STRATEGY 2023 - 2027

INCREASING INSTITUT MINES-TELECOM'S IMPACT FOR THE BENEFIT OF SOCIETY



Les Grandes Écoles des grands défis

nstitut Mines-Telecom is the numberone public group of engineering and management graduate schools in France.

Made up of eight schools, IMT Atlantique, IMT Mines Albi, IMT Mines Alès, IMT Nord Europe,Institut Mines-Telecom Business School, Mines Saint-Étienne, Telecom Paris, Telecom SudParis and two subsidiaries, EURECOM et InSIC, Institut Mines-Telecom coordinates and develops a rich ecosystem of partner schools, economic, academic and institutional partners, and key players in training, research and economic development.

> reated to respond to France's economic and industrial development needs since the 19th century, the Institut Mines-Telecom schools have accompanied all the country's industrial and communications revolutions.

> Through research and the training of engineers, managers and doctors, Institut Mines-Telecom is taking up the major industrial, digital, energy and environmental challenges in France, Europe and around the world.

> Today, we are imagining and creating a world that combines science, technology and economic development with respect for the planet and the people who live on it.



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CROSS-CUTTING STRATEGIC PRIORITIES

Make Institut Mines-Telecom a committed, visible and recognized member of the European ecosystem, with an international presence
Strengthen our commitment to the environmental transition at all levels and increase our impacts
Structure partnerships in France and Europe, at the local territory level, with companies, partner schools, research bodies and universities, to build high-performing ecosystems and create leverage
Make Institut Mines-Telecom more attractive for internal and external stakeholders
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OUR OBJECTIVE:

to increase Institut Mines-Telecom's impact for the benefit of society, in a world in transition, by drawing on the collective strength of the group and its ecosystem.



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to increase Institut Mines-Telecom's impact for the benefit of society, in a world in transition, by drawing on the collective strength of the group and its ecosystem.

An ambitious aim for our country, in keeping with our mission statement

Institut Mines-Telecom is the number-one public group of engineering and management graduate schools in France. Its mission statement was defined in close collaboration with all its stakeholders in 2021, and expresses the group's commitment in service of society: *"All together to imagine and build a sustainable future and to train its key stakeholders".*

In line with this identity, Institut Mines-Telecom's 2023 - 2027 strategy aims to help tackle the major industrial, technological, economic, environmental and societal challenges facing our country, and represents a key milestone in its development.

After the first two strategic plans focused on setting up governance and organizing an acculturation phase, followed by the first major cooperation efforts between the schools, it is now essential to define the strategy of Institut Mines-Telecom for the next five years in a more collective manner and in greater coordination with the schools. Through various forms of consultation and discussion, contributions were received from students, alumni, staff, public and private partners, members of the Management Board, School Boards and Scientific Advisory Board, and the supervising Ministry. The collegial process was steered by the General Management and the Board of Directors. It was organized around six work streams involving 70 staff members from the schools and the General Management, an extensive online consultation process to which 1,400 students, staff, alumni and partners responded, and the Mines-Telecom Days, attended by 120 people from the group's schools and affiliate schools in 2022. The 2023 - 2027 strategy therefore aims to continue the group's development, increase the collective efforts between schools to take up today's social and economic challenges, respond to the widespread need for training in scientific and technical skills, further knowledge, and support social and economic development.

At a time of increasing competition to recruit students and faculty members internationally, of structuring and acceleration in European higher education, and of consolidation and a search for critical size at national level, the Group's collective strength must be a competitive asset for IMT. It draws on the strength of each and every entity, both engineering schools and business school, as well as on enhanced cooperation between the schools. This collective strength is expressed through the group's three main functions:

- As a facilitator, by providing all the entities with expertise, skills and solutions that can be shared;
- As a catalyst, amplifier and accelerator of the schools' initiatives, experiments and innovations;
- As a driver of (internal and external) policy, joint and collective offerings and mobilization processes, able to provide representation and influence capacities in relations with public and economic policymakers.

By its collective strength and inter-school cooperation, and in line with its position under the Ministry of the Economy, Finance, and Industrial and Digital Sovereignty, Institut Mines-Telecom's objective is to be a committed, recognized member of the higher education and research environment, one that is visible and influential at the regional, national and European levels, to increase its societal and economic impact, and to place its innovation capabilities at the service of the common good.



New challenges to which IMT intends to rise

Today's context is characterized by the rapid evolution of certain major challenges.

New, often multidimensional expectations from our stakeholders - students, staff, companies and public bodies - to which we must respond by adapting and combining our activities and expertise.

More and more, we are seeing students searching for meaning in their future careers and in their course content. This is leading to an accelerated transformation of our educational system, as students take on greater responsibility in their training, with more personalized curricula and enhanced learning through practical experience.

All of our stakeholders wish to see greater diversity in the profiles of our students. Our response aims to make advances in social diversity and female representation, diversify curricula and skills, and increase our openness to the world and to Europe in particular.

The appeal of higher education grows each year and the usual recruitment pools of the Grandes Ecoles are no longer capable of responding alone to the French economy's growing needs for certain in-demand professions. Our range of courses aims to take these changes into account, to adapt our recruitments to new pathways.

Lastly, responsibility and impact with regards to the environmental transition are now key selection criteria of increasing importance for all our stakeholders. As an established player and source of technological, managerial and economic solutions, we are stepping up our action in this area, for all aspects of our missions.

A fast-changing world of higher education and research in France and Europe, in which Institut Mines-Telecom aims to be a key, influential and recognized player in its main missions.

In France, higher education and research have seen major legislative and structural changes in recent years: polarization of the higher education and research landscape, with a site-based, cooperative and resource-sharing approach; emergence of experimental public institutions; the 2021-2030 Research Programming Law, etc.

These transformations are an invitation for us to organize, steer and evaluate our capability to set ourselves apart by our national/regional network and the scope of our actions: building on our scale-up capacities, the Group's diversity of skills and local initiatives led by schools, while emphasizing the synergy between the Group's expertise and know-how and that of its ecosystem of partners.

A profound transformation of higher education and research is also underway at the European and international level, with the emergence of new pools of students, and alliance and development strategies being implemented beyond national borders. Initiatives and adaptations will be needed to seize the opportunities that are created, both in our modes of functioning and in the content and presentation of our range of courses.

Within the Institute, collectively or between the schools, a mode of functioning that serves our strategic objectives must be optimized, and a collective identity and strength consolidated and expressed.

To pursue and achieve our leadership objectives, the Institut Mines-Telecom 2023-2027 strategy includes initiatives to simplify our internal mode of functioning. The aim is to release the schools' collective potential in terms of knowledge, skills and resources. Our aim is to become more efficient and effective by drawing on our shared experience and practices, joint platforms of expertise, and the roll out of common processes and tools. These challenges can only be addressed with the mobilization and support of the Institute's staff, in a fulfilling, attractive work environment.

- Lastly, Institut Mines-Telecom's key missions training, research and innovation at the service of economic development - must be conducted in this fast-changing environment of disruptions and major transitions:
 - > The environmental transition, which aims to both limit climate change and its impacts, and preserve our ecosystems and resources, by fundamentally rethinking our systems of production and modes of functioning;
 - > The digital transition, characterized by the potential of data and new uses related to 5G/6G, automation, artificial intelligence, and in the future, Web3 and the Metaverse, as well as growing concerns around sovereignty, cybersecurity, personal data protection, and green, responsible technology;



> The industrial transition, which is at the intersection between technological developments and the impacts of the two aforementioned transitions, with a strong focus on giving new impetus and establishing sovereignty in digitization, decarbonization and energy sufficiency, eco-designed materials and processes, circular economy, etc.

As well as these three major transitions, there is:

- The transformation of the economic system, caused by the combined effect of the transitions, regulation, emerging geopolitical issues and risks, the growing role of ESG indicators (Environment, Social and Governance) and CSR standards (Corporate Social Responsibility);
- The transformation of lifelong learning processes, opening the door to more digital content and alternative means of recognizing skills other than traditional diplomas, etc.

We must also face a high degree of uncertainty due to geopolitical instability at the European and global level, exacerbating the urgency and importance of the aforementioned transitions, as well as the resources available and defense and security issues.

A response structured around precise thematic positioning, activity-level priorities and cross-cutting priorities

Institut Mines-Telecom aims to position itself as a leader and driver for the major transitions, thanks to its ability to tackle social issues, industrial networks and systems, technology and the environment in an interdisciplinary, structured and integrated way, for both scientific research and operational expertise that is useful for local and socio-economic ecosystems. To do so, we will develop our ability to support companies in their technological, digital and environmental transformations, through our range of initial training, lifelong training, partnership research and innovation, by mobilizing our faculty, students and school campuses in local areas.

We must contribute to creating relevant, high-impact responses to the development and competitiveness challenges in France and the European Union, by active involvement, either alone or in partnerships, in defining major priorities and executing important programs and projects.

This strategy is structured around:

- Overall thematic positioning at the IMT level, organized around strategic themes;
- Activity-level strategic priorities aiming to support the relevance, quality and impact of the offerings in each area;
- And cross-cutting strategic priorities for IMT to act as a driver at all levels.

The overall thematic positioning to guide our students and partners through the major transitions is based on the core skills of the schools and their interactions. It applies to all areas: training, research, innovation and economic development. It is structured around four major priorities that will guide our collective mobilization and the development of the skills of our teams in future years:

- > The responsible industry of the future;
- > Digital sovereignty and sufficiency;
- > Energy, circular economy and society;
- > Engineering for health and well-being.

Four strategic directions have been selected for training, research and economic development, along with five cross-cutting strategic priorities, to structure and mobilize all the power of Institut Mines-Telecom and use it as a driver.



* **ACTIVITY-LEVEL** STRATEGIC PRIORITIES

Strategic priority A1:

Adapt and transform our courses to respond to needs for growth and expectations of students and companies

Strategic priority A2:

Develop and network a range of vocational training and lifelong learning programs

Strategic priority A3:

Respond to the needs of strategic industrial sectors and public policy challenges through academic and technological research at IMT level

Strategic priority A4:

Play an active role in regional economic development policy and support companies in their transformation

5 "CROSS-CUTTING" STRATEGIC PRIORITIES

Strategic priority T1:

Make IMT a committed, visible and recognized member of the European ecosystem, with an international presence

Strategic priority T2:

Strengthen our commitment to the environmental transition at all levels and increase our impacts

Strategic priority T3:

Structure partnerships in France and Europe, at the local territory level, to build high-performance ecosystems and create leverage

Strategic priority T4: Make IMT more attractive for

internal and external stakeholders

Strategic priority T5:

Structure and consolidate collective modes of functioning to support the strategy

The 2023-2027 strategy is two-fold: **to pursue**, **consolidate and expand current advances and initiatives, as well as proposing disruptive changes**, **to open new paths to development and innovation**. The strategy includes the following proposals:

- Systematically including environmental transition challenges, both in the value delivered by our areas of activity and in our internal mode of functioning;
- Diversifying our student profiles, by opening up other recruitment pathways, complementary to preparatory classes, i.e. via qualifications-based admissions, international student recruitment, and research into broadening and diversifying post-high school admissions;
- Transforming teaching methods, to offer a revitalized, more attractive and higher-performing student experience, and support our growth aims;
- Significantly developing lifelong training programs;
- Mobilizing our research capabilities across all disciplines in service of the Institute's thematic positioning, in response to the needs of economic players and in anticipation of future markets;
- Strengthening the reputation and influence of Institut Mines-Telecom through stronger positioning at the European level, increased attractiveness, a formalized think-tank, etc.

Institut Mines-Telecom's OVERALL THEMATIC POSITIONING





Institut Mines-Telecom's **OVERALL THEMATIC POSITIONING**

Four strategic themes for increased leverage and impact

At the heart of the three transitions - industrial, digital and environmental - and their multiple interactions, at the service of society and its necessary transformations, the overall positioning of Institut Mines-Telecom is focused on and structured around four strategic themes:

- The responsible industry of the future
- Digital sovereignty and sufficiency;
- Energy, circular economy and society;
- Engineering for health and well-being.

These themes cover the interactions between the three transitions in terms of pervasive technology, digital and resource sufficiency, frugal practices, and environmental impacts replacing social issues as the priority in a changing society.

This overall positioning strengthens the continuum between Institut Mines-Telecom's three missions, i.e. training, research and economic development:

- It supports cross-fertilization between research and training for project-based pedagogical content in direct relation to societal challenges and in connection with socioeconomic stakeholders;
- It strengthens the training and economic development dynamic in order to deploy the new skills needed for the careers of the future and train the talents for the society of tomorrow, in a context where it is estimated that 80% of the jobs in 2050 do not currently exist or will have undergone a profound transformation;
- It supports synergy between research and economic development, which is the true historic signature of the "schools of industry and telecommunications".

They have been recognized with two Carnot Institute accreditations for placing collaborative and contract research at the heart of their strategy, from upstream to downstream, in service of industrial sectors and for the benefit of companies' competitiveness and innovations.

This overall positioning also stimulates **Institut Mines-Telecom's unique ability to develop interdisciplinary and systemic approaches, at the interfaces between these themes:**

- By valuing the hybridization of skills and expertise in the historic sectors for Telecom schools (network infrastructure, data and services) and Mines schools (resources, energy, economy and the environment), in service of the necessary digital and environmental transformations for socio-economic stakeholders;
- By offering solutions that cover a wide range of the value chain for increasingly complex systems;
- By highlighting transversal key ideas around data and AI, risk and resilience, and the co-evolution of society and technologies.

Lastly, this overall positioning at the institution level makes it possible to achieve **a structured and operational critical mass at different levels:**

- Regional, thanks to the anchoring of schools in their local area and their core contributions, especially to major projects in Regional Plans for Economic Development, Innovation and Internationalization (SRDEII);
- ▶ **National**, through the group's coordinated leverage, particularly to respond to major projects in the France Relance and France 2030 programs;
- **European**, through existing partnerships (especially the Franco-German Academy) or future collaborations, to respond to the challenges of European industrial,



digital and energy sovereignty, and contribute to creating the European higher education and research ecosystem.

This strategy in service of France's reindustrialization and its positioning within Europe, as a facilitator, catalyst, unifier and leader in turn, is therefore aimed at:

- Anticipating technological leaps;
- Supporting the incubation of industrial start-ups in Deeptech and accelerating their development;
- Contributing to local economic development;
- Creating an ecosystem of trust and innovation.

The institution can capitalize on the multiple cuttingedge skills that drive the activities in its schools. The strategy identifies a select number of clear, visible priority focuses for each strategic theme.

This structure is the result of a collegial process to:

- Analyze issues and challenges, as well as contextual elements structuring and framing the current situation;
- Identify discipline-specific and interdisciplinary key ideas and connections to be reinforced, as well as achievements in terms of major projects, platforms and chairs at the institution level;
- Define the targets and objectives at the Institut Mines-Telecom level, in accordance with French and European priorities set out in the France Relance and France 2030 programs, major European directives and the Horizon Europe program.

Figure 1 outlines the structure of Institut Mines-Telecom's overall thematic positioning.

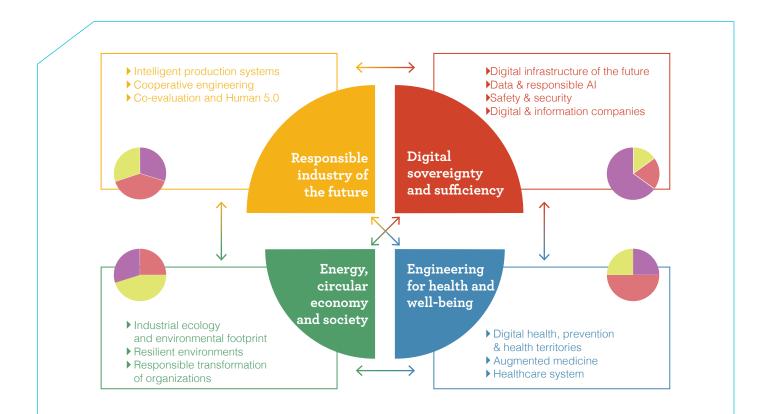


Figure 1: Diagram of Institut Mines-Telecom's overall positioning

- > 4 strategic themes: Responsible industry of the future; Digital sovereignty and sufficiency; Energy, circular economy and society; Engineering for health and well-being; and their interactions
- > 3 or 4 priority focuses structuring each theme
- > 3 transversal approaches:
- The datasphere and ethics

Risks and remediation

The co-evolution of society and technology

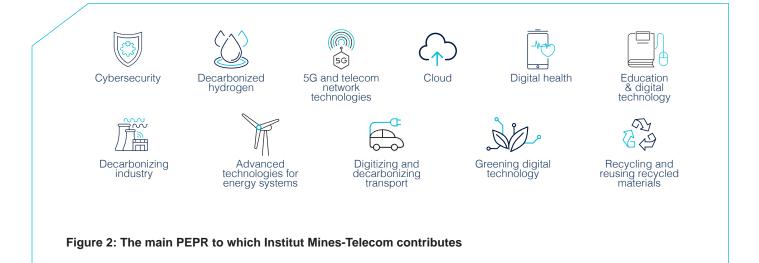


Themes structured around major focuses in the France 2030 policy and European orientations

The policy at Institut Mines-Telecom level identifies a select number of unifying, clear and visible priority focuses for each strategic theme in connection with French and European priorities set out in the France Relance and France 2030 programs, major European directives and the Horizon Europe program.

This means that Institut Mines-Telecom's strategic positioning is consistent with France Relance for **a more environmentally-friendly, competitive and solidarity-oriented France.**

As part of national acceleration strategies and an approach targeting priority sectors, markets and technologies, Institut Mines-Telecom is mobilizing in a coordinated way to contribute to new research instruments upstream, via Priority Research Programs and Equipment (PEPR - Figure 2), Projects of Common European Interest (IPCEI), various calls for research projects, and calls for projects relating to skills and professions of the future, pre-maturation/maturation projects and start-up acceleration.



Out of the ten France 2030 objectives to understand, live and produce better, three resonate powerfully with Institut Mines-Telecom's overall positioning: the energy sector for a decarbonized, resilient France; transport of the future; the health sector.

Lastly, the major European priorities and Horizon Europe program are key frameworks, especially in the area of digital technology, to which our priority focuses will contribute significantly.

The responsible industry of the future: three major focuses for reindustrialization

The French General Directorate for Enterprises defines the **industry of the future** as "the set of transformations of production systems introduced by new technologies" while Bpifrance describes it as a "revolution in organization and managerial practices following the integration of new technologies". Institut Mines-Telecom is working to bring these visions together, capitalizing on its skills in technology, social sciences and humanities, and drawing on its broad network of socioeconomic stakeholders.

Institut Mines-Telecom's goals are therefore to:

 Take action at the heart of industry, at the local and national levels;

> Address questions related to digitizing production, industrial ecology and the information enterprise that are central to the industry of the future.

The three focuses for industrial production, network equipment and service infrastructure are:

- Intelligent production systems: the convergence between materials, energy and information flows, with a focus on distribution and recovery of lowcarbon energy, advanced materials and additive manufacturing, and information, steering and control systems;
- Cooperative engineering with a focus on digital and supply chain continuity, design (modeling, simulation, optimization), safety and resilience (predictive maintenance, risks, security) and eco-design;
- Co-evolution and Human 5.0 aiming to consider the reciprocal actions and interactions of humans and their technological environment, by tackling cognition issues in terms of augmented skills, as well as knowledge, sensory systems (augmented operator, cobotics, VR/AR, digital twins), associated human factors, and human contributions in terms of intelligence, meaning and creativity for efficient and complex systems.

Digital sovereignty and sufficiency: four major focuses for establishing independence

"Our national sovereignty depends on our ability to establish our digital sovereignty, and European sovereignty also depends on our ability to establish our digital sovereignty technologically, financially and industrially" (Bruno Lemaire).

"The European Union must organize the digital world for the next twenty years" (Thierry Breton).

For digital sovereignty and sufficiency, IMT's goals are to contribute to the convergence of communication and information infrastructure, as well as to the emergence of a global and transversal datasphere that combines issues relating to value creation and decision support systems with scientific, technological, systems and competitiveness expertise, to guarantee French and European sovereignty and tackle the challenges of reducing our environmental and energy-related impact.

The four strategic focuses are:

- Digital infrastructure of the future: 5G/6G and beyond, virtual and cooperative infrastructure, architectures and orchestration, Cloud, IoT;
- Responsible data and AI: sovereign data spaces; AI, regulation, and data trust; cyberphysics for gathering data; learning and decision-making systems;
- Security: cybersecurity from end to end, orchestration of security services, security policy, attacks, resilience, digital identities;
- Digital and information enterprises: digital twins; performance and innovation; open cooperative companies (blockchain, automated transactions, creation of data commons, contribution economy); frugality.

Energy, circular economy and society: three major focuses to accelerate the environmental transition

Regarding **the theme of Energy, circular economy and society**, Institut Mines-Telecom is capitalizing on its contributions to the Sustainable Development Goals in its activities of training, research and economic development, which mainly relate to SDGs 7 (clean and affordable energy), 9 (industry, innovation and infrastructure), 11 (sustainable cities and communities) and 12 (responsible consumption and production).



The institution's aims are therefore to:

- Contribute from a systemic perspective to accelerating the environmental transition and creating social, economic and environmental value, by increasing its contributions to SDG 12;
- Take an active role in creating productive, responsible and resilient ecosystems, in order to "do enough and better with less";
- Develop a holistic approach to contribute more effectively to SDG 13 on climate action.

The three strategic focuses below therefore aim to cover and structure aspects of industrial ecology, economics of performance, use and functionality, and management of environments:

- Industrial ecology and environmental footprint (local and global): decarbonized energy, eco-design of products and processes, impact measurement and lifecycle analysis;
- Resilience and protection of environments: recycling and reuse, new resources, risk management and remediation, environmental quality;
- Responsible transformation of companies: responsible innovation and frugality, digitization of organizations and sufficiency.

Engineering for health and well-being: three major focuses for 5P medicine (Personalization, Prevention, Participation, Proof, Prediction

On the theme of **engineering for health and well-being**, the goals are to:

- Contribute to the transition from curative medicine to a (more) preventive model of medicine;
- Help create a digital health ecosystem.

The three strategic focuses for "5P medicine" are:

- Digital health in service of prevention and health territories: health and lifestyle data collection and processing, data spaces and health data ethics, autonomy and quality of life solutions;
- Augmented medicine: workstations for health professionals, augmented surgical facilities; measurement, analysis and diagnostic technology and medical procedure assistance; processes and galenic technology; medical devices (biomechanics imaging systems, prostheses and orthopedics);
- Transformation of the health system: hospital and healthcare pathways, digital twins & optimizing the health system; human factors; health and urban life with the impact of the environment, air quality, nutrition, etc.; economics and policy relating to health, sovereignty and ethics.



ACTIVITY-LEVEL STRATEGIC PRIORITIES





ACTIVITY-LEVEL STRATEGIC PRIORITIES

PRIORITY A1: Adapt and transform our courses to respond to needs for growth and expectations of students and companies

Faced with rising demand for engineers (25% increase in engineering jobs in industry by 2030 according to the most recent France Stratégie report) and higher expectations from our stakeholders, it currently seems necessary for Institut Mines-Telecom to further diversify its recruitment sources, beyond the main pool of students, i.e. Grandes Ecoles preparatory classes. There are multiple options for this diversification, aiming to both respond to the country's needs and increase student diversity in terms of gender, social origin, geographic location, disability, educational background (double specialization high school diploma-holders, candidates returning to university for a career change, etc.) To respond to the skills shortage, IMT is also expanding its range of courses at the Master's level (Specialized Master's, "international" Master's, etc.), based on its areas of leadership and in a coordinated way.

As part of this strategic exercise, IMT's aim is also to build harmonized and interoperable training architectures between schools, in order to be able to create joint pedagogical activities that support inter-school mobility for students: harmonizing calendars, defining shareable skill blocks and associated evaluation frameworks, and proposing inter-school teaching activities and events during specific day- or week-long events, focused on our schools' specialized or multi-disciplinary subjects.

The student experience and student engagement will be at the heart of the training transformation plan for the 2023-2037 period. Improvements in this area will mainly be through accelerating uses of digital technology and adapted teaching methods, supporting skills development and student fulfillment for the transition to professional and civil life. Pathways will need to be more adaptable, through the use of learning analytics. Students and faculty will be highly encouraged, motivated and supported to engage with producing pedagogical innovations.

A skills-based approach will be used in all curricula. This will make it possible to develop reference certification documents and build a range of courses that complements the current range of diplomas.

In this way, three main lines of action will structure IMT's strategic work in the area of training, for the next five years.

Diversify recruitment flows, by increasing the diversity of profiles through broader recruitment (candidates admitted based on previous qualifications, international students, etc.) and creating new courses.

Action A1.1

To respond to the predicted growth in the need for engineers and managers (+25% by 2030), Institut Mines-Telecom must rise to the challenge of increasing student numbers. It must also respond to the reform of University Bachelor of Technology degrees (BUT) for the apprentice sector, and the diversification of undergraduate student profiles and changes in their expectations, in a context of negative demographic changes. Diversifying recruitment flows beyond the core preparatory class pool should also represent a response to the demand from companies and society for openness, diversity and inclusion. In concrete terms, it is a guestion of operating multiple drivers: as well as increasing the flow of candidates admitted on previous qualifications (AST) and international students, options for new courses (run solely by IMT or in partnership) must be investigated: MS, international Master's, dual degrees, apprenticeships and post-gualification pathways, post-high school recruitment. Increasing flows from these pathways will require an appropriate range of courses to be created, including courses in English.



In 2027, we will have achieved our goals if...

- Our recruitment efforts have led to an increase in the number of graduates, while enhancing the quality of their profiles;
- The flow of AST recruitments has increased and the number of dual degree and Specialized Master's students has grown;
- Following specific research, careful sourcing of students from partner undergraduate courses contributes to cohorts for the school's various courses. These flows are particularly aimed at our apprenticeship pathways;
- We have incorporated additional groups by implementing initiatives around gender, social and regional diversity, disability, double specialization high school diploma-holders (e.g. biology/physics);
- The number of English options has significantly increased for engineering and management courses;
- An adapted range of programs for international students (engineering, international Master's, PhDs, Bachelor's degrees after specific research or in partnership) that is cohesive, aligned with IMT themes and sometimes shared between schools, has been developed;
- The range of international programs in French and English has been promoted collectively by Institut Mines-Telecom and is now well-known.

Action A1.2

Harmonize training architectures and digital environments to facilitate inter-school activity and mobility and improve efficiency.

The challenge of diversifying sources of recruitment involves the need to adapt curricula, while maintaining the quality of the degrees that are delivered. Institut Mines-Telecom schools have been able to consolidate their practices of experience-sharing and collaborating in the area of training. However, in a context where more and more training pathways are being offered, with different locations, teaching methods and durations, course architectures and digital environments must be designed using an approach based on sharing and interoperability to support student growth while maintaining quality.

Two sets of actions will be developed:

- 1- Create a harmonized training framework that is interoperable between schools to allow for joint teaching activities, develop course options that can be shared across the group, share a skills-based approach, facilitate inter-school mobility and welcome students from diverse origins;
- 2- Set up shared and interoperable digital environments to optimize the use of content and teaching methods and their modularity, in time leading to an increase in the number of students trained.

- Course frameworks and architectures have evolved to be more shareable and interoperable;
- A certain level of modularity has been introduced to facilitate admitting a diverse range of candidates (international, AST, dual degrees, etc.) and helping them succeed;
- A co-constructed, skills-based approach has been rolled out in IMT courses, based on a shared vision of engineering;
- Joint, inter-school teaching activities, on transversal subjects or topics specific to each school, have been developed;
- A unified interface (single-access platform) has been created and all the schools' pedagogical platforms have been made interoperable, structured around the Teaching Library;
- A comprehensive, shared, interoperable study and course IT system has been implemented, with specific settings for each school.



Action A1.3

Accelerate educational transformations.

The pandemic significantly accelerated the digital transformation of IMT schools, permanently changing the relationship to learning. With students' personal and educational environments being largely digitized, they demand active teaching methods fundamentally centered on skills acquisition. Furthermore, with the aim of promoting openness, inclusion and diversification of recruitment profiles, it is essential to recognize all experience and skills acquired by the student during their study journey. IMT will contribute to the development of students' talent and creativity by offering personalized, hybrid and joint course pathways, as well as a system of evaluation that includes their level of experience.

Institut Mines-Telecom aims to implement an ambitious program of educational transformations to diversify the modes of skills acquisition and increase quality and pedagogical impact, by improving the experience of students and faculty.

The objective is two-fold:

- Improve the student experience by accelerating use of digital technology and teaching methods adapted to skills evaluation, to strengthen their acquisition, and facilitate students' transition to professional and civil life; work on aligning training objectives, acquire skills and certifications;
- Accompany each school's pedagogical transformation, share expertise, recognize and value staff engaged in these transformations.

In 2027, we will have achieved our goals if...

- Student experience is recognized and valued, with the development of a portfolio of student skills;
- The evaluation system has evolved to allow better consideration of experience-based learning and contribute to the student portfolio;
- Schools' digital maturity is evaluated by a multi-site IMT digital transformation dashboard;
- A set of actions to value and recognize teaching activities has been defined and implemented;

- Means, resources and a teaching community have been organized and mobilized around support and sharing actions for inter-school educational transformation projects;
- Innovative training products from Institut Mines-Telecom are valued, both internally and by the international scientific and educational community.

PRIORITY A2: Develop and network a range of vocational training and lifelong learning programs

As part of its missions relating to training and support for economic development, Institut Mines-Telecom aims to develop a position as a significant and recognized body for vocational and lifelong training, in response to a growing need from companies, which was confirmed during the consultation undertaken in spring 2022. To respond to this demand, schools must be able to draw on the Institute's collective strength, to offer companies and professionals a range of courses that is both broad and adapted to specific factors in local areas, as well as certification and diploma course pathways, at a level that is appreciated and recognized.

The Institute aims to structure its range of professional and lifelong courses at the IMT level, with a universal skills-based approach, leading to certification (at different levels and with different scopes). This priority will be facilitated by pooling schools' abilities to offer content, certification, support, market analysis and promotion, allowing schools to operate lifelong training activities alone, in collaboration with each other or in partnership, in synergy with other training activities.

This priority is also a key driver to consolidate and reinforce Institut Mines-Telecom's local anchoring, which is already one of the major factors that makes us stand out at present.

Economic efficiency will draw on this synergy, in terms of content, with initial courses that will be reinforced by new teaching methods developed as part of priority 1.3.



PRIORITY A3: Respond to the needs of strategic industrial sectors and public policy challenges through academic and technological research at the Institut Mines-Telecom level

Institut Mines-Telecom aims to affirm its leadership and relevance in its four core themes: responsible industry of the future; digital sovereignty and sufficiency; energy, circular economy and society; health engineering and well-being. The objective of IMT research is to produce scientific, technological and systemic knowledge. What is unique about IMT is that it maintains a continuum between the three areas representing the scope of its research: (1) pushing the frontiers of knowledge forward, to guarantee research excellence and a cutting-edge or disruptive position (2) removing technological obstacles for operational solutions, (3) innovating and transferring new uses to be deployed in society.

This is how Institut Mines-Telecom structures its strategic actions for the 2023 - 2027 period, around objectives for resourcing, mobilization of research *"task forces"* and development of *"totemic subjects"*, etc.

Action A3.1

Affirm and reinforce our thematic positioning by developing *"totemic subjects"*, a signature of IMT research, and creating and coordinating *"task forces"* at the IMT level.

The concept of *"totemic"* research subjects was selected to facilitate a collective research strategy for Institut Mines-Telecom, and guide and structure the group's efforts around symbolic research topics that apply to different issues, expertise and sectors of activity.

These *"totemic subjects"* must have a dual external/ internal orientation, a dual structuring/visibility function, and a dual objective to boost our position in historic sectors and conquer new economic sectors.

Regarding their external visibility, they must be selected for their strong potential for development, progress and disruption, in response to corporate needs, in line with content and objectives from flagship programs such as France Relance and Horizon Europe, or in anticipation of market challenges and expectations. They will act as strong *"markers"* of IMT research, to provide legibility

Action A2

Create a range of lifelong learning courses designed and produced by schools in collaboration with each other, and implement support for initiatives around lifelong learning and "executive" programs at the group level, in service of the schools.

A group of the schools' lifelong learning managers will implement the structural elements for inter-school coordination, specifically shareable program outlines and models for cooperation, including the achievements of projects awarded funds by the IFPAI program (*"Engineering of Vocational Training and Innovative Support Services"*- PIA 3) and the CMA program (*"Skills and Professions of the Future"* - France 2030).

To create a system to support school activities, IMT will firstly undertake a analysis of the needs of schools and companies, and announce its target structure, mode of functioning and operational model, while supporting existing initiatives at schools, specifically as part of the Parcours project (lifelong learning for the Industry of the Future), which was awarded to Institut Mines-Telecom alongside a number of major industrial partners.

The support unit will carry out market research, assist with registering courses in the National Directory of Professional Certification (RNCP) and various certifications, defining and analyzing economic models, setting up partnerships, designing platforms, etc.

- IMT, in partnership with companies, is a benchmark in terms of anticipating changes in professions and skills;
- IMT is recognized for the relevance, quality and volume of its professional certifications, provided in lifelong learning format;
- Its level of activity is over €10 million, based on an "IMT Executive" brand;
- Accreditations obtained by one school are deployed by other schools.



and visibility. Regarding their internal exposure at IMT, they will be unifiers and creators of interdisciplinary synergy, by combining the "*Mines*" and "*Telecom*" skills to serve socioeconomic stakeholders.

These "totemic subjects" will benefit from agile governance, with a mobilization process via "task forces" for each project. By capitalizing on current structures or new inter-school laboratories, on the coordination of communities around the key themes, and the mobilization of the inter-school research "task forces", the totems will contribute to the expertise and skills needed to advance projects over time. These "task forces" can be temporarily reconfigured depending on a project's obstacles and needs. The missions contributing to the project and, over time, to the totem, will be recognized and valued at various levels of governance bodies (group, school, flagship themes, etc.).

Whether in parallel or in synergy, positioning in strategic sectors and major calls for projects from France 2030 or Horizon Europe will benefit from the same *"task force"* approach to create the critical mass and expertise to respond at the best level. Strategy and research projects will aim to combine approaches based on company needs and uses (known as *"market pull"*), with approaches based on technologies and innovations (known as *"techno push"*).

The aim for the *"totemic subjects"* is to strengthen positioning in historic sectors such as telecommunications, materials, energy and corporate organization, while providing opportunities to conquer new economic sectors, such as aerospace, oceans and agriculture.

The choice of themes and their construction as part of the strategy's implementation will contribute to major multi-disciplinary challenges for 2030, like circular engineering of territories, sovereign digital spaces, energy sovereignty, sustainable habitats, digital health and medicine, sustainable aviation, etc.

In 2027, we will have achieved our goals if...

"IMT Inside". IMT is seen as a benchmark – essential and recognized by sector leaders – for the industry of the future, energy and circular economy, engineering for health and well-being and digital sovereignty, thanks to its research production and ability to connect said research to its range of courses and economic development;

- IMT is leading and has successfully led projects with high socio-economic impact, significant consequences and high visibility;
- IMT is a reference partner for research partnerships and leader of the academic Carnot Institutes;
- Its range of courses independently generates increasing resources and additional margin.

Action A3.2

Spearhead a scientific and technological resourcing dynamic to strengthen research excellence and support the emergence of disruptive and risky research fields.

The resourcing program implemented at IMT level will aim to give the Institute a head start by creating the conditions for cutting-edge research, opening up new avenues for research and research platforms to international standards, defining policy to attract talent, and supporting exchanges for researchers with laboratories and other high-level research structures in Europe and internationally, or with companies. The resourcing program will inspire better practices and should be based on a sustainable economic model, including the resourcing dynamic for the Carnot Institutes sustained by research partnerships, as well as specific numerical objectives defined collectively and shared. It will receive financial resources that correspond to the targeted level of leverage. It will be shaped, steered and evaluated at regular intervals for continuous improvement purposes.





Coordination of inter-school communities of researchers on the key themes (created in the previous strategy), will continue to sustain the process of resourcing and development of joint scientific projects. This process will be accompanied by reflection around the "*IMT PhD*": quality of PhD supervision, salaries, choice of thesis topics, etc.

In general, scientific activity will be undertaken in line with an open science policy and the French National Plan for Open Science, with the aim of 100% of publications being open-access by 2030.

In 2027, we will have achieved our goals if...

- The number of high-impact international publications has increased significantly across the 2023 – 2027 period;
- Scientific publications in emerging areas of research are the subject of sessions in international conferences;
- IMT research platforms support the development of structural industrial projects, especially in Europe, and are promoted by them;
- The number of researchers recruited or hosted (PhD students, post-docs, research fellows, professors) is growing, in line with set objectives;
- The mobility & visiting professors policy, from and to high-level laboratories in Europe and around the world, is self-sufficient.

Action A3.3

Create and coordinate a Think Tank to anticipate societal evolutions around the IMT themes and in support of public policy.

By organizing and formalizing the work of faculty members in a Think Tank, IMT aims to make a larger contribution to analyzing the relationships between technology, society and the economy in the areas of our stakeholders' skills, provide insight into societal debates and public action, contribute to spreading science and technology while highlighting reflection around their uses and impacts, and sustain strategic reflection for IMT partners. It must naturally contribute to embodying the IMT vision and strategy in the long-term, and thereby increase IMT's influence and impact.

The Think Tank's mode of functioning will be based on IMT's internal skills, and those of stakeholders, in coordination with and with the support of the Fondation Mines-Telecom, as well as other think tanks or prospective initiatives in this area. It will interact with the work performed by the General Council for the Economy.

- Speaking opportunities for IMT faculty members have been organized and increased;
- IMT research is recognized as a neutral source of expertise and science, and is regularly sought to help plan and organize high-level scientific and societal events;
- IMT has increased its presence and participation in advisory bodies set up by the regions, French government and European Union.



PRIORITY A4: Play an active role in regional economic development policy and support companies in their digital and environmental transformation, with local areas benefiting from the involvement of nearby schools and access to all the IMT group's skills

IMT's innovation and economic development positioning, in connection with France 2030 and Horizon Europe, is aimed at the challenges of reindustrialization and resilience, in support of the competitiveness of companies and start-ups, as well as that of local territories, with a responsible innovation approach.

Through its various schools and their ecosystems, IMT has potential for rich and complementary value propositions, especially for the digital and environmental transformation of regional midcaps and innovative SMEs.

To this end, IMT creates synergy - nation-wide and in the local areas of its schools - between its training missions, especially for skills for the careers of the future, and its research missions, through internships, R&D contracts, custom POCs and technology transfer actions. The proposed support therefore covers a broad spectrum, from upstream to downstream: exploration, skills recommendations, proposal of solutions and collaborations.

This offering mobilizes students and faculty, vectors of innovation and transfer, as well as technical platforms, going beyond the network of the schools' innovation campuses.

In parallel, IMT is specifically targeting entrepreneurship and innovation actions, capitalizing on its network of 11 incubators to support start-up creation and development from ideation to maturation, and targeting development of its range of acceleration services, in connection with Bpifrance's industrial start-up plan and the European Innovation Agenda adopted by the European Commission.

The objective of the next five years is to make this wide variety of programs clear and visible, and to make it available to companies and local areas, in response to their needs and challenges, by drawing on the skills and experience of all the schools and the network of incubators.

To do so, IMT has defined two major actions for the 2023-2027 period.

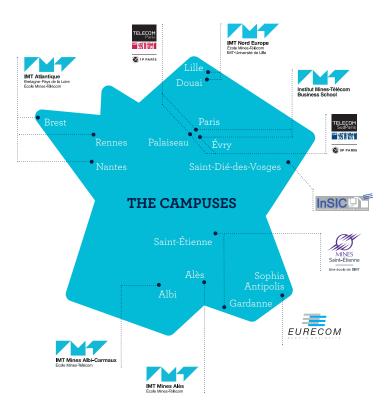
Action A4.1

Create the policy and overall offering for the IMT group and be the IMT Grandes Ecoles in the regions.

This action aims to reinforce IMT's position and differentiation for industrial sectors and local economic zones, thanks to a value proposition that can be mobilized for each school, amplified by the "group" effect. In connection with regional specialization policies, this network offering, coordinated by leaders in this area and business profiles at our schools, will be created based on an evaluation of the needs of local stakeholders and possible options for a response from each school or overall. A promotional, steering and shaping policy will be defined for the offering.

- Institut Mines-Telecom has actively contributed to national economic policies, specifically in the area of industrial sovereignty;
- Local policymakers, especially in cities and regions, identify the IMT schools as essential contributors to their innovation and economic development strategy;
- The economic model for accompanying companies at the IMT level is stable, tried and tested, thereby supporting the group's and school's development goals;
- The number of prospects and the transformation rate are increasing overall, at the IMT level and for each school;
- The network of partner schools provides a significant contribution to their local areas and contributes to the potential of the whole, with their thematic and local specificities.





Action A4.2

Support companies in their growth, particularly startups, technology SMEs and midcaps, by contributing to their innovation capacity and accompanying them in their digital and environmental transformations.

IMT can draw on a national network of incubators, which produces an average of 70 companies per year, and also offers options for accommodation, consulting, initiation, building contacts and access to funding. The goal for the next strategic period is to consolidate, develop and stabilize the incubator model, as well as to strengthen IMT's presence for companies in the postcreation and acceleration phase (start-ups specifically targeted), through a range of adapted services.

For other companies, especially technology SMEs and midcaps, IMT can support their aims regarding innovation, competitiveness and conquering markets, by recruiting young engineers, providing lifelong learning for their engineers and managers, technology transfer, and specific applied research. For this action, IMT is mobilizing its engineering school and business school. IMT will continue to mobilize SMEs and midcaps in submitting projects for the National Acceleration Strategies and Regional Plans for Economic Development.

- IMT is a recognized partner of Bpifrance and French Tech;
- IMT has created a partnership with a network of investors;
- IMT has been granted a significant number of structural innovation and economic development projects, at all geographic levels;
- IMT incubators have increased their capacity for accompanying start-ups in their growth, using a sustainable economic model;
- High-level, high-impact scale-ups and future European champions have originated from the IMT incubator and accelerator network, especially with Institute alumni and faculty at the helm;
- The schools work regionally with organizations of midcaps and SMEs and welcome innovative industrial companies onto their campuses.

CROSS-CUTTING STRATEGIC PRIORITIES





CROSS-CUTTING STRATEGIC PRIORITIES

PRIORITY T1: Make Institut Mines-Telecom a committed, visible and recognized member of the European ecosystem, with an international presence

Faced with the challenges of sovereignty and the opportunities now available at the European and international level, IMT aims to strengthen its abilities to influence and act beyond national borders, and take part in more alliances and large international projects, by drawing on European ecosystems and networks. European activities are relevant for all the IMT missions - training, research, innovation and support for economic development - and involve all stakeholders.

All major decisions made since the Bologna Process have impacted or are impacting IMT (French Bachelor's/ Master's/PhD system, European standards, certification and diplomas, student mobility, etc.).

While European higher education and research is in the consolidation phase, IMT must take advantage of Europe's stated goals and step into a leadership role in France, Europe and internationally for its various missions.

The success of this positioning will be based on:

- Strengthening our capacities for action and influence, recruiting specific resources, transforming our modes of functioning and our offerings, and IMT's contribution to one of the 60 European universities through to 2027;
- Implementing a coordination unit dedicated to European activities, with the priority mission being to help the Institute to win large-scale projects, by strengthening the relevance and coherence of our collective approach. It will also systematically identify the existing opportunities at each school, working to overcome any lacking skills at that point;

- Compliance with European standards, and data reliability and availability, to allow for the steering and reporting of various actions;
- The internationalization of entities, to facilitate the welcoming and follow-up of international students and staff, the implementation and use of an HR incentive framework for faculty mobility, and the development of overseas opportunities for our students (internships, gap years, etc.) and dual degrees overseas.

A major action has been identified, to allow IMT to position itself as a committed, visible and recognized member of the European ecosystem.

Action T1

Reinforce IMT's presence and influence in European ecosystems, as part of European research, training and innovation programs. Optimize the organization and mobilization of IMT entities' skills and capabilities to effectively address large-scale opportunities (at the collective level and in each school).

IMT can draw on the various initiatives already undertaken in this area in recent years (participation in Horizon 2020, Erasmus, ERC, creation of the Franco-German Alliance for the Industry of the Future in partnership with TUM in 2015, other research programs such as Eureka, TeraLab, public-private partnerships, etc.), by developing a strategic transversal vision and including all its activities, in service of its European influence.



The success of this action will be rely on:

- Strengthening our capacities for action and influence (especially from the Brussels office) on other major academic institutions, large European industrial actors and various working groups, etc.;
- > Recruiting specific resources;
- > Transforming our modes of functioning and our offerings (content - pedagogical, research, recruitment, etc. - available in English, facilitating student and faculty mobility, encouraging and training staff on the specificities of actions and projects at the European level, etc.).

To this end, IMT wishes to set up a coordination unit dedicated to European activities, with the priority mission being to help the Institute to win large-scale projects, by enhancing the relevance and coherence of our collective approach. It will also systematically identify the existing opportunities at each school, working to overcome any lacking skills at that point.

In 2027, we will have achieved our goals if...

- IMT belongs to an European university, selected and funded by the European Union, and contributes to major networks of European higher education institutions;
- An IMT "European" Master's has been submitted for each of the core themes;
- The number of European students and faculty has increased;
- IMT's own resources have increased, by mobilizing European funds (with an aim of €12 million of Horizon Europe turnover);
- We obtain 3-5 ERCs each year;
- International development (Africa, Latin America, Asia-Pacific) is linked in with European programs.

PRIORITY T2: Strengthen our commitment to the environmental transition at all levels and increase our impacts

The environmental transition is at the heart of society's current challenges. For several years, Institut Mines-Telecom has positioned itself on these issues and must keep moving forward with its practices and offerings, to remain a pioneer and true driver of the environmental, energy and related societal transition. Beyond the environmental impact of its activities, IMT must propose disruptive solutions through its courses, research and innovations. IMT aims to be a recognized contributor to territorial resilience, the energy transition and crisis planning, by supporting public and private bodies in decarbonizing industry and services, and developing the circular economy and frugal innovation.

Scaling up IMT's commitment at all levels to support the environmental transition will rely on two main lines of action.

Action T2.1

Make IMT an accelerator of the environmental transition through its three areas of activity.

It involves three major objectives:

- Systematically including skills for the environmental transition in all course curricula to equip future engineers and managers from the Institute;
- Increasing research with high impact on the challenges of the environmental transition;
- Accompanying local territories in terms of sustainability, circular economy and new economic models, by drawing on a network of engaged incubators.





In 2027, we will have achieved our goals if...

- All faculty have received training on the environmental transition in their domain, with tools, methods and programs for sharing experience between schools at their disposal;
- The schools have improved their results on the criteria of the Times Higher Education Impact ranking.

In terms of training:

- Skills for the environmental transition have been included in all curricula, in different ways (common core, electives, transversal projects, internships, challenges, etc.);
- A certificate program is offered to all students on the Teaching Library;
- A range of lifelong learning courses has been designed around our themes of expertise: circular economy, energy transition, re-orienting sectors, digital sufficiency, etc.

In terms of research:

- Awareness-raising actions have been implemented for faculty, investigating the sustainability potential in their field of research;
- The number of our publications tackling the topic of the environmental transition in an interdisciplinary way in our fields of expertise has significantly increased.

In terms of innovation and territorial actions;

- Our students and faculty are project leaders, in response to the demand from stakeholders in local areas;
- Our technology, innovations and start-ups with high positive-impact potential are valued.



Commit to a trajectory to reduce the environmental impacts of our activities.

Governance and management must create the conditions for powerful action to reduce our environmental impact, both collective and individual. IMT will be structured in a cooperative way and equipped to follow a trajectory of reducing environmental impacts at the group level and for each entity, based on shared objectives and principles in key areas (travel, energy renovation program, responsible purchasing, digital sufficiency, etc.) as well as by performing evaluations of our carbon footprints and environmental impacts.

In 2027, we will have achieved our goals if...

- Evaluation indicators have been defined and are monitored;
- All staff have been educated in this area and have upskilled at all levels to transform practices;
- The carbon footprint of IMT campuses and activities is measured and has been reduced by at least 25%, thanks to effective group policies: eco-friendly modes of transport, energy efficiency, responsible purchasing and digital sufficiency;
- Our campuses have become exemplary ecocampuses: respect for biodiversity, reduction in soil sealing, energy efficiency and waste management.

PRIORITY T3: Structuring French and European partnerships, at the local territory level, with companies, partner schools, research bodies and universities, to create high-performing ecosystems and leverage.

Institut Mines-Telecom aims to strengthen its position as a key player and its impact in strategic sectors of the French economy, as well as in local ecosystems (from France's regions to a Europe of the regions).



Action T_{3.1}

Develop partnerships with companies, in the aim of creating or joining strategic communities of interest, and therefore strengthen our ability to undertake structural R&D and training projects in France and Europe.

Its specific positioning - engineering and management courses, research partnerships, innovation - and its size are the foundation for multiple partnerships that we must develop and structure.

To do so, we must develop an ambitious partnership policy over the next five years, with socioeconomic stakeholders as well as academic and research bodies.

This policy's implementation and success will involve:

- Boosting the attractiveness of IMT and its schools for target partners, particularly through the group's collective strengths that make it stand out as a competitor, by drawing on a networked, structured, clear and dynamic value proposition;
- Defining the partnership strategy at the Institute level, offering a space for dialog and cooperation to the network of partner schools (affiliated or associate) to strengthen and enrich the implementation of IMT's major priorities for the benefit of all;
- Schools' ability to take part in overall IMT partnerships and develop their own or inter-school partnerships in their ecosystems;
- Developing strategic overall partnerships with economic stakeholders in terms of training, research and innovation.

This partnership policy must be operated at multiple levels, from the local to the European level. IMT must be able to draw on profiles that can create and coordinate significant partnership relationships, including on an international scale.

The culture of our faculty members must also display this openness to other members of our ecosystems, with suitable means and resources at their disposition, to invest in developing partnership relationships on largescale projects.

To achieve its partnership policy goal, the Institute has identified two major actions:

To do so, IMT will first specify the value proposition that it plans to contribute and the positions it wishes to occupy in stakeholder ecosystems, particularly around its leadership themes. An agile form of organization, capable of mobilizing specific resources and suitable funding, will be needed to create and participate in these communities of interest.

In 2027, we will have achieved our goals if...

- Our schools are organized to bid in more large-scale calls for projects, thanks to a solid and robust fabric of economic partnerships;
- We are present in key communities of interest in major strategic sectors that correspond to our priorities;
- We have developed industrial chairs at the group and school level that contribute to exploring strategic themes and spreading knowledge.
- Carnot M.I.N.E.S and Carnot TSM have consolidated their position as leaders of the academic Carnot Institutes.

Action T_{3.2}

Develop partnerships with research bodies, sites, and French and European universities, and strengthen our abilities for collective action with the circle of partner schools.

These partnerships must make it possible to undertake large-scale research projects and develop highperforming, competitive and high-level course curricula, including in lifelong learning format. IMT has already launched European-level partnerships and created the Franco-German Academy for the Industry of the Future, and it aims to accelerate efforts in this area over the next five years.



To this end, IMT's role is to design and offer adapted and adaptable frameworks and modes of cooperating to the schools.

IMT will contribute to the development of the Institut Polytechnique de Paris through its two schools Telecom Paris and Telecom SudParis, which themselves contribute greatly to the IP Paris student numbers and to implementing this overall strategy and initiatives involving other IMT schools and IP Paris.

Partnerships with national research bodies may be developed for areas in which IMT possesses significant strengths and experience, and therefore contributes to public policy.

Partner schools, particularly Mines Paris, are an integral part of our strategy for promoting and growing our potential for action, as well as of our support for maintaining and developing the spirit and practices of *"French engineering schools"*. Deepening our partnership with these schools must contribute to creating a large-scale community of values that drives joint actions, like the Carnot Telecom & Société Numérique¹ and Carnot M.I.N.E.S.², institutes, the Mines-Telecom and Mines-Ponts competitive entry exams and the apprentice recruitment platform.

- ¹ Telecom Paris, Telecom SudParis, IMT Atlantique, Institut Mines-Telecom Business School, Ecole Polytechnique, ENSTA, EURECOM, FEMTO, STRATE (school of design), Telecom Physique Strasbourg, Telecom Saint-Etienne
- ² IMT Mines Albi-Carmaux, IMT Mines Alès, IMT Nord Europe, IMT Atlantique, Mines Saint-Etienne, ENSTA, École Polytechnique, MINES Paris, SIGMA Clermont, CNRS, Armines

In 2027, we will have achieved our goals if...

- We have increased the number of cooperation agreements with national research bodies and highlevel European research and development institutes;
- We are, at the least, present and active, or even copilots or pilots of Priority Research Programs and Equipment (PEPR), particularly around our thematic positioning;
- We have increased the number of exchanges of faculty members with academic and research partners, for each school and at the group level, ensuring balance between outgoing and incoming flows.
- We have contributed to the development of Institut Polytechnique de Paris, and created joint IP Paris and IMT actions and projects.

The network of partner schools plus the group's schools represents a large, diverse and consolidated ensemble, source of initiatives and projects in engineering training, research, innovation and economic development.

PRIORITY T4: Increase IMT's attractiveness for internal and external stakeholders

In a context of high tension for recruitment, for both students and staff, the Institute's goal is to support and increase its attractiveness, by simultaneously activating different, complementary drivers, the first of which are HR policy, campus evolution and communication strategy.

Action T4.1

Strengthen the attractiveness policy for staff.

Attractive recruitment and staffing policy will be structured around multiple vectors: promoting existing programs and communication around our employer brand, various aspects of human resources policy, support during the initial phases for new teaching and research staff, etc.

In terms of policy and human resources, particular emphasis will be placed on:

- Recruitment, talent and careers management: levers to help strengthen IMT's attractiveness and increase staff loyalty include developing forward-looking skills management to adapt recruitments to changes in IMT professions, supporting induction and assumption of duties for newly recruited staff, identifying and developing talents through lifelong training and promotion drivers, proposing personalized career follow-up and support to allow them to develop their skills and responsibilities, facilitating and encouraging mobility between the group entities, and developing international recruitments as part of the scientific resourcing policy;
- Salary policy: IMT aims to make its salary policy more attractive for staff, over the next five years, particularly for professions in demand, by adapting the



management framework for contract staff and working to integrate into civil servant management policy drivers introduced by texts applying to scientific, cultural and professional public institutions (EPSCP), specifically the Research Programming Law (LPR);

Quality of life at work and social measures policy: IMT's attractiveness will also be increased by constantly improving quality of life at work and support for staff, with an approach based on joint commitments at the Group level: development of the offer of social measures and healthcare, development of remote working and measures for work-life balance, making internal collaboration smoother through efforts around collective modes of functioning and simplifying processes, and implementing training schemes and career support to contribute to each individual's performance and fulfillment in their role.

Support programs during the initial phase for new teaching and research staff will be investigated and proposed, in the form of *"welcome packages"* that combine, in different ways, financial support to launch new activities or support the project in question (recruitment of PhD students or assistants, purchasing equipment needed to perform research or training activities, etc.), temporary adaptation of professional objectives or working conditions, support for employees (and sometimes their family) to settle in (especially for foreign staff), etc.

These advances, as well as all of IMT's powerful assets, will be highlighted through a communication strategy aimed at recruitment pools and staff: meaning, values, commitment to the *"environmental transition"*, gender equality, working conditions, social measures, compensation, and tools to facilitate the development of activities and projects.

More generally, IMT's recruitment policy will aim to match role profiles with needs identified to support the development of the strategic priorities, for faculty as well as support staff: priority recruitments in areas of training and research in connection with thematic positioning, specific priorities for developing the range of courses, drivers for improving institutional management, especially for transversal and inter-school activities and projects. This priority will be highlighted in communication actions aimed at recruitment pools and staff, which will promote the position of candidates and employees at each entity in creating the overall IMT strategy.

In 2027, we will have achieved our goals if...

- Staff and candidates know IMT's strengths and are proud to work here, or would like to join us;
- IMT has obtained and implemented the HRS4R label representing diversity, openness and equal opportunity;
- Our welcome programs for incoming foreign faculty members and outgoing mobility programs for our faculty overseas are used regularly, with an increase in numbers;
- Quality of life at work at IMT is guaranteed in all entities, evaluated regularly by staff and attractive for candidates;
- All recruitments for high-stakes roles or largescale projects are accompanied by support for the assumption of duties in the form of a "package" adapted to the target objectives.

Action T4.2

Make schools high-performing and attractive physical and virtual campuses for staff and students, and meeting places open to companies and society.

In a context of national and international competition, IMT's attractiveness to students, staff and companies is conveyed by physical and virtual campuses that offer high-quality conditions for study, research and work.

This means offering highly welcoming and comfortable sites that can adapt to multiple uses, respond to demands from the various groups that use them and facilitate connections. We also need to transform campuses to better respect environmental requirements (energy efficiency, biodiversity, local consumption, etc.) and increase their resilience to climate change.

Lastly, it will be important to provide high-performing information and communication systems, and access, data-processing and cooperation tools that are shared or interoperable between the school campuses, to accelerate the digital transformation of all our activities. The emphasis will also be placed on strengthening the welcome and induction of international students and



staff, by increasing the number of resources available in English, implementing adapted procedures and training staff. This effort will also involve implementing inclusion measures (people with disabilities, diverse profiles, etc.).

Students will be involved in transforming their curricula and their own courses. They will contribute to making their campus a catalyst for relationships between local economic stakeholders and our faculty, through interschool and inter-company activities.

In line with their mission statement, IMT schools will ensure they are physical or virtual places that allow citizens to strengthen their connection to science, through activities to make science more mainstream and connect science and society, especially in dedicated spaces like FabLabs, media libraries, creative spaces, etc.

In 2027, we will have achieved our goals if...

- Our students appreciate the quality of our campuses and consider that the conditions are conducive to learning, enriching their social relations and engagement;
- Spaces have been adapted to new uses, optimized and reconfigured (energy efficiency, multi-purpose, etc.) through renovation and new design of old facilities;
- The IT system road map has been prioritized and deployed in line with set objectives (HR IT system, shared IT training, interoperable LMSs, etc.);
- A plan to internationalize the schools and their campuses has been implemented (signage, documentation, communication, training of staff, support, etc.);
- Actions for inclusion have been deployed (adapted tools and communication, infrastructure, training, support, etc.)
- Events, training and awareness-raising initiatives are regularly organized on campuses for new groups (jobseekers, middle and high-schoolers, etc.).

For internal stakeholders (students, staff, and to a certain extent alumni), a sense of belonging to IMT, which extends from and strengthens their sense of

Action T4.3

Develop IMT's reputation and attractiveness by cultivating the sense of belonging and attachment to the schools and group for stakeholders, and mobilizing them as ambassadors.

belonging to their school in a mutually beneficial way, is an essential driver of consolidation and accentuation of the group's collective strength. This collective sense of belonging will develop through everyone appropriating the group's potential and strength: IMT's mission statement, diversity of schools and their contributions, group scope, staff engagement, successful inter-school collaborations and collective achievements.

The attachment of external stakeholders (companies, local authorities, etc.) is firstly based on successful collaborations with schools; their interest in IMT will be increased by the possibility of having access to expanded course offerings, a source of initiative, solution-finding capabilities, and a vision of the evolution of society, technology, professions and skills, at the group level.

For all stakeholders, success stories that highlight our collective action and its achievements will be a source of motivation to spread the word about IMT's activities and increase its reputation and attractiveness.

To support internal and external stakeholders, an *"ambassador"* program will be implemented over the next five years. This program will be backed up by a communication strategy aiming to make everyone capable of presenting the IMT value *"promise"* (manifesto and points of difference).

Furthermore, a communication plan will be defined in support of IMT's strategic objectives. Communication on the group will support and enrich communication on the schools, and vice versa.

- Internal stakeholders have solid knowledge of the activity of the group's various components and present a common discourse. They are proud of what IMT does and want to share it;
- External stakeholders know IMT and its specificities and are comfortable talking about it;
- High-schoolers and students, as well as influential figures (teachers, etc.) know the IMT schools and their value promise.

PRIORITY T5: Structure and consolidate collective modes of functioning to support the strategy

The 2023-2027 strategy aims to strengthen collaborations within the group and increase its organizational and economic performance, to address the many development challenges posed by increasing its impact in service to society and the economy in an uncertain environment. IMT must therefore simplify and optimize its mode of functioning and establish a development policy based on high-performing and solid economic models.

Action T_{5.1}

Implement a common functioning framework aiming to simplify processes and optimize resource use, in service of the collective dynamic and in respect of the schools' diversity.

Institut Mines-Telecom is increasing its commitment to simplifying its mode of functioning and processes, based on shared principles, to liberate and encourage teams' initiatives and innovations. This priority will be developed as part of quality policy created at the IMT level and implemented in schools, and draw on process alignment and IT tools.

Particular attention will be paid to defining a transversal organizational structure, to facilitate administrative, financial and legal management of inter-entity activities and projects.

Using a collective performance approach, IMT will identify the domains and expertise in which use of an organizational structure that is shared (placing identified experts in a network), pooled (creation of service platforms) or outsourced (use of support providers) could increase performance and impact, and work towards professionalizing management in a broad sense across the institution. By optimizing resource mobilization, the new organizational structures implemented will free up additional flexibility, for the benefit of strategic issues. Pooled resources will be made available to the group and easy to mobilize for the schools, to support our strategic ambitions and commitment to successfully fulfilling our institution's missions.



The Institute will use program-specific road maps for each major field of management (HR, Finance, IT, etc.) to develop their professionalization and performance in service of the institution's missions, in line with the strategic priorities. To support the implementation of these set trajectories, the road map for IMT's IT systems, which aims to build a cohesive IT system at the group level, will be deployed with the goal of accelerating the digital transformation of our professions and deploying data policy, while promoting transversality and interoperability.

Lastly, formalizing a base of shared management rules will make it possible to structure objectives to make daily management practices more reliable, meet regulatory standards and create cohesiveness across the institution, while consolidating the responsibilities and operational efficiency of schools.

- Our transversal functioning processes are identified, simplified, formalized and steered;
- Networks of experts and service platforms are easy for schools to mobilize, to support and accelerate our strategic priorities;
- A plan to professionalize management players in a general sense, for operational departments and decision-makers alike, has been launched, with the goal of adapting support activities more in line with the pursuit of the strategic priorities.



Action T_{5.2}

Build shared economic models to develop and optimize resource use in service of the development of the schools and IMT.

The goals pursued as part of this line of action firstly require the development of in-depth, shared knowledge of the economic conditions and contexts in which activities are implemented by the institution's entities (analysis of the profit/expenses dynamic, joint analytical accounting, level of profit margins, break-even points, risks, etc.), to identify actionable drivers of improvement at the level of teams, departments or centers, schools and the group.

On this foundation, the institution will over time establish shared principles or rules at the IMT level: pricing policy (pricing for platforms, price ranges or minimum price for international Master's, thesis supervision, apprentice courses, etc.), principles for automatic debits from specific profits and allocation to activities, and modes of self-funding for school and group activities.

Economic models and related support for activities implemented in a pooled way, completely or in part, or backed by *"external"* structures will be defined: market positioning, sub-contracting, forecast profits and expenses, funding initial investments, use of the subsidiary IMT Transfert and related developments, partnership agreements for use of the brand, externalization, etc.

- When one or several IMT entities commit to a project, the associated economic model exists and ensures balance or a specific, non-economic performance, depending on the desired result;
- Principles for granting resources to activities and engagements of IMT entities and the group are defined and implemented across the board;
- Costs and pricing of IMT entity activities are identified as part of management checks performed across all group entities.

IMPLEMENTING the overall strategy



IMPLEMENTING the overall strategy

The 2023-2027 overall strategy described in this document will be implemented with contributions from all components of the group, which will coordinate the action.

Each school has a strategic plan covering the same period, in line with the overall strategy. At their own level, they will embody IMT's overall project, while adapting their action to their own characteristics and challenges (according to their history, identity, local area, ambition, assets, etc.) and developing collaborations with other schools.

The success of the overall strategy will be based on the engagement of teams from the various entities (schools and general management) in collective projects. In this way, each school will contribute to implementing different actions from the overall strategy; depending on the situation, they may act as a leader, contributor, or active user.

The lines of action described in the IMT strategy will be translated and specified in the form of action plans (operational goals and content, deadlines, distribution of roles, resources and timeline) that will be implemented in stages over the years and evolve according to priorities, mobilizable resources and opportunities. Specific funding processes will be organized combining budget grants, IMT strategic funds, school contributions and own resources.

In connection with the institution's governance bodies (Board of Directors; sector committees organized by "area"), specific governance (steering committees) for the strategic priorities and project teams for each line of action will be created to steer and facilitate the implementation of each strategic priority and related line of action. They will monitor progress, evaluate and assess results, and make or propose decisions to strengthen the performance and impact of actions.

The 2023-2027 Objectives and Performance Contract (COP) between the French government and IMT will be organized in line with the overall strategy. It will include a certain number of objectives that are priority for the government, often formulated as numerical indicators and expected achievements ("MILESTONES").



























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Consult the strategy on imt.fr