

Politecnico di Milano - HRS4R Implementation Report Activities and Achievements since 2015

Table of Contents

1. A Culture of Research, Responsibility, and Renewal
2. Politecnico di Milano: A Hub of Research and Innovation
3. An Organization Designed for Impact
4. A Collaborative Governance Model for HRS4R
5. From Planning to Practice: A Decade of Action
 - a. 2015–2016: Laying the Groundwork
 - b. 2017–2020: Consolidating and Expanding
 - c. 2020–2022: Integrating Strategy and Vision
6. Looking Ahead: The 2026–2028 Action Plan
7. Conclusion: A University That Grows with Its People

1. A Culture of Research, Responsibility, and Renewal

The journey of Politecnico di Milano toward the Human Resources Strategy for Researchers (HRS4R) began in 2014 with a clear ambition: to align the university's research environment with the European Charter for Researchers. This was not a superficial compliance effort—it was a deep, structural transformation that would involve every part of the university, from doctoral students to senior professors, from administrative staff to top-level governance.

2. Politecnico di Milano: A Hub of Research and Innovation

Politecnico di Milano is Italy's leading technical university and a global reference point in engineering, architecture, and design. With over 48,000 students and more than 4,000 academic and administrative staff, the university is a vibrant ecosystem of innovation. Its research achievements include:

- 339 externally funded research projects
- 9 ERC grants and 437 Horizon 2020 projects
- 119 spin-offs and 3.408 patents
- 97% graduate employment and 98% PhD employment

3. An Organization Designed for Impact

The university's governance is structured to ensure academic excellence and operational efficiency. It includes:

- **Academic Senate** – Oversees scientific and educational activities
- **Board of Governors** – Ensures strategic and financial sustainability
- **Board of Auditors** – Guarantees transparency and compliance
- **General Director** – Manages operations and resources
- **PhD School** – Coordinates all PhD-related activities
- **Departments** – Twelve departments drive research and teaching

Supporting this governance is a modernized **Central Administration**, composed of the following divisions, each playing a strategic role in implementing HRS4R objectives:

- **General Affairs and Strategic Support Division** – Coordinates institutional planning and supports strategic initiatives
- **Financial Management and Economics Division** – Ensures financial sustainability and supports research funding
- **Campus Life Division** – Enhances student and researcher wellbeing through services and facilities
- **Educational Division** – Oversees academic programs and doctoral education
- **Supplies & Facility Management Division** – Manages infrastructure and logistics
- **Public Engagement & Communication Division** – Promotes research visibility and societal impact
- **Research, Innovation and Corporate Relations Division** – Supports research development and partnerships
- **HR & Organizational Development Division** – Manages recruitment, training, and career development
- **ICT Services Division** – Provides digital tools and platforms for research and administration
- **Real Estate, Construction and Development Division** – Develops and maintains research and learning spaces

Each division has contributed to the implementation of HRS4R, ensuring that the strategy is embedded across all levels of the institution.

4. A Collaborative Governance Model for HRS4R

To guide the HRS4R process, Politecnico established a two-tier governance model:

- The **Steering Committee**, composed of institutional leaders, provides strategic oversight and ensures alignment with the university's broader vision.
- The **Working Group**, representing the research community—including PhD students, researchers, professors, and administrative staff—is supported by the Research Service and is responsible for operational implementation.

This model has enabled continuous dialogue, co-design of actions, and a shared sense of ownership across the university.

5. From Planning to Practice: A Decade of Action

Politecnico di Milano's commitment began in 2014 with the preparation of the first Gap Analysis and the definition of the 2015-2016 Action Plan, which initiated a systemic review of recruitment practices, training and support for researchers. In 2017 the "HR Excellence in Research" recognition was confirmed, and in 2022 the site assessment visit by experts from the European Commission took place, which led to the official renewal of the accreditation.

A. 2015-2016: Laying the Groundwork

The first Action Plan focused on establishing the foundations for a more supportive research environment. Key actions included:

- Launch of the **ERC Helpdesk**, which provided tailored support for ERC applicants
- Delivery of over **50 training courses** on funding and project management
- Update and publication of the **Code of Conduct** aligned with European principles
- Establishment of an **Open Data Policy Working Group** and adoption of an **anti-plagiarism tool** for PhD theses
- Revision of **career progression regulations**, made publicly accessible
- Provided strategic support for **international mobility**, particularly through MSCA networks
- Creation of **conflict resolution services** and **leadership training programs**
- Establishment of the **Ethical Committee** and a university-wide **transparency policy**
- Development of over **15 MOOCs (Massive Open Online Courses)** for **researchers**, covering both research dissemination and methodological skills
- Organization of **departmental meetings** and **public engagement events** to foster dialogue and visibility

Impact:

- ERC applications increased significantly: 2014–2016 saw 90+ submissions and 12 grants
- 15 additional PhD scholarships funded by the university
- Full implementation of the **IRIS research monitoring tool**
- Launch of the **POK platform** for MOOCs, with dedicated content for researchers

B. 2017–2020: Consolidating and Expanding

The second Action Plan built on the previous phase and introduced new strategic dimensions:

- Launch of the **META Project**, promoting interdisciplinary dialogue on ethics, sustainability, and social inclusion
- Creation of the **MSCA Helpdesk** and hosting of the first **MSCA Masterclass**
- Funding of **20 interdisciplinary PhD scholarships per year**
- Expansion of **doctoral training** in soft skills (ethics, impact writing, public speaking, etc.)
- Strengthening of **internal communication** through 40+ customized newsletters per year
- Development of **open access policies** and reorganization of the university website
- Enhanced **career services** for PhD students, including personalized support and placement reports
- Public engagement initiatives such as **ERC Week**, **Wind Tunnel Open Day**, and **lab inaugurations**

Impact:

- 70+ MSCA proposals submitted in 2018–2019, with 10+ grants and 15 Seal of Excellence recognitions
- META organized dozens of seminars and workshops on smart cities, ethics, and sustainability
- MOOCs expanded to include topics like industrial property, STEM careers, and risk reduction

→ 57 PhD students supported through career coaching and industry placement services

C. 2020–2022: Integrating Strategy and Vision

The third Action Plan was fully aligned with the university's Strategic Plan, structured around three pillars: **The Individual, Global Campus, and Impact**.

- Signed specific **PhD agreements** to clarify roles and responsibilities for doctoral candidates and supervisors.
- Increased the **number of funded PhD scholarships** to expand opportunities for early-stage researchers.
- Delivered dedicated Talent Development sessions to **enhance skills and career prospects for young researchers**.
- Reinforced MSCA Masterclasses to **increase competitive fellowship applications**.
- Improved **onboarding services** to facilitate the integration of international researchers.
- Developed **online portals to showcase European research projects** (FP7, H2020, Horizon Europe).
- Carried out **major infrastructure upgrades and new building** projects to improve research environments.
- Expanded **welfare programs** to support work-life balance, including extended parental leave, new sports facilities, and services for people with disabilities.
- Implemented **ongoing ethics and compliance training** and strengthened whistleblower protections.
- Established **monitoring tools and dashboards** to track progress and support data-driven decision-making.

Impact:

- Over 860 PhD agreements signed
- PhD grants increased from 486 (2019–20) to 776 (2023–24).
- More than 50 Talent Development sessions were delivered for early-stage researchers.

- 146 researchers participated in MSCA Masterclasses, resulting in 41 MSCA Postdoctoral Fellowships awarded.
- Onboarding services for international researchers have been significantly improved.
- Online portals launched to present FP7, Horizon 2020, and Horizon Europe project outcomes.
- Major infrastructure projects completed (Buildings 11b, 5, 20).
- Enhanced welfare services, including broader parental leave, new sports facilities, and better disability support.
- Continuous delivery of ethics and compliance training, with active whistleblower protections in place.
- Effective monitoring of actions and outcomes through dedicated dashboards.

6. Looking Ahead: The 2026–2028 Action Plan

Politecnico di Milano's new HRS4R Action Plan for 2026–2028 outlines a comprehensive set of initiatives across four strategic pillars, each designed to enhance the research environment through ethical practices, inclusive policies, and career development.

Pillar 1: Ethics, Integrity, Gender and Open Science

In the coming years, Politecnico aims to deepen its culture of responsible research by embedding ethical reflection and inclusivity into everyday academic life. A revised Code of Ethics will be adopted, accompanied by a new MOOC on academic integrity. The META program will continue to play a central role, offering at least 15 annual events—lectures, workshops, and courses—on the societal dimensions of science and technology.

Open Science will be strengthened through institutional guidelines and training on dual-use risks and research security. The university also plans to expand training on research integrity, including a dedicated PhD course using real anonymized cases.

Inclusivity remains a core value. The university will maintain its Gender Equality Certification and pursue gender balance in recruitment and governance. Initiatives such as the alias careers protocol and full campus accessibility will ensure that all members of the community feel respected and supported. The Polisocial Award will

continue to fund interdisciplinary research with high social impact, reinforcing the university's engagement with society.

Pillar 2: Researchers' Assessment, Recruitment and Career Progression

Politecnico is committed to making recruitment and evaluation processes more transparent, accessible, and aligned with European best practices. A new online portal will provide clear, regularly updated information on selection procedures. The university will also develop its first CoARA-aligned Action Plan to promote responsible research assessment.

A major recruitment campaign is underway, with the goal of hiring 120 new tenure-track researchers by 2026. This effort will prioritize international representation and gender balance. To support integration, the university will enhance welcoming services for international faculty and launch a new HRS4R and Talent Development platform to centralize career resources and HR strategies.

Pillar 3: Working Conditions and Wellbeing

Creating a supportive and stimulating research environment is a key priority. Politecnico plans to expand coworking spaces by 50%, develop over 50,000 m² of new green and sports areas, and double participation in campus sports activities. These efforts aim to foster collaboration, wellbeing, and a vibrant campus culture.

Housing support will be offered to 120 non-resident PhD candidates, while early-career researchers will benefit from expanded welfare services, including discounted access to wellbeing programs through the "Polimi People Care" initiative.

To strengthen research impact and external engagement, the university will open a Brussels office and establish a Technology Transfer Help Desk. A new organizational model will also be introduced to improve coordination between departments and research support services, streamlining access to funding and project management.

Pillar 4: Research Careers and Talent Development

Supporting researchers throughout their careers remains a cornerstone of the university's strategy. Politecnico will provide 30 months of visiting grants annually for early-career researchers and allocate €1.5 million in seed funding to support independent projects.

The Talent Development Program will be expanded to reach at least 40% of early-career researchers, offering personalized coaching and training. A structured onboarding program will help new faculty integrate into the academic community, while the “Am I an Innovator?” initiative will be extended to PhD candidates, bridging academia and industry.

Supervisor training will be expanded, with a target of 200 early-career researchers completing a new structured program focused on mentorship, research ethics, and academic leadership. A structured needs analysis will be conducted to gather feedback from young researchers and inform future services.

Finally, the university will promote interdisciplinary research aligned with the Sustainable Development Goals by awarding 40 PhD and 7 postdoc grants in collaboration with the Tech Europe Foundation. Ten new MOOCs on sustainability topics will also be developed, covering areas such as green skills, energy transition, and climate-resilient technologies.