POLITECNICO
DI MILANO

STRATEGIC PLAN 2023—2025

POLITECNICO
MILANO 1863

160

POLITECNICO DI MILANO WOULD LIKE TO THANK THE VICE RECTORS FOR HAVING CONTRIBUTED TO THE WRITING OF THIS REPORT, PROVIDING CONTENTS, IDEAS, AND CRITICAL REVIEWS.

A SPECIAL ACKNOWLEDGEMENT TO THE RECTOR'S DELEGATES, MEMBERS OF THE ACADEMIC SENATE, BOARD OF GOVERNORS, HEADS OF DEPARTMENT, DEANS, PROFESSORS, AND RESEARCHERS, AS WELL AS TO STUDENT REPRESENTATIVES AND ALUMNI, TOGETHER WITH THE GENERAL DIRECTOR AND TECHNICAL-ADMINISTRATIVE STAFF. THEIR INPUTS HAVE BEEN EXTREMELY VALUABLE TO THE PLAN.

WE WOULD ALSO LIKE TO THANK COMPANIES AND INSTITUTIONS SUPPORTING US IN DEFINING THE STRATEGIC LINES.

SUPERVISION
ISABELLA NOVA
UMBERTO TOLINO

EDITED BY
MONICA LANCINI

REVISION
PAOLA CARLUCCI
RITA BALDI
LUCA VINCENZI

GRAPHIC DESIGN BY
ANDREA MANCIARACINA

PHOTOS BY
RENATO AIMINIO, P. 21
DANIELA CANOSSI, P. 16
IDA CASTELNUOVO, P. 33
MARCO INTROINI, P. 6
LAB IMMAGINE POLIMI, P. 9
STUDIO FOTOGRAFICO ENRICO CANO, P. 10

PRINTED BY
LITOGÌ, MILANO, MAY 2023

Aiming for **sustainable and inclusive growth** that promotes talents, skills, and ambitions. Making a significant impact on the **social and cultural progress** of the country. Reinforcing an **ethical dimension** that is the foundation of our work.
This is our commitment.
This is the responsibility of a university capable of tackling major challenges by combining **scientific rigour** with **creativity, concreteness** with **vision**.
This is who we are: for 160 years, a benchmark for those who look into the future.

STRATEGIC PLAN 2023—2025

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PREFACE
Politecnico di Milano: identity, values, and aims

Founded in **1863**, today Politecnico di Milano is the largest scientific-technological university in Italy. A modern university where, both in teaching and research, quality and innovation are the foundations of a strong and lasting relationship with the social and productive system and with foreign institutions in the fields of architecture, design, and engineering. A reputation built in one hundred and sixty years with commitment and vision.

Today, defining the university's development strategy means facing a **highly competitive system**. It means challenging the policies adopted by the world's leading universities, which are more attractive to students and professors, and able to draw financial resources. It means creating links within international networks outlining new scenarios in Europe and worldwide.

In a **global context** where knowledge and technological innovation are strategic drivers, easiness of access to information, knowledge, and expertise can lead to distorting effects, both for those who govern technologies and for those who are left behind. Academia has the challenging but complex task of rethinking the boundaries of knowledge and its area of application. This is accompanied by the progressive detachment of the financial system from the **real economy**, together with serious consequences for Western countries, with the progressive weakening of welfare policies, and with a growing sense of distrust towards institutions. This domino effect requires universities to play an ethical role due to their responsibility towards new generations.

It is within this unstable environment, recovering from a pandemic and challenged by a conflict in the heart of Europe, that Politecnico has to distinguish itself as a **solid, recognisable and reliable reference point**, both in Italy and abroad, capable of guiding public and private decisions in the long term.

In this time of uncertainty, we find in our founding values the reasons to build a future characterised by **continuous, sustainable, and inclusive growth**. Responsibility, respect, integrity, professionalism, fairness, trust and transparency lead every choice we make and every action we take toward a future in which students and staff are our institution's real asset.

Donatella Sciuto
Rettrice

MISSION

A leading guide. A landmark. A solid, recognisable, and reliable reference point for sustainable development in Italy and Europe. This is how Politecnico di Milano intends to distinguish itself in the coming years: by its ability to tackle the main scientific and technological challenges according to an ethical dimension that interprets and declines the very concept of sustainability as a synonym for **equity, inclusion and shared growth**.

It is in the interplay between scientific rigour and creativity that our university aims to establish itself as an international community of people united in diversity. An attractive community for students and researchers from all over the world; dedicated to significantly contributing to social and cultural development.

COMMITMENT TO SUSTAINABLE GROWTH

Politecnico di Milano, among the biggest universities in Italy, firmly embraces the principles underlying sustainable growth, of which the Strategic Plan is a clear statement. In the fullest and deepest sense of the term, sustainability means "caring for, supporting and fostering" an integral development of individuals and the whole society, as well as the environment. It is an expression of increased awareness and maturity. It indicates a **unifying perspective** for the three academic domains: research, teaching and social responsibility. It offers opportunities for shared growth within our community: from inclusion to diversity, from an improved quality of life to participatory involvement in university activities.

↳ In terms of **TEACHING**, sustainability means educating our students to critically address major global challenges and local needs, offering them appropriate models and concrete tools in an environment that fosters **the right to education** and **equal opportunities**.

↳ In terms of **RESEARCH**, a sustainable approach requires understanding and adequately assessing the ethical implications of scientific progress and technological development. It extends disciplinary perspectives to humanities. It develops partnerships with top national and international research institutions. It guarantees independent, high-quality research with a focus on **talent development** and **the careers of young researchers**.

↳ In terms of **SOCIAL RESPONSIBILITY**, a sustainable proposal recognises and consolidates actions and projects in response to the needs of the city, the region, the country and in terms of international cooperation. Accordingly, we will draft the first **Strategic Sustainability Plan** to measure and validate the results and effectiveness of our choices.

VISION

The vision that shapes our future starts from the European Union's six core values: human dignity, freedom, democracy, equality, rule of law, respect for human rights. These are accompanied by the goals of the **New European Bauhaus** initiative, whose central focus is the value of beauty, not only as a stand-alone aesthetic quality but as a measure of the protection of ecosystems, of the harmonious relationship between places and people, between economic growth and the use of resources. Politecnico di Milano is a European university through and through, in its roots and ambitions.

According to this perspective, education is central to the university's strategic lines. In this direction, we will continue to experiment and apply **innovative teaching models**, characterised by hybrid and multidisciplinary forms, interactive processes, far from classroom-taught lectures, in a cosmopolitan environment open to **international exchange**.

Scientific research, which has always been an integral part and a driving force of the Politecnico, will open new opportunities with a focus on the **stable recruitment of young researchers**, also thanks to the collaboration with already existing European networks and new ones that we will create to consolidate our goals in talent development. Also, we must remind the many initiatives of the National Recovery and Resilience Plan (NRRP) that puts us in a strong position to open new innovation scenarios.

It will therefore be crucial to rethink **physical space** to create more flexible places for study, research, and exchange; places that are sustainable (from an environmental and energy point of view), welcoming (to promote well-being and safety), accessible and liveable. Places that extend the university within the city and the **local area**, both at a physical and cultural level, to face new events, starting with the **2026 Winter Olympics**.

POSITIONING

Politecnico di Milano adopts **multi-directional strategies according** to the context it refers to, starting from the Italian one. A context in which, in addition to increasing the number of graduates, there is still much to be done on the gender gap side, especially in STEM (Science Technology Engineering and Mathematics) subjects, and in strengthening high-level education.

The Italian university system is also characterised by low attractiveness, public funding notoriously below the OECD average, and the effects of a poorly rewarding resource distribution policy. These are all factors that have strongly steered Politecnico's research efforts towards **international funding** and joint initiatives with **industrial partners**. From large companies to **start-ups**, Politecnico is at the centre of a competitive and highly innovative ecosystem.

It is therefore not surprising that, despite the constraints imposed by still rather rigid disciplinary boundaries, Politecnico has distinguished itself for its ability to develop joint initiatives aimed at exploring **transdisciplinary topics** with partner universities in both Italy and overseas, paying close attention to the **quality of outgoing profiles**.

Not least, our university has invested, with great conviction, in social **responsibility**, cooperation, and educational development initiatives. Indeed, the university is now once again a point of reference for the growth of local communities. An extraordinary opportunity for social mobility and inclusion.

PEOPLE

1,169 professors - **334** donne and **55** international

458 researchers - **156** women and **42** international

745 postdocs - **293** women and **115** international

851 lecturers - **266** women and **184** international

1,600 PhD students - **525** women and **391** international

1,292 technical-administrative staff - **784** women

210,000 members of the Alumni community

467,600 m^2 for students, researchers, companies, citizens

RESEARCH

31,000 papers (2017-2022)

20 PhD courses

279 research labs

8 big infrastructures

67 Joint Research Platforms

€ **189** million from Horizon 2020, **34** ERC

€ **64** million from Horizon Europe, **17** ERC

€ **181** million from self funding (2022)

EDUCATION AND LEARNING

48,000 students - **8,200** international

24 Bachelor Degree Programmes - **1** with another university

44 Master's Degree Programmes - **4** with other universities

131 Specializing Masters and Postgraduate Programmes

100 MOOC (Massive Open Online Courses)

98% employability **1** year after graduation

SOCIAL RESPONSIBILITY

4 Off Campus with more than **70** events on local areas

56 projects funded by Polisocial Award - € **4.8** million funded by 5x1000 (2012-2022)

100 cooperation and development projects in **30** countries (2012-2022)

100,000 visitors/year for exhibitions and cultural events

122 start-ups in PoliHub - € **30** million fundings (2022)

SWOT ANALYSIS

The SWOT Analysis provides a picture of Politecnico's **strengths** and **weaknesses, opportunities** and **threats** regarding its positioning in the local, national and international context, based on the needs, expectations and goals expressed by a detailed analysis conducted among the relevant stakeholders.

The first distinguishing feature is certainly Politecnico di Milano's prestige, which, from the quality of education and research to economic soundness, places it on the shortlist of the twenty best universities in the world in its three domains of study: **10th in Architecture, 8th in Design and 18th in Engineering according to the QS World University Rankings 2023**. Yet, there are still many structural weaknesses: from the limited availability of spaces to the low degree of internationalisation of teaching staff and the limited ability to influence the country's development policies. In addition, it faces contingent threats, dictated by the critical geopolitical situation, the widespread distrust in institutions and the limited resources available compared to major international universities. These should not, however, limit our natural inclination to accept new challenges and opportunities.

This is why, to support the identification of the actions in this plan, the analysis of internal factors (resources and limitations) and external factors (favourable and unfavourable external circumstances) was conducted with particular attention to the following areas of strategic interest: **People, Education, Research, Social Responsibility**.

STRENGTHS

NATIONAL AND INTERNATIONAL REPUTATION

QUALITY OF EDUCATION AND RESEARCH AND RELATED INFRASTRUCTURES

POLITECNICO COMMUNITY'S SENSE OF BELONGING TO THE INSTITUTION

ECONOMIC AND FINANCIAL SOUNDNESS AND SELF-FINANCING CAPABILITY

RELATIONS WITH COMPANIES, COMMUNITY, INSTITUTIONS, AND OTHER UNIVERSITIES

OPPORTUNITIES

NETWORKS OF EXCELLENT UNIVERSITIES AT THE INTERNATIONAL LEVEL

LIFELONG LEARNING ACTIVITIES

CRITICAL EMERGING CHALLENGES

IMPORTANCE OF SUSTAINABLE DEVELOPMENT GOALS

AVAILABILITY OF EXTRA FUNDING (NRRP)

WEAKNESSES

INTERNATIONALISATION OF TEACHING STAFF

AVAILABILITY OF SPACES FOR TEACHING AND RESEARCH

ABILITY TO INTERACT WITH LARGE INTERNATIONAL COMPANIES ON RESEARCH TOPICS

ABILITY TO INFLUENCE THE COUNTRY'S DEVELOPMENT POLICIES

ABILITY TO GENERATE INNOVATIVE PATENTS AND SPIN-OFFS AND THEIR GROWTH

THREATS

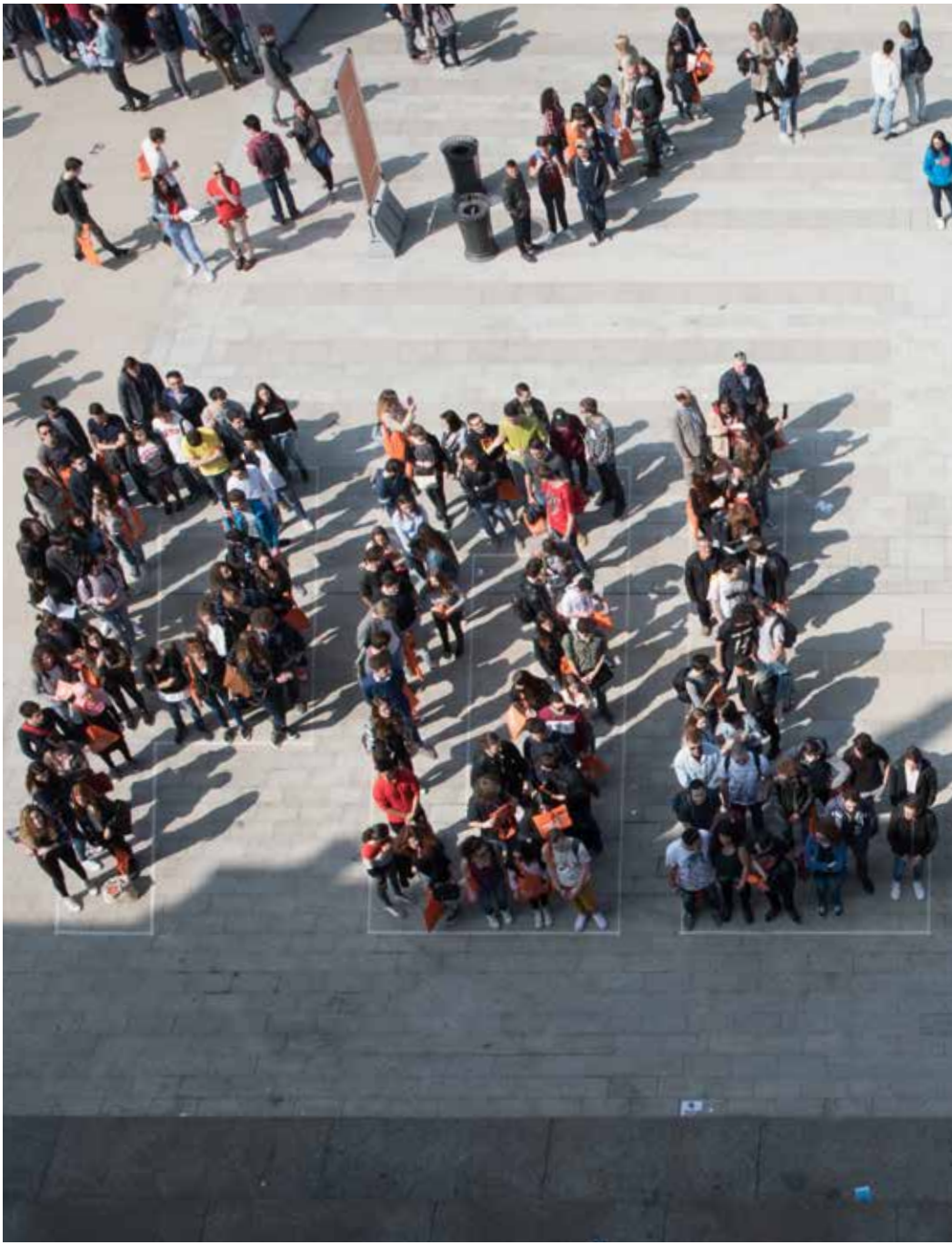
COMPLEXITY OF THE GLOBAL POLITICAL AND ECONOMIC SITUATION

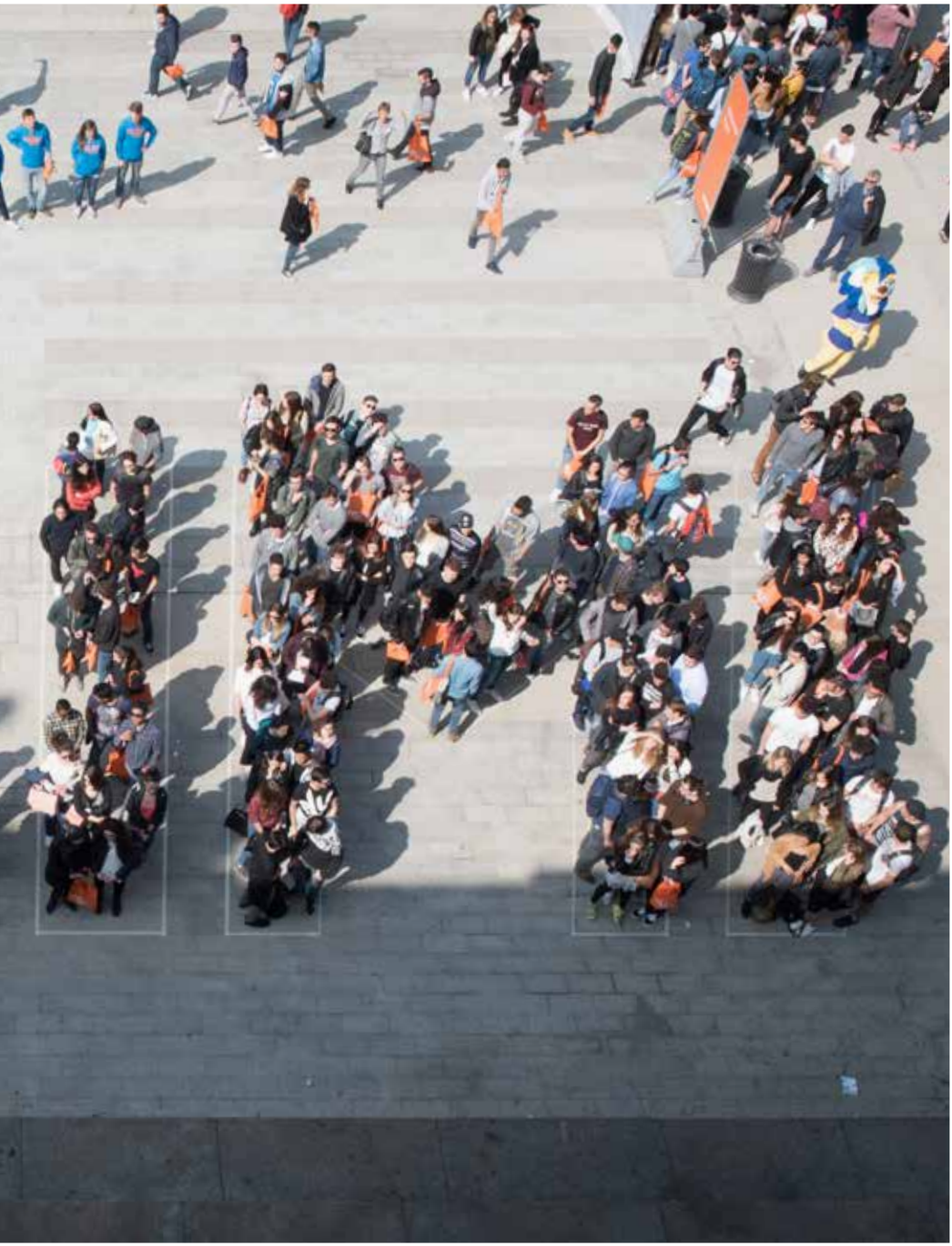
LIMITED RESOURCES IF COMPARED TO LEADING INTERNATIONAL UNIVERSITIES

WIDESPREAD SOCIETAL DISTRUST IN TECHNICAL-SCIENTIFIC SKILLS AND KNOWLEDGE

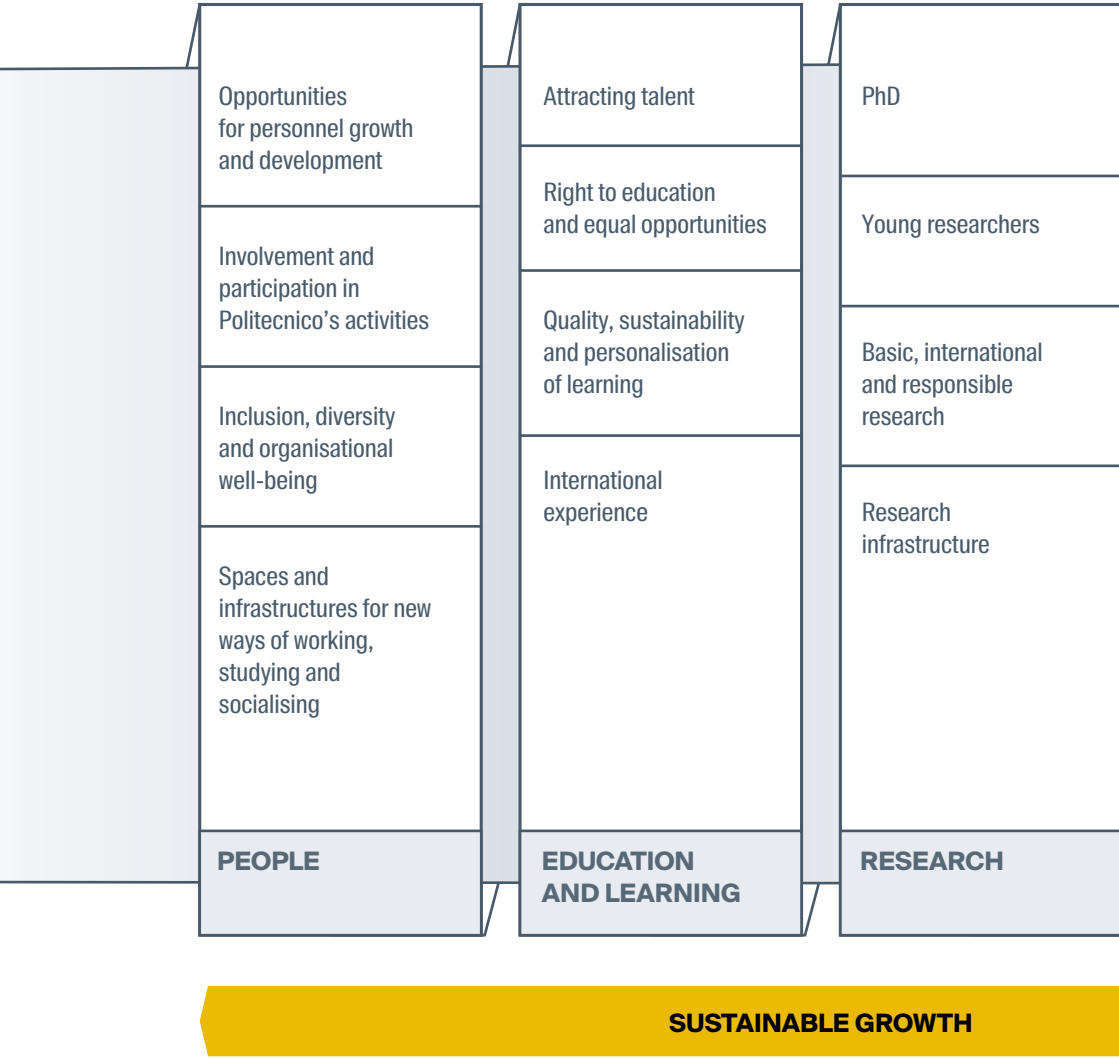
STRONG INTERNATIONAL UNIVERSITY COMPETITION

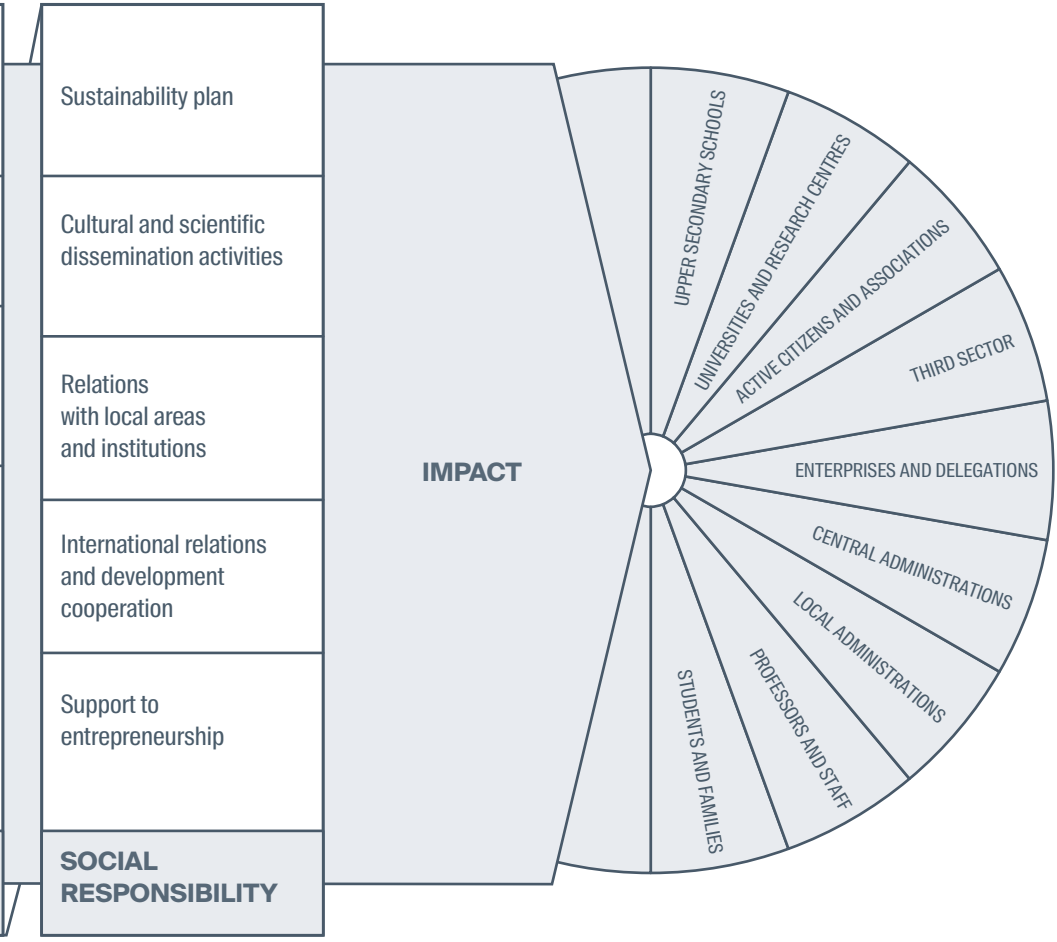
MANAGEMENT OF HUMAN RESOURCES RECRUITED AFTER NRRP





ACTION MAP


Opportunities for personnel growth and development
Involvement and participation in Politecnico's activities
Inclusion, diversity and organisational well-being
Spaces and infrastructures for new ways of working, studying and socialising
PEOPLE
Attracting talent
Right to education and equal opportunities
Quality, sustainability and personalisation of learning
International experience
EDUCATION AND LEARNING
PhD
Young researchers
Basic, international and responsible research
Research infrastructure
RESEARCH
SUSTAINABLE GROWTH


Sustainability plan
Cultural and scientific dissemination activities
Relations with local areas and institutions
International relations and development cooperation
Support to entrepreneurship
SOCIAL RESPONSIBILITY
IMPACT
UPPER SECONDARY SCHOOLS
UNIVERSITIES AND RESEARCH CENTRES
ACTIVE CITIZENS AND ASSOCIATIONS
THIRD SECTOR
ENTERPRISES AND DELEGATIONS
CENTRAL ADMINISTRATIONS
LOCAL ADMINISTRATIONS
PROFESSORS AND STAFF
STUDENTS AND FAMILIES

STRATEGIC GUIDELINES
PEOPLE

People are the beating heart of Politecnico di Milano. A diverse community of researchers, professors, technicians, administrators, and students from today and the past. A large community that feeds all our activities, from research to teaching, from innovation to social service. People's serenity and well-being, a sense of belonging to the institution and pride in being part of it are key conditions for everyone to express themselves to the fullest and they also define the quality of the work we carry out.

It is our responsibility **to attract the best national and international profiles**: students, scholars, researchers, and professionals with a high and proven cultural and scientific background. It is our duty to bring out talents, to indulge passions and aspirations, to allow everyone to demonstrate and enhance their potential for personal and professional growth, **to promote inclusion and diversity, and to accommodate**, when necessary, the small and great vulnerabilities that lie hidden in each of us.

For this, the Politecnico community must work in harmony with **flexible work and study spaces** that support personal needs, in line with new organisational and teaching processes. Contemporary spaces that meet the demands of the university population and citizens in terms of semantics, functionality and meaning.

PEOPLE: MAIN ACTIONS

OPPORTUNITIES FOR PERSONNEL GROWTH AND VALORIZATION

Sustainable growth that rewards scientific and cultural qualification and professionalism

Continuing education

INCLUSION, DIVERSITY AND ORGANISATIONAL WELL-BEING

Diversity and inclusion, with specific attention to gender equality

More inclusive work environments for people with disabilities or SLDs

Investments in well-being and corporate welfare

INVOLVEMENT AND PARTICIPATION IN POLITECNICO'S ACTIVITIES

New channels of discussion and internal communication

Participation of students and PhD students in Politecnico's life

SPACES AND INFRASTRUCTURES FOR NEW WAYS OF WORKING, STUDYING AND SOCIALISING

Working spaces redesigned to favour new ways of working

Study spaces to encourage the presence of students on campus

PEOPLE: KPIs

OPPORTUNITIES FOR PERSONNEL GROWTH AND VALORIZATION

150 New Researchers

75% of Professors and Staff trained in Innovative Skills

INVOLVEMENT AND PARTICIPATION IN THE POLITECNICO'S ACTIVITIES

+100% Part-time Activities for Undergraduate and Graduate Students

INCLUSION, DIVERSITY AND WELL-BEING AT WORK

40% of Female representation in new research recruits

Full campus accessibility

8,000 Subscriptions to Welfare Initiatives

SPACES AND INFRASTRUCTURES FOR NEW WAYS OF WORKING, STUDYING AND SOCIALISING

+50% Spaces equipped for study and group-work

+500 Study Spaces

+50,000 m^2 of green spaces, sports grounds, services, offices, laboratories

STRATEGIC GUIDELINES
EDUCATION AND LEARNING

Learning is not acquiring erudition but gaining education and developing awareness. Teaching is a responsibility towards new generations, the planet and society. Education is, first and foremost, a great opportunity for individual and collective growth that values merit and does not discriminate. This is why it is crucial to foster an environment that supports **the right to education, equal opportunities and social inclusion**.

Our university will further strive to attract and select the best students from all over the world as well as ensure that they receive **high-quality international education** through the acquisition of skills and tools that will enable them to smoothly move into the labour market.

For these reasons, the process of experimenting with innovative teaching methodologies, long initiated by our university, will be consolidated and implemented, defining new tools and **new organisational, orientation and pedagogical models**. Politecnico will strengthen personalised paths, new professional, multi- and inter-disciplinary profiles, continuing education, and lifelong learning.

EDUCATION AND LEARNING: MAIN ACTIONS

ATTRACTING TALENTS

Redesigning promotion policies

Revision of the selection criteria

QUALITY, SUSTAINABILITY AND PERSONALISATION OF LEARNING

Redefining the governance model of teaching

Consolidating innovation within educational paths

Strengthening lifelong learning

RIGHT TO EDUCATION AND EQUAL OPPORTUNITIES

Support and enhancement of diversity

Increased action and investment in favour of students

INTERNATIONAL EXPERIENCE

Increasing international exchange opportunities

Developing the European Technical University

Increasing attractiveness and professors' international mobility

EDUCATION AND LEARNING: KPIs

ATTRACTING TALENTS

25% of International Students

RIGHT TO STUDY AND EQUAL OPPORTUNITIES

30% Gender balanced Study Programmes

+25% Student Support and Scholarships

QUALITY, SUSTAINABILITY AND PERSONALISATION OF TRAINING

New Teaching Model

130 Corsi MOOC (Massive Open Online Courses)

INTERNATIONAL EXPERIENCE

2,500 Outgoing Students

Developing the European Technical University

+100% Courses with International Professors

STRATEGIC GUIDELINES
RESEARCH

Politecnico di Milano's research is developed within the boundaries dictated by the principles of scientific and ethical integrity and is aimed at having a positive impact on the major challenges of modern society. It serves the Sustainable Development Goals (SDGs), respecting the environment and the planet.

Therefore, our university intends to support and promote **excellence and frontier research**, increasing its competitiveness also in the context of European university alliances. Accordingly, measures aimed at the development of **PhD** programmes, the **support of young researchers** and the **selection of incoming profiles** are important. The development of special projects, capable of capturing and anticipating future trends in scientific research and technological development, is crucial.

The contribution to the measures and actions of the National Recovery and Resilience Plan (NRRP) is decisive, as is the active involvement of business partners in the field of applied research. **Joint projects with companies** and public institutions, as well as business initiatives and the development of research infrastructures are also pivotal thanks to the growth of the innovation district in the Bovisa area.

RESEARCH: MAIN ACTIONS

PHD

Interdisciplinary scholarships focused on the SDGs

Internationalisation

Administrative support

Training of supervisors

Young researchers' skills empowerment

YOUNG RESEARCHERS

Network of Talent Academies

Young researchers, industry and entrepreneurship

Individual projects by young researchers

BASIC, INTERNATIONAL AND RESPONSIBLE RESEARCH

Interdisciplinary round tables and discussions on SDGs

Criteria for research assessment and development of responsible research policies

Participation in European strategic research alliances and networks

Technology foresight

EXPERIMENTAL RESEARCH INFRASCTRUCTURES

Living Labs and Joint Research Platforms

Interdisciplinary labs and related staff training

University laboratories

RESEARCH: KPIs

PHD

2,000 PhD students

YOUNG RESEARCHERS

75 Funded Projects assigned to Young Researchers

BASIC, INTERNATIONAL AND RESPONSIBLE RESEARCH

22 ERC-funded Projects

€ **105** million from Horizon Europe

EXPERIMENTAL RESEARCH INFRASTRUCTURES

3 New Laboratories

STRATEGIC GUIDELINES
SOCIAL RESPONSIBILITY

Social responsibility includes actions carried out as a complement and in synergy with teaching and research in favour of social, cultural, environmental, and economic development. They activate a process of mutual exchange and enrichment with civil society.

Our university wants to design and manage these initiatives even more broadly and across the board: from **environmental sustainability** and climate change mitigation to **social innovation**; from supporting **entrepreneurship** to **science diplomacy**; from open cultural, educational, and scientific events to projects with a major impact on the city and the region.

Within this framework, Politecnico intends to make its commitment even more meaningful, systematic, and organic; planned, managed, and participated; differential and visible to get the involvement and awareness of an increasingly large audience.

SOCIAL RESPONSIBILITY: MAIN ACTIONS

SUSTAINABILITY PLAN

First Strategic Sustainability Plan

Extensive portfolio of sustainability projects for our campuses and their cities

RELATIONS WITH THE LOCAL AREAS AND INSTITUTIONS

Influential participation in institutional discussions

Polisocial, Off Campus and Living Lab as models for social innovation

New “Polimi4NonProfit” platform for mutual collaboration

SUPPORT FOR ENTREPRENEURSHIP

Bovisa Campus as a platform for innovation

Full cycle: from proof of concept to start-up to scale-up

Entrepreneurship training

CULTURAL AND SCIENTIFIC DISSEMINATION ACTIVITIES

Programming of communication initiatives for major architecture, design and engineering events

Extensive communication plan on sustainable development topics

Socio-cultural impact of the Technology Foresight Centre

INTERNATIONAL RELATIONS AND DEVELOPMENT COOPERATION

Scientific and cultural diplomacy in international relations

Development cooperation activities as the ideal engine of our university

SOCIAL RESPONSIBILITY : KPIs

SUSTAINABILITY PLAN

First Strategic Sustainability Plan

+4 MW Production from Photovoltaics

CULTURAL AND SCIENTIFIC DISSEMINATION ACTIVITIES

360,000 Participants to the Cultural Events programme

6,000 Press releases on SDGs

RELATIONS WITH THE TERRITORY AND INSTITUTIONS

Polimi4NonProfit platform

200 Organisations engaged by Off Campus

INTERNATIONAL RELATIONS AND DEVELOPMENT COOPERATION

12 Science Diplomacy Projects

SUPPORT FOR ENTREPRENEURSHIP

450 Supported start-ups

2,000 People trained in Entrepreneurship

STEERING BOARD

The picture outlined so far describes a complex and challenging project, based on a **shared approach and constant interaction** ranging from Departments to Schools, to Campuses; from students to Alumni; from companies to public administrations; from cultural and service sector institutions to major international universities.

That is why, along with the Rector and the Executive **Vice Rectors**, we have introduced the Vice Rectors, committed to advancing and exploring the key issues of this mandate, supported by fifty Delegates. A model that, by its very definition, aims to characterise a shared commitment, a broad vision, and an inclusive management.

RECTOR

Rector	Donatella Sciuto

VICE RECTORS

Strategic Plan	Isabella Nova
Communication and Cultural Events	Umberto Tolino
Education and Learning	Stefano Ronchi
Digital Infrastructures and Services	Gianpaolo Cugola
People Management and Organization	Cristina Masella
Institutional and Community Relations	Carolina Pacchi
International Affairs	Ilaria Valente
Research	Alberto Guadagnini
Talent Development	Paolo Biscari
Development and Enhancement of University Spaces	Emilio Faroldi
Sustainable Development and Impact on Society	Alessandro Perego
Technology Transfer and Corporate Relations	Daniele Rocchi

160 YEARS OF HISTORY
OF TECHNOLOGY AND CREATIVITY
OF DEDICATION AND COURAGE
OF INITIATIVE AND DRIVE.

SINCE 1863, POLITECNICO DI MILANO HAS BEEN
THRILL OF DISCOVERY
WONDER OF ACCOMPLISHMENT
ABILITY TO LOOK INTO THE FUTURE.

A PAST THAT EMBRACES INNOVATION AND BEAUTY.

A PRESENT THAT OPENS UP TO NEW CHALLENGES.

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