the committees. The Sustainability Committee is a network composed of representative of multiple university structures (Departments, Campuses Administration, Divisions) who are organized into working groups, each focused on one of the specific topics that have been identified as priorities.

The aim of the working groups is to identify and develop concrete projects and actions to tackle the most urgent issues related to sustainable development within the university.



The organizational model thus developed cooperates and is integrated with entities and bodies already established within the university, who have been active in promoting sustainable practices and programmes at Politecnico di Milano since 2011.

## The 2022 Programme for Sustainability at Politecnico di Milano

The Programme for Sustainability set in motion in 2022 aims at supporting Politecnico di Milano in addressing issues of sustainable development which have not been, until now, properly addressed by the University governance and bodies, as well as in increasing the already significant effort on existing projects and lines of action.

The Programme is composed of four main lines of action, coordinated by the Sustainability Task force and closely managed by the Board Committee, who have enjoyed the support of multiple University's Divisions and Departments to carry out different types of actions: policymaking, development of initiatives by dedicated sustainability working groups, data monitoring and reporting, participation to global sustainability rankings.

### POLICYMAKING

Policymaking is one of the main tools identified by the university decision-makers to embed and enhance sustainability and sustainable development practices in the university institutional activities.

Given the multi-faceted nature of sustainable development, which is comprised of social, economic and environmental aspects, different areas of intervention for policy development were examined to identify focal points. The most urgent topics to be addressed through policymaking were found to be: the lack of a comprehensive and organic admission policy to support university action towards quality education (SDG4) and inclusivity (SDG5, SDG10); the lack of an explicit policy regarding the accessibility of university premises to the community and the public, supporting university stance towards meaningful impact on the surrounding community (SDG10, SDG11); the lack of explicit policies detailing the university approach to sustainability in food and catering services and in consumption of materials and resources (ethical and sustainable sourcing, minimization of waste, recycling and waste management), directly linked to university commitment to achieving SDG12 and SDG2.

Dedicated interdisciplinary committees – involving heads of administrative divisions, experts on subject matter and communication professionals – have been working on the drafting of policy documents and on the identification of implementing tools with the support of the university Sustainability Task Force and guided by the Board Committee.

Their work led to the publication of the following policy documents:

- University admission Policy, which details the different admission processes required to study at Politecnico di Milano, presents the actions undertaken by the university to counter any possible cause for inequality or discrimination in access to university studies and ensures that access to teaching activities is open

to all, regardless of ethnicity, religion, disability, immigration status or gender.

- Access to university premises Policy, stating that Politecnico di Milano manages its facilities in order to make them open and usable by the university community (students, researchers, faculty and staff) and the public, as an integral part of the social impacts activities in which the University is engaged, particularly in terms of production of public goods of a social, educational and cultural nature. The policy document contains the general information and norms for public access to the facilities; detailed information is then given in the dedicated webpage.

## SUSTAINABILITY WORKING GROUPS

The members of the Sustainability Committee have been active in the last year in the design of sustainability actions and initiatives within theme-specific working groups, with the support of staff who are directly involved in operations and management within the university and the collaboration of students' representatives to provide insight on the needs and expectations of the student population.

Specifically, five working groups were created following lines of action established by the Steering and Board Committees, each dealing with a sustainable development topic with direct linkages to one or more SDGs.

- **Reduction of food waste working group (SDG2, SDG12):** created with the goals of integrating good sustainability practices, particularly for reducing food waste in food service and developing anti-waste initiatives; following meetings with food service providers, it was found that Politecnico di Milano does not produce significant food leftovers, which signals an encouraging attitude of service providers and customers towards food wastage. However, the working group believes it would be useful to further engage the community towards waste avoidance through activities, agreements, projects, and improved communication. Another proposal is the introduction of guidelines for sustainable catering by following the examples of departments that have already implemented such policy.
- **Sport and wellbeing in the university community working group (SDG3, SDG2):** the aim of the working group is to gather ideas and proposals with the objective of ensuring the health and well-being of the Politecnico di Milano community. In particular, proposals were gathered on the topics of welfare surveying, wellbeing services (socialization, decompressing), sport activities and facilities, nutrition quality education and improvement.
- **Gender policy working group (SDG5):** the working group objective is to support and integrate the already significant effort put in place by Politecnico di Milano in bridging the gender gap in all institutional activities, by identifying areas of potential improvement and developing specific projects towards those. The main areas of intervention are attraction of female younger students to STEM disciplines, promoting better work-life balance and developing empowerment initiatives for the diverse woman components of the university community.
- **Disability and accessibility policy working group (SDG10):** the working group

aim is to strengthen the already significant support offered by Politecnico di Milano to students, members of staff and guests with disabilities and/or access issues. Working group members conducted an initial framing of the University's services, processes and contact persons on the topic of disability and accessibility issues (physical and digital). The compilation of experiences and best practices already in place at departments, campuses administration and divisions revealed a framework of individual initiatives and localized management of physical accessibility issues.

- **Materials reuse and waste management working group (SDG12):** the goal is to integrate the waste management system at the university with innovative projects aimed at reducing the quantity of materials ending up in waste disposal facilities, improving the quality of waste separation and recycling, allowing the recycling of non-conventional waste categories through agreements with local waste management services and/or innovative start-ups. The four main areas of intervention are the improvement of recycling containers and facilities, materials and resources sharing, innovative projects and communication.

The project proposals drafted by the working groups will be incorporated in sustainability strategies of Politecnico di Milano. The participatory approach ensures that different experiences, areas of expertise and perspectives within the university are valued and taken into consideration while designing solutions that have the potential to impact the entire community.

An additional key success factor has been the possibility for the Sustainability Committee members to identify the working groups to take part in, based on existing experience and/or best practices in the person's own structure and on personal expertise and interest; this allowed the scale-up of initiatives that were previously pursued only at a smaller level, the development of original and innovative projects and the close match between needs identification and addressing strategies.

The working groups approach also allows the sustainability governance to be a dynamic system where additional teams can be set up to respond when different needs in terms of sustainability actions arise, while working groups which have concluded their planning activities can be closed to free resources for new purposes and challenges.

## DATA MONITORING AND REPORTING: TEACHING, RESEARCH, INSTITUTIONAL ACTIVITIES

As part of its 2022 Programme for Sustainability, Politecnico di Milano identified the need to develop and implement tools for data monitoring and reporting on the contribution to sustainable development attained by the university's activities (teaching, research, operations, outreach).

On the topic of sustainability-related teaching activities, the governance for sustainability launched a mapping activity of the delivered courses against the 17 SDGs of the UN 2030 Agenda, with a threefold objective: to achieve tracking within the University on the presence and dissemination of the SDGs in the teaching

programs, useful to identify existing strengths and possibilities for improvement; to communicate externally, and in particular to students who have to define their study curriculum, the relevance of teaching programmes to sustainable development issues, declined according to the SDGs framework; to disseminate knowledge of the Sustainable Development Goals among faculty and raise awareness regarding the role that teaching can play in the challenge of sustainable development.

Thanks to the developed tool, faculty members who oversee teaching activities have the possibility to communicate which SDGs – if any – are pertinent to the course topics. The results of the implementation of the mapping tool can be navigated in the Degree Programmes web platform of the university, where SDGs contributions can be visualized for each relevant course.

A similar mapping activity was launched for funded research projects carried out at Politecnico di Milano: in addition to the monitoring of publications related to the SDGs through keyword searches on Scopus, a tool was integrated in the University's research projects database to identify linkages between projects in which Politecnico participates and the 17 SDGs of the UN 2030 Agenda; this was done in order to identify the themes on which research activity in the University is primarily focused, monitor their evolution and create a useful tool for communication and participation in university rankings.

For the monitoring and reporting of sustainability actions related to university operations and management, as well as outreach and public engagement, it is a key objective for the University to develop a sustainability dashboard within the SDGs framework to keep track and plan future activities. This process has been set in motion during the last year, starting from a first set of key performance indicators which are required for internal reporting and university rankings participation. The dataset is currently in the process of being finalized and expanded, creating a system which allows continuous data monitoring with the identification of data owners and standardized update processes.

### PARTICIPATION TO GLOBAL SUSTAINABILITY RANKINGS

As part of the strategy to enhance the university's reputation for sustainability, in 2022 Politecnico di Milano participated to THE Impact Rankings for the first time, submitting application to be ranked against 10 of the 17 SDGs. THE Impact Rankings are a global performance tables that assess universities against the United Nations' SDGs, using a large set of metrics to provide comprehensive comparison across four broad areas: research, stewardship, outreach and teaching. The university obtained significant results in SDG9 (18th on the global ranking), SDG10 (45th) and SDG8 (59th), ranking among the top 100 best-performing institutions worldwide and 3rd among Italian universities. In addition, Politecnico di Milano participates to the 2022 edition of UI GreenMetric World University Rankings, having previously reached the 80th place in 2021, which focuses on environmental sustainability topics (Setting and Infrastructure, Energy and Climate Change, Waste, Water, Transportation, Education) and the actions put into place by higher education institutions to tackle them.

Participation in sustainability rankings is the result of a significant university effort of gathering data and mapping actions, initiatives, policies within a comprehensive sustainable development framework: main purpose is to provide support in structuring a process that, starting from the valorisation of already accrued experiences, aims at developing the skills necessary for a complete reporting of our actions in the field of sustainability, and to highlight possible spaces for improvement of our policies and actions towards sustainable development.

The remainder of this report is organized as follows: for each of the 17 UN Sustainable Development Goals a short report is available, presenting the university contribution to said SDG in teaching and research, summarizing the preliminary results obtained thanks to the newly-developed mapping tools, and institutional activities through synthetic data card. Each report then presents the new actions and initiatives put in place by Politecnico di Milano in the last year, as an integration to the first comprehensive SDGs@Polimi report published in 2021.

## SUSTAINABLE DEVELOPMENT GOALS





# SDG1

## NO POVERTY



### Teaching



### Research



### Data and initiatives

#### UNIVERSITY CORRIDORS FOR REFUGEES UNICORE 4.0

The fight against all forms of poverty consists in ensuring that fragile people, who have fled from vulnerable situations, do not fall back into them. For this reason, Politecnico di Milano for the first time, together with 31 other Italian Universities, adheres to the UNICORE project that offers scholarships to refugees, giving them the opportunity to arrive in Italy in a regular and safe way to continue their university career in Italy. The beneficiaries for the 2022 UNICORE project are students residing in Cameroon, Niger and Nigeria who hold an official refugee status, who have obtained a Bachelor degree valid for admission to the chosen Master degree programme. For the first edition, unfortunately, no scholarships could be awarded by Politecnico di Milano due to the lack of candidates who satisfied the requirements; nevertheless, the activity provided useful insight and networking opportunities, gaining valuable experience for future editions of the scholarship programme.

The complete set of programmes, actions and initiatives on SDG1, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg1>





# SDG2

## ZERO HUNGER



### Teaching



### Research



### Data and initiatives

#### SPESA SOSPESA A NOLO

The “Spesa Sospesa a Nolo” is a solidarity initiative in support of the Nolo neighbourhood’s inhabitants, conceived during the first lockdown following the Covid-19 pandemic. Created within the “Nolo Social District”, the neighbourhood’s social street, since October 2020 it has been managed by OFF CAMPUS Nolo where 20 items of shopping are distributed weekly to vulnerable people thanks to donations from citizens. As well as calling for greater attention to be paid to the economically disadvantaged groups affected by temporary unemployment situations aggravated by the pandemic, the initiative also supports the economy of small neighbourhood shops by purchasing their products. Off Campus Nolo is located in an indoor market in Viale Monza 53, Milan. Spesa Sospesa a Nolo is an initiative for people in temporary economic difficulty and the collaborative spirit of the neighbourhood

The complete set of programmes, actions and initiatives on SDG2, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg2>

and its inhabitant goes beyond the management of the initiative, helping the Off Campus Nolo community also in the promotion of the initiative outside the Viale Monza Municipal Market.

### ANTI-FOOD WASTE INITIATIVES FROM FOOD SERVICES

With the aim of reducing food waste within the dining premises of Politecnico di Milano, the university collaborates with food and catering suppliers involved in several initiatives:

- Avoiding food leftovers: leftover bakery and pastry products are available in university cafés every evening from 16:30 to 17:00, to be collected by university students; similarly, in university canteens students can buy food not consumed during the lunch break for a reduced price. Leftovers boxes are healthy for people and the environment, ensuring the reintroduction into the food chain of food that would otherwise be wasted.
- Biodegradable disposable products: food and catering suppliers at Politecnico di Milano only provide biodegradable disposable tableware when no reusable options are viable, supporting the fight against plastic waste production and reducing the environmental impact of university waste disposal.
- Ibrida beer: Ibrida is a local bread-based beer brewed with the surplus bread unsold in the bakeries in Milan. Ibrida wants to provide a proactive and reflective vision to address the problem of food waste, sharing the values of circularity, and enhancing local production and consumption. In 2021, 220 bottles were sold in the university cafés.
- Banco Alimentare Onlus and Siticibo project: Siticibo is a program of Fondazione Banco Alimentare ONLUS and aims to recover the cooked and fresh surplus food. Catering suppliers, at the end of the service, distribute food surpluses to Banco Alimentare Onlus; food which is still perfectly edible is recovered and donated to charities, and distributed to people in need. Recovery of food surplus prevents the food from becoming waste, which also avoid wasting the energy, water and soil needed for production and disposal.

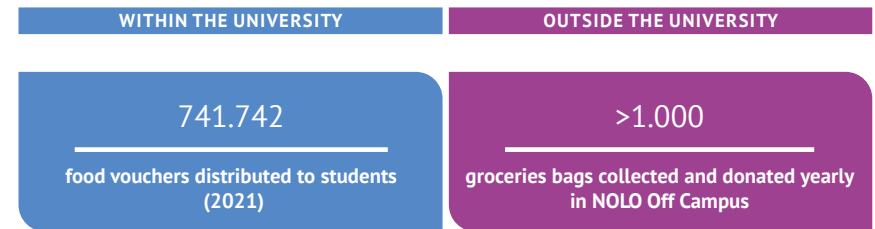
### SUSTAINABILITY WORKING GROUP: REDUCTION OF FOOD WASTE

The Sustainability working group tasked with the development and improvement of university initiatives towards reduction of food waste has identified the following actions:

- Support food services in the activities of communication for the correct disposal of waste in canteens and restaurants , as well as in the distribution of leftover food boxes.
- Development of a sustainable catering policy to ensure that suppliers guarantee sustainable catering through the implementation of good practices in respect of

the environment and the community, and that catering initiatives are managed in a sustainable way by the entire University staff.

- Development of agreements with companies that fight food waste along the supply chain, to create education on and awareness of food waste and empower the university community to mitigate this pressing issue
- Organization and promotion of educational outreach events and activities to spread awareness on the issue of food waste and on potential actions that can be undertaken to mitigate the problem on the occasion of the national Food Waste Prevention Day.
- Development of a distribution channel of locally-produced seasonal products, acting as a connection between local producers and the university community, in order to support small businesses and consolidate communities; buying local agricultural products reduces waste, mitigates pollution and enhances eco-sustainability.





# SDG3

## GOOD HEALTH AND WELLBEING



### Teaching



### Research



### Data and initiatives

#### SPORT PROMOTION AND EVENTS

Sport activities are an unique opportunity for students to come together, increasing their sense of belonging, stimulating competition and building self-esteem. For this reason Politecnico di Milano is committed to continuously enriching its sport offer and sporting events organization. Three main sport events are held throughout the year: PolimiRun Winter, held around the Lecco Campus, PolimiRun Spring, held in Milan, connecting the two city Campuses, and PolimiRide, a cycling event that tours among the four Campuses located outside the city of Milan. All events are open to all citizens and represent an occasion for strengthening the relationship between the university communities located in the different cities where Politecnico is present. In order to improve socialization and health through sport within the university community, the university organizes yearly students championships of 5-a-side

The complete set of programmes, actions and initiatives on SDG3, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg3>

Football, Volleyball, Basketball, Padel and Athletics; a hundred teams take part annually, with a total of over 1,000 students.

### SPORT AND WELLBEING FOR UNIVERSITY STAFF

Faculty and staff are also encouraged to practice sport activities within the university: to this end, Politecnico offers them the same sport centers subscription conditions that are available for students, and since 2022 is active in the organization of sports tournaments dedicated to faculty and staff, engaging them in mixed teams that compete in a variety of sport disciplines. To further increase the socialization among colleagues and to promote well-being, recreational clubs for employees are proposed to share hobbies, passions and personal experiences, alongside the creation of innovative break areas to allow staff members to relax and recover during work hours.

The university has entered into an agreement with the Mutual Aid Society 'Insieme Salute' to provide its staff with a supplementary healthcare service in the event of illness, accident, pregnancy and to encourage prevention activities. Health coverage is activated free of charge for the administrative and technical staff. The teaching staff can also activate the health coverage via the payment of a small fee. Coverage can be extended to family members. In addition, Politecnico di Milano provides the recipients with an integrated 'people care/welfare network' service capable of providing "all-round support" to cope with their own and their family's difficult situations, identifying all possible actions to be implemented, either directly or through the national and regional social welfare and health services (Polimi People Care).



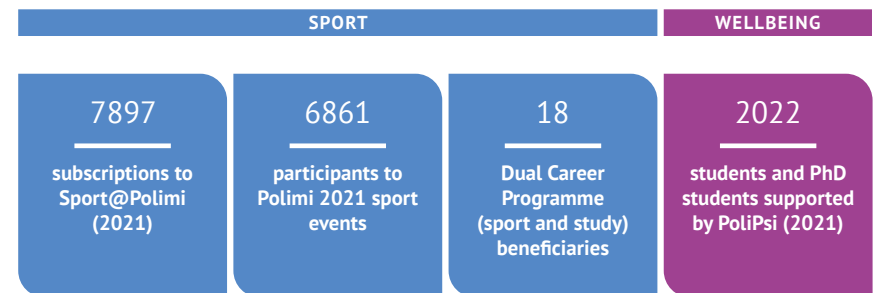
### POLIMI SUMMER CAMP

Each year, Politecnico di Milano organizes summer activities for the children of teaching and technical-administrative staff, to support families during the summer school break and to offer young children the possibility of exploring a variety of sport games thanks to the infrastructure available at the Giuriati sport Center. Additionally, laboratory activities, workshops and practical experiences are offered to participants, also taking place in Bovisa Campus. The summer camp is also open to external users.

### SUSTAINABILITY WORKING GROUP: SPORT AND WELL-BEING IN UNIVERSITY LIFE

The Sustainability working group was born with the aim to increase the level of well-being by identifying the following actions:

- The extension of the climate and organizational well-being survey that the university already submits to the technical-administrative staff to assess their opinions, feelings, perceptions and expectations to faculty and to the student population. This will allow to analyse the working and study climate, the quality of relationships and engagement, and identifying what aspects to act on in order to improve the well-being.
- The investigation of the possibility and means of implementation of dedicated smoking areas to promote a smoke-free campus, in order to respect the health of all and to make the University spaces cleaner, safer and reducing the risk of fire.
- The addition of new open-air playgrounds to the already-existing university network of sport facilities, to further encourage all students and staff to practice sport as a tool to support individual training and professional growth; for this reason,
- Proposal of an educational offer in sustainable food choices that can preserve the health of the individual and the community while respecting the environment, spreading food education in all campuses thanks to the helps of professional nutritionists.





# SDG4

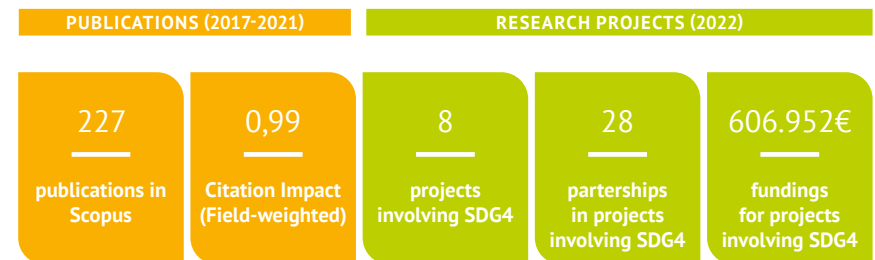
## QUALITY EDUCATION



### Teaching



### Research



### Data and initiatives

#### ADMISSION POLICY

The University is committed to drafting a Policy to clarify the admission process and the requirements necessary for its courses of study. The admission Policy identifies services and interventions put in place by Politecnico di Milano to support and guarantee access to studies in a fair way, through economic support and equal opportunities without any kind of discrimination. This makes access to studies fair, inclusive and for all.

#### POLIMIFORKIDS

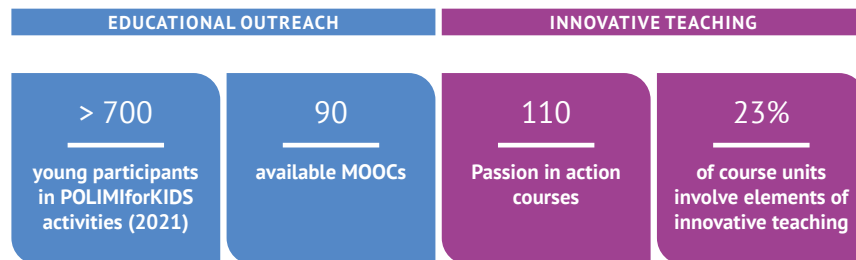
Children have a natural curiosity that lends itself to science, technology, math, and engineering. Learning takes place mainly through play, toys and services dedicated to them. This is why teachers and researchers of Politecnico di Milano have designed

The complete set of programmes, actions and initiatives on SDG4, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg4>

for children aged 7 to 13 years, lessons, experiments, games and performances to intrigue and attract even the smallest to the engineering world. On the occasion of the second edition of the Engineering Festival, the POLIMIforKIDS format returns. Politecnico di Milano is committed to bringing children closer to STEM disciplines with games and interactive activities. At POLIMIforKids, we take full responsibility for helping children investigate their ideas and interests.

### TECH CAMP

TechCamp@POLIMI is the first project in Italy to bring high school students closer to technological courses with university-level standards. It was born from the idea of two professors of Politecnico di Milano it is a novelty in the numerous initiatives of orientation of the university to establish new “bridges” between technical universities and high schools. The goal is to offer young secondary school students a brief course to explore the theory, but above all to experiment with particularly relevant, up-to-date technological subjects, starting with robotics, self-driving vehicles and coding. The primary purpose is not to necessarily lead to university studies in engineering, but it is above all to make known to young people, who may choose other paths in life, the scientific basis of some of the most important technological issues of the future years. The courses are in English and are taught by teachers, researchers and PhD students of Politecnico di Milano.





# SDG5

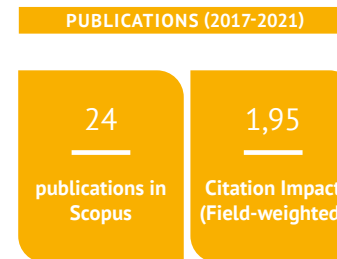
## GENDER EQUALITY



### Teaching



### Research



### Data and initiatives

#### POLIMI GENDER BUDGET

In 2021 Politecnico di Milano published the third edition of its Gender Budget, which presents a snapshot of the University regarding the gender perspective of study and occupational pathways for students, faculty and among technical-administrative staff and describes policies, actions and initiatives undertaken in order to promote gender equality within and beyond the university. Two aspects are investigated in depth in the 2021 Gender Budget: on the one hand, the career path of female international students by comparing their careers with those of both male and female Italian students; on the other hand, the first steps of the academic career with a focus on the careers of young female researchers that highlight how new recruits of Politecnico di Milano can really bring about the change enabled by equal opportunities policies.

The complete set of programmes, actions and initiatives on SDG5, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg5>

## GENDER EQUALITY PLAN (GEP)

The Gender Equality Plan of Politecnico di Milano, published in 2021, presents the University policy plan for gender equality and for the promotion of equal opportunities for all. The work carried out by our Institution since 2018 on the Gender Budget made it possible to define objectives, tools to achieve them and specific actions in different directions. The gender equality plan has a three-year horizon and five lines of action are identified, defined according to the principles of the implementation of our policies. The goals and actions of the Plan are structured in the following main areas:

- Work-life balance and organisational culture
- Gender balance in leadership and decision-making
- Gender equality in recruitment and career progression
- Integration of the gender dimension into research, teaching and technology transfer
- Measures against gender-based violence including sexual harassment

## SCHOLARSHIPS FOR WOMEN AND GIRLS

Every year Politecnico di Milano offers scholarships for girls who enrol to bachelor and master courses that are characterized by low women representation, with the

aim of increasing female participation in STEM subjects. In the academic year 2021/2022, several calls for applications were published to obtain scholarships and graduation awards promoted by the university and private companies that want to support and encourage the participation of deserving girls in STEM disciplines. Girls@Polimi is the main scholarship programme funded by Politecnico di Milano dedicated to women enrolling in engineering degree course; in 2021, an additional call “STEM4Future” was directed specifically to female students who enrolled in a BSc programme in Aerospace, Automation or Electrical Engineering. The two programmes globally awarded 25 scholarships with the aim of overcoming the gender gap in STEM disciplines.

## SUSTAINABILITY WORKING GROUP: GENDER POLICIES

The group was created with the aim of expanding and strengthening the initiatives promoted by the University to bring female younger students closer to the STEM disciplines, promote a better work-life balance and develop empowerment initiatives:

- Attracting and encouraging young female students to enrol in STEM disciplines is an important factor that constantly needs to be strengthened; for this reason, Politecnico di Milano aims to consolidate the orientation initiatives aimed at high school female students to spark and keep alive their interest in a STEM career through conferences, meetings with role models, activities and competitions.
- Organizing focus group activities dedicated to teaching and technical-administrative staff with the aim of monitoring their view of their work and career opportunities, their perception on the existence of a gender imbalance at Politecnico di Milano, and plan support and empowerment activities to bridge any remaining gap.
- Politecnico di Milano aims to strengthen mentoring activities for women PhD students from the second year until the end of their PhD programme. A dedicated mentorship programme will be organized for small groups of women PhD candidates with the support of mentors from national and multinational companies with PhD background. The programme will address various themes with the aim of supporting the mentees in their academic path, facilitating their professional growth and career in research and innovation.



### WOMEN ATTRACTION AND EMPOWERMENT

10  
Girls@Polimi  
scholarships  
awarded  
(A.Y. 2021-22)

### MATERNITY AND PATERNITY POLICIES

5  
editions of  
Empowering  
Women@Polimi

3  
available childcare  
facilities

375.000€  
research funds  
dedicated to women  
researchers after  
maternity leave  
(2018-22)





# SDG6

## CLEAN WATER AND SANITATION



### Teaching



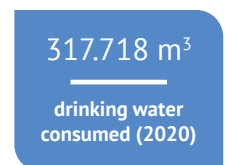
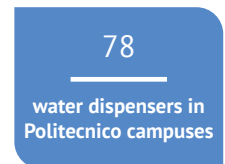
### Research



### Data and initiatives

#### WATER DISPENSERS PROJECT

In order to make drinking water available and free for all its community, Politecnico di Milano, since 2016, has been providing the installation of micro-filtered water dispensers that withdraw water directly from the public water provision system. The quality of the water is constantly monitored with daily and periodic operations of sanitization, maintenance and chemical and microbiological analysis. This allows to deliver to the polytechnic community free water even in a non-domestic context, contributing to spreading the awareness that public water is good and constantly controlled.



The complete set of programmes, actions and initiatives on SDG6, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg6>



# SDG7 | AFFORDABLE AND CLEAN ENERGY



## Teaching



## Research



## Data and initiatives

### UNIVERSITY'S ENERGY BALANCE

The university's Energy Commission publishes a yearly report detailing and analysing energy data related to our campuses. These include global energy consumption (electricity and natural gas) and production data, as well as detailed analyses of energy needs of the various buildings comprised in the campuses (lighting, appliances, heating and cooling). Data are provided by energy bills, data made available by energy providers, live monitoring systems and dedicated monitoring campaigns.

The latest edition of the University Energy Balance is accompanied by a document analysing the impact that the lockdown periods had on the university's energy consumption, which was firstly presented in June 2021 at the Italian University Network for Sustainable Development (RUS) workshop on the impact of Covid-19 on the emissions of Italian universities.

The complete set of programmes, actions and initiatives on SDG7, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg7>

## NEW ENERGY PROJECTS

With the aim of steadily improving the energy performance of Politecnico di Milano in order to reduce energy consumption and GHG emissions, the university is involved in various innovative energy projects:

- Energy efficiency in buildings: replacement of older window fixtures, cooling systems and lighting systems with LED appliances
- Efficiency in energy production: optimization of CCHP (trigeneration) plant in Leonardo Campus
- Electric mobility: installation of charging stations for electric vehicles, both private and owned by the university
- Renewable energy production: installation of additional photovoltaic systems on the university premises (1.7 MW additional capacity by 2023, further 2 MW capacity planned)
- Planning of an energy community in the Lambrate neighbourhood, for the engagement and sensibilization of the community surrounding the university as well as Politecnico population.

### RENEWABLE ENERGY

### ELECTRIC MOBILITY

150 kW

photovoltaic plants  
capacity

2.000 kW

photovoltaic plants  
planned extension

174 MWh

energy produced by  
PV plants in 2021

16

electric vehicles  
charging stations





# SDG8 | DECENT WORK AND ECONOMIC GROWTH



## Teaching



## Research



## Data and initiatives

### CAREER SERVICE POLIMI

Improving the employability of its students is one of the core vocations of Politecnico di Milano. Through its Career Service, the University provides career guidance services for its students, tailoring orientation activities both on students' expectations and companies requirements, which are continuously adapting to innovations in entrepreneurship and production systems.

Every year, recurring events are organised such as Career Day, Small-Medium Enterprises Day and the International Job Fair. In the last two years, new events and initiatives have been launched: "Architects – What to do?" is a one-day event, not at its second edition, where Architecture students and graduates meet architecture companies, real estate employers and professional studios, featuring talks and job interview opportunities. In 2022, Career Service has also launched "My Turn", an

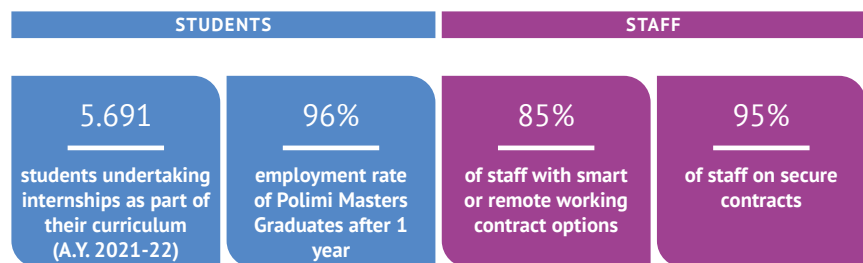
The complete set of programmes, actions and initiatives on SDG8, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg8>



original podcast in collaboration with Chora Media, dedicated to students who are about to enter the working world, addressing key topics to help them face the job market with more awareness and confidence.

### RECRUITMENT AND EMPLOYER BRANDING

As part of the actions dedicated to improving the quality of staff recruitment programmes, the dedicated web section has been redesigned to highlight the defining traits of Politecnico as a work community, detailing the organization's values, vision and way of working. Specific sections are dedicated to presenting initiatives for new employees, professional development and training opportunities, remuneration and incentivization policies and work-life balance initiatives.





# SDG9 | INDUSTRY INNOVATION AND INFRASTRUCTURE



## Teaching



## Research



## Data and initiatives

### TECHNOLOGY FORESIGHT CENTER

Politecnico's Technology Foresight Center was established with a threefold aim: to interpret and anticipate major changes that are underway, to understand the potential of high-impact technologies and to adopt a critical approach to technological development to identify viable solutions. In 2021 the Center published the working paper Technology Foresight – Ground-breaking technologies and innovation: what impact on sustainable development goals?, analysing the outcome of a survey on the impact of 50 new or improved technologies are expected to have on six areas of sustainable development (people's needs, universal values protection, socio-economic development, sustainable use of resources, safeguard of the planet, governance). The selected technologies include biotechnologies and medical equipment, energy systems, AI, innovative materials and mobility solutions.

The complete set of programmes, actions and initiatives on SDG9, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg9>

## NEW LARGE INFRASTRUCTURE LABORATORIES

In the last year, two innovative laboratories were added to the Large Infrastructures network managed by Politecnico di Milano, strengthening the university's offer of advanced research facilities for internal and collaborative academic purposes and for industry research and development activities.

- DriSMi – Dynamic Driving Simulation Lab: DriSMi houses a next-generation medium-sized driving simulator that is used to design and build new eco-friendly vehicles, to develop components using innovative materials, to study and test vehicle dynamics, to optimise consumptions, to test Advanced Driver-Assistance Systems (ADAS), for applications connecting vehicles and infrastructures, and for applications of autonomous driving. The simulator supports the university's research activities but is also available to external companies interested in testing their products.
- LaborA - physical and virtual modelling laboratory: LaborA is a university structure that supports university training and scientific research in project development, representation and communication through physical and virtual models. The laboratory activity consists in educational support to MSc and PhD students, providing teaching support for the creation of physical and virtual models under the guidance of laboratory tutors, who advise students in the choice of materials, construction techniques and use of laboratory equipment.

58

active JRCs (2021)

148M€

total JRC portfolio  
(2021)

+2

large laboratory  
facilities

73

active university  
spin offs (2021)





# SDG10

## REDUCED INEQUALITIES



### Teaching



### Research



### Data and initiatives

#### SUSTAINABILITY WORKING GROUP: DISABILITY AND ACCESSIBILITY POLICIES

The Sustainability working group tasked with the development and improvement of university initiatives towards disabilities and accessibility (both physical and digital) has identified the following actions:

- to increase the effort towards the removal of physical obstacles that hinder access to university facilities for people with disability: all existing issues will be mapped and an initial set of interventions will be carried out.
- to develop and improve digital tools to help people with reduced mobility to identify friendly routes inside and between university campuses
- to develop educational material for staff and faculty to support them in the creation of digital content that is accessible to people with visual impairments or learning disorders.
- to conduct a survey focused on people with disabilities on perceived accessibility

The complete set of programmes, actions and initiatives on SDG10, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg10>



and inclusion at Politecnico di Milano, in order to further address issues and cater effective initiatives.

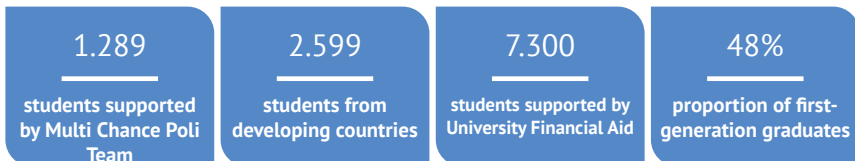
### MULTICULTURALISM

Politecnico di Milano has been strengthening activities aimed at fostering inclusion and integration for its international community (both students and faculty). These include welcoming initiatives such as a dedicated international Welcome Week and the Buddy Project, in which incoming international students are paired one-to-one with Politecnico students who help them navigate their first weeks at the university and in Milan; cultural initiatives such as the “World at Polimi” events, where international students can share their countries’ culture through exhibitions, seminars and performances; development of educational resources such as the “Cultural Shock” and “Multiculturalism – Inclusive Knowledge” seminars.

### LGBTI+ SUPPORT

The university promotes the inclusion of LGBTI+ people in university life through support, training and counselling initiatives and policies. The support and inclusion of LGBTI+ students is one of the lines of action of the ‘POP’ Strategic Plan, and is put into action through long-standing actions such as the funding and promotion of the Poliedro LGBTI+ Student Association, the establishment of the Alias Career Protocol for students who undergo a gender transition process, the sponsorship of Milano Pride events and organization of the concurrent Polimi Pride Week.

Politecnico has developed educational and informative content on diversity and inclusion themes, such as the “Embracing Diversity” MOOC and “Inclusive Knowledge” seminars for the university staff; the most recent addition is the production of a short video on inclusive language (Le parole per escludere, le parole per includere) presented at the Polimi Pride Week 2022, challenging the university community to explain LGBTI+ related vocabulary and encouraging discussion about inclusion and exclusion through speech and communication.





# SDG11 | SUSTAINABLE CITIES AND COMMUNITIES



## Teaching



## Research



## Data and initiatives

### MOBILITY ACTION PLAN

Kicked-off in 2021, the Politecnico Mobility Action Plan, starting from an analysis of the mobility habits of the Polimi community in commuting to the campuses, states the actions proposed to promote sustainable mobility. The document, built upon the results of a mobility survey, defines 5 main topics:

- Cycling infrastructures: to increase the number and safety of bike shelters, two fenced and protected bike stations have already been built, one in Leonardo and one in Bovisa Durando; an additional one will be available by the end of the year in Bovisa La Masa
- Incentives for staff who choose to commute by bike
- Active mobility services, such as showers and lockers rooms
- Electric mobility infrastructures: 40 charging stations for electric cars will be installed across all the campuses and will be reserved for Politecnico personnel

The complete set of programmes, actions and initiatives on SDG11, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg11>

only; 16 located in Leonardo campus are active since September 2022

- Incentives for car poolers

The MobilityAction Plan will be updated soon to check the impact of the implemented actions. To do so, it is necessary to gather new data on the mobility habits and needs of our community; a data collection activity is currently being carried out through an extensive mobility survey, whose results will be studied also in order to propose new initiatives.



### PUBLIC ENGAGEMENT@POLIMI

Politecnico di Milano constantly engages with the surrounding community through the offer of a rich programme of educational and recreational activities which are held throughout the year and open to the public. In 2021, over 50 large events were organized by the university public engagement division, and more than 300 by the individual university Departments.

Since 2020 a dedicated working group has been working to identify a strategy to organically include the themes of public engagement and social responsibility within the University's lines of action. The identified aims of the project were the survey of projects and initiatives present in the university, in order to place them in a coherent framework; the identification, starting from the aforementioned survey, of traits of specificity and recognisability of a 'Politecnico approach'; the alignment of Politecnico's vision with that promoted by ANVUR (National Agency for the Evaluation of the University System and Research), as well as with the taxonomies established at international level; the definition of a strategic vision for our University in the field of social responsibility, with the aim of achieving shared guidelines for future development; finally, the improvement of the communication strategies and channels adopted at Politecnico with respect to community engagement.

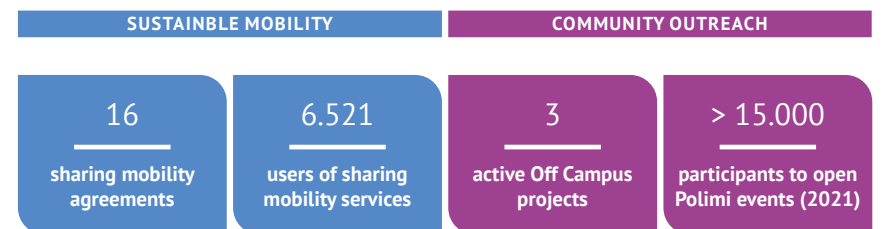
The findings of these analyses are collected in the dedicated publication Third mission and Public engagement – context and outlook at Politecnico di Milano, which presents public engagement as part of higher education institutions' mission within

a national and international context, maps Politecnico di Milano's engagement within four subsequent levels of community and public engagement in university activities and proposes steps forward to make Politecnico a truly "engaged" university.

### OFF CAMPUS SAN VITTORE

The year 2022 marks the expansion of the Polisocial Programme with the addition of a third Off Campus project located inside San Vittore prison in Milan; the aim of the project is to create within the prison a space for the university to promote actions and activities that can bring the city and the prison closer; the Off Campus space as a tool to build a new knowledge on the places of detention. The project involves three Politecnico di Milano Departments, as well as two partner Universities located in the city of Milan.

These initiatives promote the presence and involvement of our University within the city of Milan, together with the two already-established Off Campus spaces (San Siro and NOLO), whose activities have been consolidated and expanded in the last year by renewing and updating partnerships with the local administrative bodies. A fourth Off Campus project is also under development in the Corvetto neighbourhood and will be launched in the forthcoming months.





# SDG12 | RESPONSIBLE CONSUMPTION AND PRODUCTION



## Teaching



## Research



## Data and initiatives

### SUSTAINABILITY WORKING GROUP: MATERIALS REUSE AND WASTE MANAGEMENT

The Sustainability working group is tasked with the development of university initiatives towards the reduction of materials and resources becoming waste and the improvement of the university waste management system, thus strengthening circular thinking within the university. Four main lines of actions were identified:

- The standardization of recycling bins across campuses, in order to reduce confusion and improve the quality of recycling, as well as minimize the share of waste that is committed to the residual waste collection, losing valuable material that could otherwise be recovered and transformed into new products. Specific attention is given to the improvement of an innovative collection process in place at Politecnico since 2019, which focuses on scraps of materials used by Architecture and Design students in the creation of models and prototypes: such scraps are collected on a voluntary basis by students in dedicated bins, from

The complete set of programmes, actions and initiatives on SDG12, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg12>

which other students can recover them to employ in their projects.

- The testing of innovative waste collection projects: two pilot projects have been identified in collaboration with external bodies who offer new waste collection services. The first one aims to collect the ever-growing electric and electronic waste generated by individuals in their daily lives within and outside the university, and to extend the service to people living in the outside community. The second one addresses waste generated through smoking and aims at collecting cigarette butts to reduce littering, the soiling of non-specific waste bins and the recovery of the cigarette material into plastic materials that can be then reused.
- The development of an online platform and a management process to share physical resources among the various university departments and divisions (e.g. furniture, electric and electronic appliances), which are no longer useful for the owner but could otherwise be employed within the university, with the possibility of donating excess material to outside bodies such as schools and NGOs.
- The development of effective communication campaigns alongside the launch of the new projects, to promote the correct use, sharing and disposal of materials and resources within university campuses.



72%  
proportion of recycled waste (2021)

3152  
green Polimi-branded products sold in 2021

5  
innovative waste collection projects





# SD13

## CLIMATE ACTION



### Teaching



### Research



### Actions and initiatives

#### UPDATE OF CO2 MITIGATION PLAN

Politecnico di Milano's CO2 Mitigation Plan – approved at the start of 2019 by the academic bodies – sets out its formal commitment to reduce climate-changing emissions. The Plan was drawn up collectively by a number of bodies within the university and represents the solid contribution that the Politecnico – which for many years has been engaged in numerous institutional, educational, research and technological development initiatives – is making to the global effort to mitigate climate change, as well as another step toward developing a “Sustainable Campus”. The Plan sets the goal of reducing the university's CO2 emissions by 25% by 2025 and by 35% by 2030 (with respect to 2015 emission level) and is currently undergoing a review and revision process to update the CO2 emissions inventory, in order to monitor the university performance and set further ambitious climate action goals.

The complete set of programmes, actions and initiatives on SDG13, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg13>



# SDG14

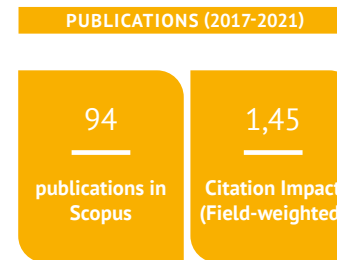
## LIFE BELOW WATER



### Teaching



### Research



### MARECO

MARECO is a research project developed by the Department of Electronics, Information and Bioengineering and funded under the PRIN 2020 research programme. It aims to forecast the effects of fishing pressure and climate change on marine biodiversity and ecosystems. The final purpose is to provide guidelines to adapt the strategic planning and management of Mediterranean ecosystems to preserve their biodiversity and the associated benefits to human societies.

### SEAWISE

SEAWISE is a research project carried out at the Department of Electronics, Information and Bioengineering and funded under the H2020 Research and Innovation Programme, addressing the challenge of increasing fisheries benefits while reducing impacts on the ecosystems. It focuses on the impact of fisheries management measures on Common Fisheries Policy, Marine Strategy Framework Directive, European Biodiversity Strategy and on the UN SDGs.

The complete set of programmes, actions and initiatives on SDG14, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg14>



# SDG15

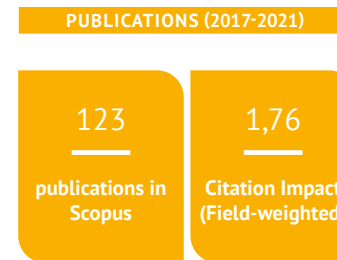
## LIFE ON LAND



### Teaching



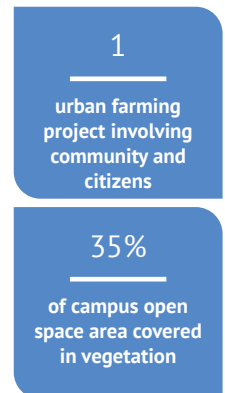
### Research



### Data and initiatives

#### VELUXLAB AND GREEN BUILDING IMPLEMENTATION

VELUXlab is a prototype for new buildings, equipped with experimental sensors, in which to test and develop innovative experiences on the themes of sustainability, light and natural ventilation. Built at the Campus Bovisa, it represents the first Italian building NZEB (Nearly Zero Energy Building) inserted in a university campus. The whole project was carried out with an eye to the environmental impact for the entire life cycle of the building, from construction to demolition. Following this pilot experience, Politecnico di Milano is introducing green building elements and experimental green walls in the construction of new buildings on campus.



The complete set of programmes, actions and initiatives on SDG15, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg15>





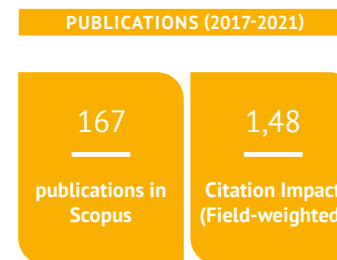
# SDG16 | PEACE, JUSTICE AND STRONG INSTITUTIONS



## Teaching



## Research



## Data and initiatives

### WELCOME INITIATIVES FOR UKRAINIAN STUDENTS, RESEARCHERS AND PROFESSORS

Politecnico di Milano, together with the other Italian universities, has put into action a number of initiatives to ensure that teaching and research activities carried out at Ukrainian institutions can be resumed locally or, where possible, transferred to Italy. Politecnico welcomes Ukrainian students, PhD candidates and researchers who wish to apply to our University, and to this purpose offers guidance on processes to enter the country and to be admitted into university. Almost 300 Ukrainian students have reached out for various requests through a dedicated channel and more than 40 have been supported in application processes; 12 of these students successfully enrolled in degree programmes offered by Politecnico. Polimi Graduate School of Management launched projects to support management schools in Ukraine, organizing courses and networking opportunities for students, consolidating a relationship to help ensure continuity of learning.

The complete set of programmes, actions and initiatives on SDG16, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg16>



# SDG17

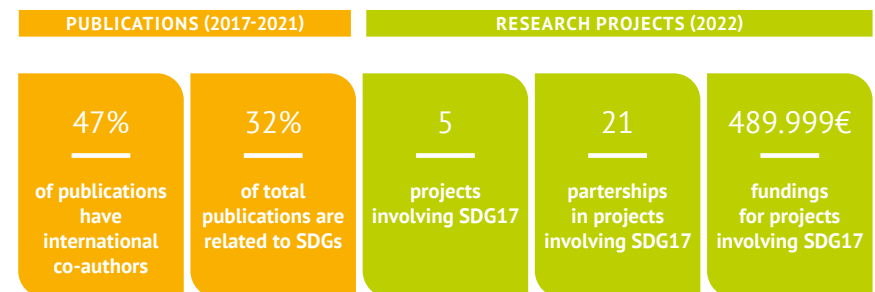
## PARTNERSHIPS FOR THE GOALS



### Teaching



### Research



### Data and initiatives

#### POLISOCIAL AWARD - 2021 AND 2022 EDITIONS

Polisocial is an annual competition to promote responsible research characterized by high social impact. It is entirely funded by 5xMILLE donations received by Politecnico di Milano (a share of personal income tax that taxpayers can elect to donate to entities carrying out socially relevant activities, typically research institutes and NGOs) and each edition revolves around a core theme. The programme has the aim of stimulating cooperation and inclusion processes in vulnerable contexts, developing innovative technologies, processes and services to reduce social inequalities, and consolidate research and co-design in collaboration with other university departments and/or external stakeholders.

In the 2021 edition “Equity and recovery”, emphasis was placed on the development of approaches, strategies and tools capable of reducing the social imbalances

The complete set of programmes, actions and initiatives on SDG17, as well as the extensive brochure published in SDGs@Polimi 2021, can be found at <https://www.polimi.it/sdg17>

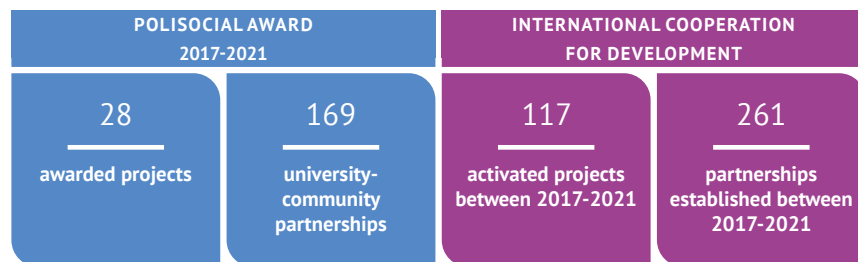
aggravated by the Covid-19 emergency, favouring access to resources and opportunities by vulnerable people, categories or communities, with a perspective of equity and sustainability. The five winning research projects address different vulnerable categories in diversified social and geographical contexts, working with more than 30 national and international partners from academia, civil society, institutions and private sector.

The 2022 edition “Local development and ecologic transition” promotes multidisciplinary research projects and partnerships aimed at generating, consolidating and supporting viable interventions for autonomous, just and sustainable local development, with particular reference to contexts in the global South. All proposals must promote projects based on solid partnerships of research, action and co-design, becoming agents of the broader contribution of Politecnico di Milano to SDG17.

### INTERNATIONAL COOPERATION FOR DEVELOPMENT

International cooperation projects to support local development in developing countries have been a fundamental element of Politecnico di Milano's research activity in the last decade, aiming at solving complex problems by involving professors and young researchers in synergy with local partners or stakeholders. Collaborations with universities in cooperating countries make up an important proportion of the university's network, as do its close relationships with public administrations in the context of technical assistance services or the sharing of best practices.

In 2021, the most recent cooperation experiences were collected and analysed in the second edition of the report “Stories of Cooperation at Polimi”, providing an up-to-date overview of the experiences and offering reflections for valorising and enhancing the long-term effectiveness and impact of our cooperation actions. Data were collected on more than 40 recent projects, highlighting the relevance of the African continent from the geographical point of view, and allowing for the identification of three main categories of initiatives in which to strengthen the effort of Politecnico in the coming years: Higher education and capacity building, Research for local development and Science diplomacy, which constitute the pillars of the “Politecnico approach” to international cooperation for development.





**THE 2022 SDGS@POLIMI REPORT HAS BEEN PREPARED BY A DEDICATED WORKING GROUP:**

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