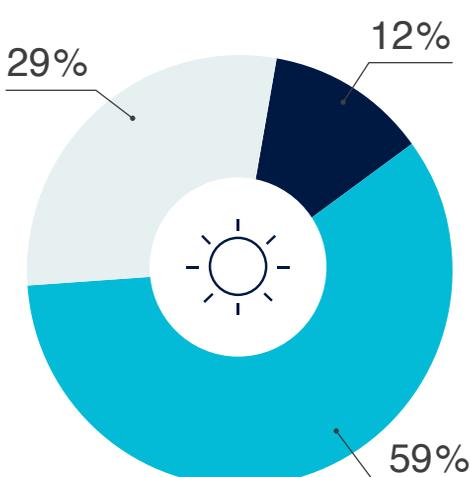


2021 BUSINESS PROSPECTS

59%

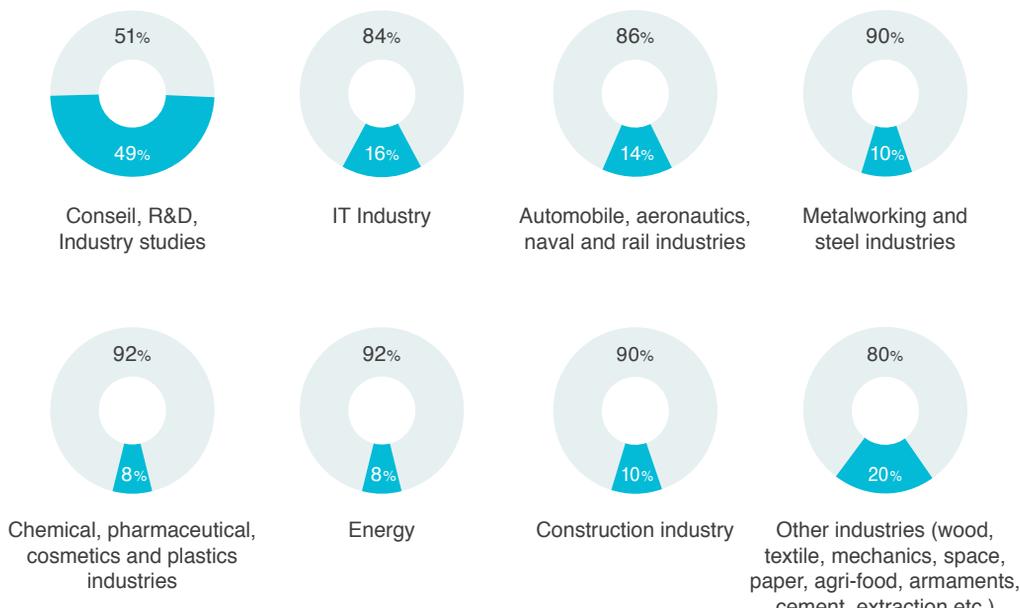
of companies have **positive** business prospects



Prospects

- Positive
- Neutral
- Negative

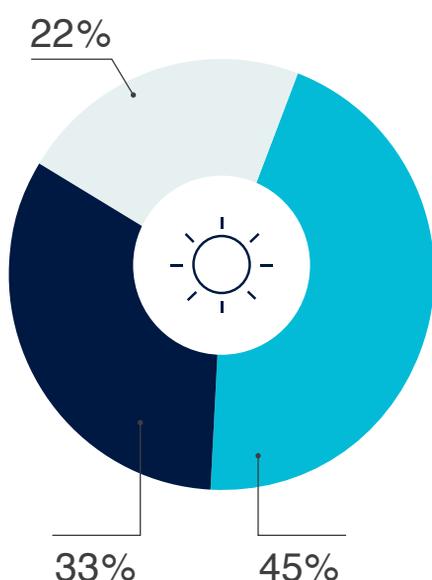
The main sectors involved



2021 RECRUITMENT PROSPECTS

33%

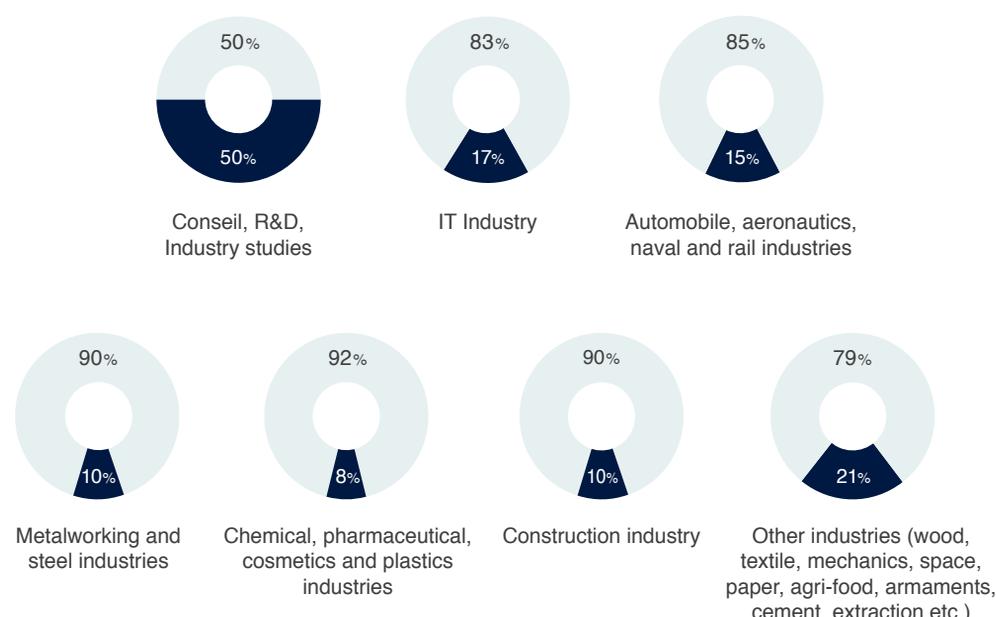
of companies have more positive **recruitment** prospects than in 2020



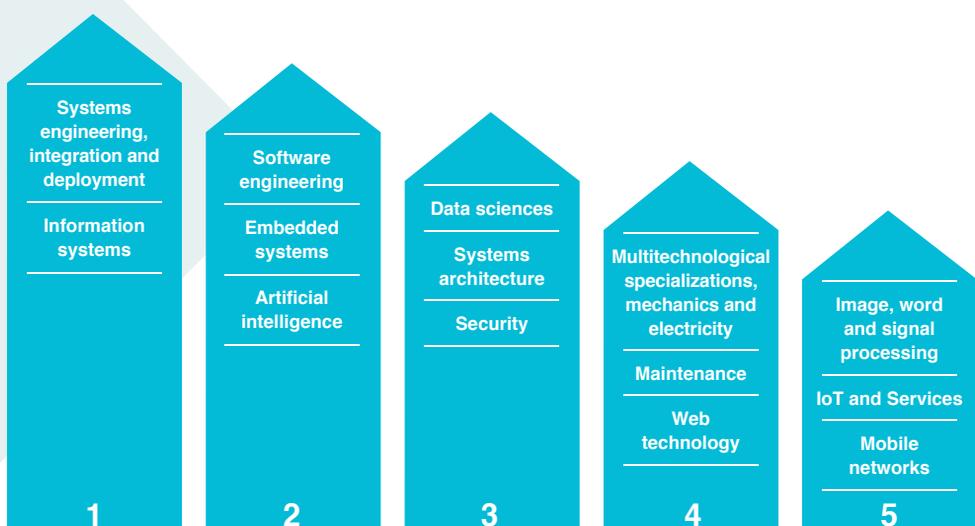
2020 Prospect

- Positive
- Neutral
- Negative

The main sectors involved



THE MOST IN-DEMAND SKILLS IN 2020



2021 BENCHMARKS

76%

of companies have incorporated the concept of the Industry of the Future into their activities

84%

of companies have integrated sustainable development to boost attractiveness

2021 INDUSTRY PROFESSION BAROMETER

ACTIVITY, RECRUITMENT AND KEY SKILLS

An exceptional barometer for an exceptional year



2021 INDUSTRY PROFESSION BAROMETER

Trends in the industry sector

Overview of 2021 forecasts

Institut Mines-Télécom, a public higher education and research institution, comprises 8 graduate schools and 2 subsidiary schools. Its activities in the fields of engineering sciences and digital technology, combined with a strong regional presence, places IMT at the intersection of the economic and academic spheres. Each year, IMT surveys the companies participating in its forums in order to collect information for its Business Tendency Barometer. The events of 2020 did not allow for face-to-face interviews. IMT therefore launched a unique online questionnaire dedicated to the digital and industrial sectors which was distributed by IMT and affiliated schools, and to which 85 companies responded. It has allowed IMT to identify the major trends in the ever-changing organization of work and the labor market. For the industry sector and its stakeholders (consulting firms and design offices), the panel represents various segments: automotive industry, naval and railway aeronautics, construction, metalwork/ironwork, chemical, pharmaceutical, cosmetics, plastics, and other industries.

Accelerating and sustained changes

Every crisis carries with it a paradox: it is a difficult situation but one that also generates new opportunities for changes and rebounds.

The current context allows industries to modernize and to launch new sectors. Through its recovery plan, the State wants to open new strategic sectors: hydrogen, space, battery, quantum computing, and 5G telecommunications. Calls for projects, aid for the modernization of small and medium-sized companies, and other efforts are all rising to the challenge. Industry has therefore become a pillar of recovery, with a twofold recovery plan: both regionally and nationally. The aim is to revitalize the local economic fabric while strengthening key sectors (aeronautics, automotive, etc.); the focus is to push industrial organizations upmarket. The Minister for the Economy, Finance and Recovery also wants to lay the foundations of the French economy for the next 25 years. In addition to this, there is the European plan to be carbon neutral by 2050.

Industry is interwoven with all sectors of activity

The health crisis has shown that industry is very present in regions, although sometimes not entirely visible. Its organizations are very heterogeneous and form a vast and complex ecosystem with important interactions with other sectors of activity. For example, the packaging industry is in good shape with the explosion of e-commerce, while the plastics/metalwork industry is in trouble with the slowdown in the aeronautics and automotive industries. Spending on household equipment has increased, thus having a positive impact on industry, which manufactures parts for carpentry, tools and parts for DIY and furniture. Target markets are different and there is not enough awareness of the impact that one sector can have on entire industries. In other words, the dynamic nature of the civil engineering sector, agriculture or the food industry depends on the growth curves of many manufacturers of equipment and spare parts. **“We must develop a more regional vision of industry, taking regional specificities into account. The Occitanie area is obviously associated with aeronautics, but it is not sufficiently known, for example, that nearly three quarters of the country’s pharmaceutical production and R&D sites are concentrated across only four of its regions (Île-de-France, Auvergne Rhône-Alpes, Centre-Val de Loire and Normandy).”** Fabien Boisbras, Head of the inter-industry observatory OPCO 2i.

Industry is a dynamic, ever-changing sector for young graduates

In 2021 industry offers many professional opportunities and optimum working conditions. The digital revolution that is transforming the structure of factories of the future, which now faces great technological challenge, as well as the arrival of new generations to compensate for recent retirements, is profoundly changing the configuration of this sector. With that in mind, a third of the panel’s respondents are looking to recruit more young engineers and managers, albeit in lower volumes than in 2020.

“The potential opportunities in the industry are still too unknown. It’s not just about jobs opening up to more diversity, but also about business takeover procedures. They make it possible to preserve know-how and keep industries in the region, yet they are insufficiently valued.”

A time of change and resilience

By modernizing their production tools and accelerating their digital and ecological transitions, companies can regain competitiveness and relocate. The shift to Industry 4.0 represents a real groundswell; for more than half of the panel, this has translated into concrete actions in their organization. With this in mind, recruitment plans focus on professions that can support or accelerate their transitions. Many sites were already operating using 4.0 processes (remote management, etc.), and the crisis has only accelerated the need to deploy on a wider scale.

“Today, the Industry of the Future is synonymous with new professions, but above all it represents professions that are transforming and introducing new skills, particularly digital ones. We must prevent any risk of employees dropping out of the workforce in the face of these changing skills.”

Target professions in 2021

Manufacturers must look to the long term to meet the major environmental and digital challenges. Pandemics are now integrated into the risks they face. The health crisis has shown that the life cycle of certain products or innovations may be only a few months. Almost half of the professionals surveyed revealed a dramatic increase in demand for design/R&D-related jobs. Jobs related to the design and development of software and networks as well as those in architecture and engineering are also highly sought after. The strategic dimension of data, a key building block in designing the next disruptive innovations, is becoming ever more important, and demand for big data is increasing. The more traditional production roles are strongly involved, alongside those of maintenance and the supply chain.

The most sought-after specialties

With the fast transition to Industry 4.0, the need for skills, including for companies already invested in the digital sector, are growing, particularly in response to immediate threats related to cybersecurity and to anticipate Big Data and IoT (Internet of Things). The amount of data generated is expected to quadruple by 2025. Thus, the professionals on the panel are particularly interested in profiles specialized in artificial intelligence, data science and embedded systems. They are also looking for engineers specialized in information systems as well as engineering, integration, and system deployment. Software engineering specialties also rank high in terms of applications.

Versatile profiles

The changes in industry towards all-digital technology are in turn generating profound changes in skills and qualifications. Tools are becoming digitalized and new skills must be unlocked.

“To my mind, the challenge for recruiters lies in identifying candidates with the ability to adapt to the digital sector. This know-how is crucial, so much so that it has become a hard skill. Digitalization of processes mobilizes new cognitive networks to interact with the machine.”

“Digital experts must also learn to handle them. The operator/manager relationship has to evolve. This remote and all-digital management can be complex.”

People are at the heart of tomorrow’s industries, with career opportunities at all levels, particularly for senior technicians or middle managers at Bachelor level, which the industry lacks. Professionals are searching for exceptional candidates who have both sharp technical skills and management abilities while showing qualities related to interpersonal skills. To develop and enrich one’s C.V., experience of more than six months abroad is a bonus for most employers. Industry seems to be less under pressure, with the exception of consulting, which is finding it more difficult to fill all its vacancies.

Sustainable development and Corporate Social Responsibility (CSR)

The industry of the future is not only a technical feat, but also involves integrating ecological, political, societal, and human dimensions. In this sense, the sector is moving with the times, which is perceived as a strong differentiating element and as an integral part of the employer brand. They are proactive and willing to listen; more than half of the companies surveyed state that the CSR dimension is intrinsic to all jobs and that young graduates must include it in their positioning. Only very few of them consider CSR as an externality.

Survey conducted by IMT Training Department among 49 companies, including partner companies of IMT schools (IMT Atlantique, IMT Lille Douai, IMT Mines Albi, IMT Mines Alès, Institut Mines-Télécom Business School, Mines Saint-Étienne, Télécom Paris, Télécom SudParis, EURECOM, InSIC)) or partner companies of its network of schools (ENSEIRB-MATMECA Bordeaux, TÉLÉCOM Physique Strasbourg, TÉLÉCOM Saint-Étienne, TÉLÉCOM Nancy, SIGMA, ESIGELEC, ENSG Nancy, ENSSAT, ENIB, ENSEIHT).