Observatoire des futurs
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Circular Economy & Industry in 2035

Employment

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1. Definitions

1.1. Defining the report topic

Under INSEE's accounting definition, employment encompasses all persons, employees and self-employed workers alike, engaged in a productive activity[1]. This concept of employment reflects a socioeconomic perspective on the labor market, encompassing the balance between supply and demand, challenges arising from labor shortages or surpluses, and the creation of new jobs. For this study, the focus is on the industrial sector. A distinction is made between the internal and external labor markets, leading to the identification of several types of workers from the company's perspective: the human resources "core," comprising long-term, full-time employees; the first periphery, including part-time employees, fixed-term contract workers, work-study trainees, and interns; and the second periphery, encompassing external workers such as subcontractors, temporary agency workers, and self-employed workers, including freelancers.

Employment represents the human resources response to a production need, serving as both a quantitative and a qualitative variable, to use the terms of the human resources director of an industrial company in Alsace (Châtelet, 2024).

The concept of human resources, associated with human capital, offers a more strategic and managerial perspective on the men and women who make up an organization. Individuals are understood primarily in terms of skills and talent, allowing the technical skills, or "hard skills," and behavioral skills, or "soft skills," needed by industrial companies to be identified. This definition also considers the challenges of attracting and retaining talent in light of generational differences, particularly among Generations Y, Z, and Alpha.

Under this definition, the "employment" variable will be referred to as "EHRI": employment and human resources in industry.

1.2. Relevance to the study and key questions for the future

The EHRI macro-variable encompasses changes in employment in France's industrial sector in relation to the circular economy (CE), with a 2030 horizon.

The relationship between the EHRI macro-variable and the CE is twofold: EHRI can be understood as an antecedent, facilitator, or obstacle to the transition to the CE; it is also possible to examine the impact of that transition on EHRI. The following are some key questions[2] arising from this relationship:

- Do changing skills hinder or facilitate the CE?
- What impact does the CE have on new "talent" profiles—for example, product engineers specializing in ecodesign (Brodhag, 2014)?
- What jobs are created or eliminated through the CE—for example, jobs facilitating and energizing the transition to the CE?
- Do Generations Z and Alpha, who are more sensitive to civic social responsibility and sustainable development in Europe (Delaye and Delannoy, 2015), facilitate the transition to the CE?
- How does the scale of "circularity"—local, regional, national, or transnational/international—influence employment configurations in the industrial sector?

[1] https://www.insee.fr/fr/metadonnees/definition/c1693#:~:text=Ensemble%20des%20personnes%2C%20salari%C3%A9s%20et,le%20domaine%20de%20la%20production

[2] (nonexhaustive list)

The mediating or moderating influence of the EHRI macro-variable on the CE may also be correlated with the study's other macro-variables:

- The demographic context, particularly migration issues and occupational mobility in the global village, may affect the labor market and, consequently, the transition to the CE.
- The geopolitical context, particularly the continuation of the Russia-Ukraine war, must be considered, especially in connection with labor shortages in transportation (see the supply chain report).
- Industry 4.0 has a definite impact on the future skills required of talent, as well as on the reconfiguration or disappearance of certain industrial occupations.
- The dynamics of reshoring industrial production to France versus the continuation of globalization affect the labor market and forms of work organization.
- Support policies and industrial policies have a major impact on training and the configuration of industrial employment. For example, industrial and territorial ecology (ITE) policies aimed at greater competitiveness that respects environmental impacts through resource optimization affect occupations related to the pooling of maintenance services, through the pooling of material resources, and the development of innovation.

2. Retrospective analysis

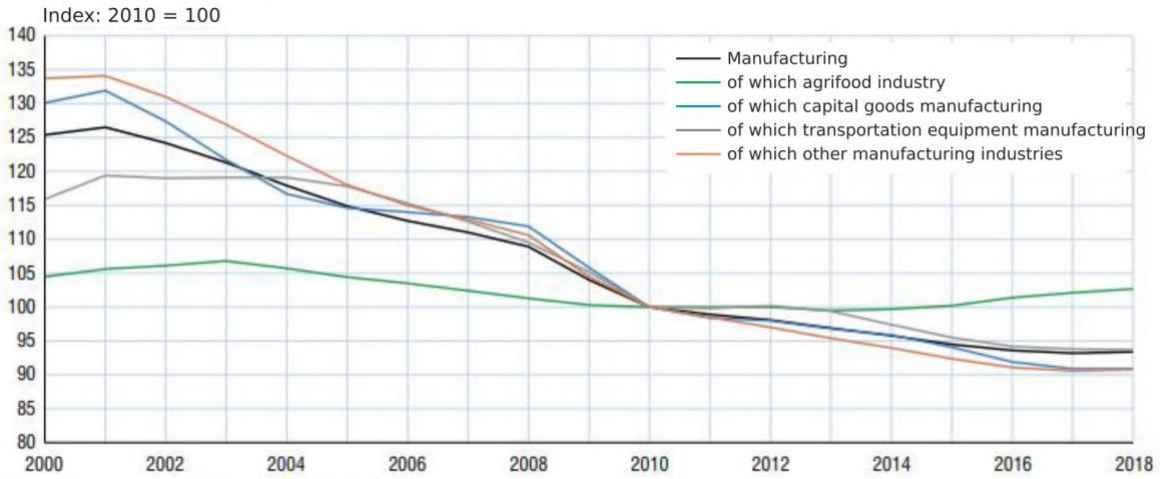
2.1. Past developments

The effect of deindustrialization on employment: A small share in France and offshoring

Since 1980, industrial sectors have lost nearly half their workforce, or 2.2 million jobs, before stabilizing at 10%–11% of total employment in 2018[3]. The following table (INSEE Références, 2020) shows the continuing decline in industrial payroll employment, which accelerated after the 2008 financial crisis but has been relatively stable since 2015–2016.

[3] In 2018, manufacturing employed 2.8 million salaried workers, or 11% of the total economy, and 280,100 temporary agency workers in full-time equivalents (FTEs). The sector created jobs in 2018, adding 6,700, or 0.2% over one year, after a prolonged decline (INSEE 2020).

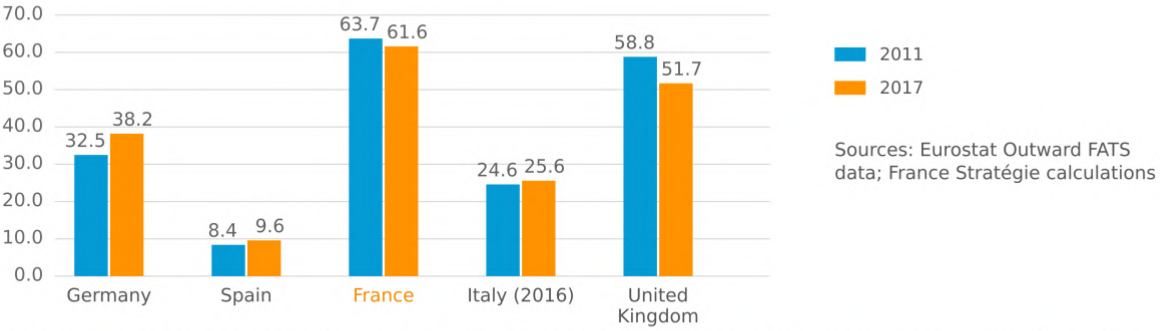
Changes in payroll employment excluding temporary agency work



Coverage: France, manufacturing sector.
Source: INSEE, employment estimates, average of four quarters, seasonally adjusted data.

Relatedly, the retrospective analysis reveals a refocusing on core business and the outsourcing of support functions since the 1980s, as well as substantial offshoring of industrial jobs. Employment in French groups' foreign industrial affiliates corresponds to 62% of industrial employment in France, compared with 52% in the United Kingdom, 38% in Germany, 26% in Italy, and 10% in Spain. The following chart highlights France's greater degree of offshoring (France Stratégie, 2020).

Chart 3—Employment in foreign affiliates as a percentage of domestic payroll employment, industrial sector



3. The corporate social solidarity contribution (C3S), business property contribution (CFE), and business value added contribution (CVAE).
4. The gap in compulsory levies is 7.1 percentage points for the economy as a whole.
5. In 2016; source: COE-Rexecode (2018), "La structure des prélèvements obligatoires sur les entreprises industrielles." The manufacturing sector's net operating surplus is €27 billion, and compulsory levies after tax credits total €59 billion.

The COVID-19 period led to a sharp fall in France's overall employment rate in 2020. In industry, payroll employment excluding temporary agency work fell by 58,000 in 2020 after three years of slight increases. This was the largest annual decline since 2010 (INSEE, 2021). Although the decline was not unique to French industrial companies, the lack of autonomy and extensive offshoring served as a wake-up call about the need to bring industrial production chains, and consequently jobs, back to France.

Labor costs in France remain among the highest in the European Union, although public authorities have taken measures over the past decade to narrow the gap with the European average and comparable countries through reductions in social security contributions. Overall, of every €100 in aid to industrial companies, €40 supports employment and training, mainly through contribution relief and CICE[4].

[4] Details of the support measures are provided in the industrial policies report.

A skills-based approach to work: Soft skills and digitalization

Within companies, human resources are understood in terms of skills rather than qualifications, allowing greater emphasis on "soft skills." These behavioral skills have provided distinctive competitive advantages to industrial companies in recent years (Châtelet, 2024). The OECD defines key skills and abilities through the four C's—creativity, critical thinking, communication, and collaboration—and problem-solving[5].

Alongside the development of soft skills, the preceding period was marked by the rise of digital occupations such as community manager, data scientist, and data analyst, now found in every sector. It was also marked by the digitalization of skills across all existing occupations3. The emergence of jobs such as "e-maintenance technician," for example, is directly linked to changing production methods and requires constant skills adaptation. This digital transition has profoundly changed the nature of work, generating growing demand for appropriate skills and for qualified people able to master technologies and adapt agilely to change.

Generations Y and Z: Seeking mobility, boundaryless careers, and talent management

Past developments have been marked by increasing worker mobility between organizations as companies intensify their search for "talent"[6]. Generation Y already marked a significant decline in workers' traditional attachment to a single company throughout their careers, favoring instead a "boundaryless" career approach (Brillet et al., 2012) in which they explore varied professional opportunities. The notion of employee loyalty and a lifelong career in one company has thus become obsolete. The psychological contract between companies and workers rests on a win-win relationship between performance and employability, supported by continuous skills acquisition.

This trend intensified with Generation Z, as boundaryless careers became widespread. Companies consequently face growing challenges in retaining talent, emphasizing proactive talent management to identify and retain skilled employees with recognized potential (D'Armagnac et al. 2016). Amid this war for talent, Generation Z appears to favor the financial terms offered by large companies or certain digital SMEs that offer innovation and creativity (Benraïss-Noailles et al., 2022).

Generations Y and Z's shift toward boundaryless careers is also reflected in the diversification of employment statuses and the growth of the "community of self-employed workers" (Aunis, 2023) during the 2010s, with the emergence of the gig economy and the expansion of digital platforms. These platforms operate through a model in which microentrepreneurs, rather than employees, are at the center of the system; their number quadrupled between 2015 and 2016 (Aguilera et al., 2018). Self-employment is no longer associated solely with highly skilled, mobile workers but increasingly encompasses less-skilled and more precarious jobs.

2.2. Current developments

A current environment favorable to stable industrial employment, with workforce growth in certain occupations

An overview of employment[7] in France, produced by INSEE[8], describes current developments. The key points below help explain the current developments discussed in the rest of the report.

- A sharp increase in the youth employment rate thanks to the expansion of work-study programs: up 3.3 percentage points in 2021, reaching its highest level since 1992.

[5] See Observatoire des futurs 1.

[6] According to the originators of the concept, "talent" is "the sum of a person's abilities—their intrinsic gifts, skills, knowledge, experience, intelligence, judgment, attitude, and character" (Michaels et al., 2001, p 12).

[7] Employment and unemployment rates calculated using the International Labour Office (ILO) definition.

[8] Photographie du marché du travail - INSEE - March 2022 (INSEE première, 2023)

- The unemployment rate, affected by COVID-19, fell to 7.9% in 2021, returning to its 2019 level. It continued to stabilize in 2023, reaching, for example, 7.5% in the fourth quarter of 2023[9].
- Self-employment continues to expand, notably enabling new forms of subcontracting by self-employed microentrepreneurs for companies (Malenfer et al. 2023), but remains limited relative to salaried employment, which continues to be the predominant form, particularly open-ended employment contracts[10].
- Jobs held are increasingly skilled, and the upward trend continues
- An increase in the number of hours worked, which in 2023 exceeded the 2019 prepandemic level[11].

Workforce growth in some industrial occupations and stabilization at approximately 11%. According to the *Métiers 2030* report by France Stratégie and DARES (Sciberras et al., 2022)[12], French and European climate policy, combined with a desire to reduce industrial dependencies after the COVID-19 crisis, would support increased employment in industrial occupations within the industrial sector through an ongoing increase in value added. This growth in industrial occupations would partly reflect increasingly blurred boundaries between industry and services, also affecting the distinction between occupations managed by industrial firms and those managed by service companies. Although industrial companies previously refocused on their core business, there is a growing tendency to develop new services associated with the goods they manufacture, such as financial services including loans and sales and repair services at car dealerships (Sciberras et al., 2022).

This increase must nevertheless be put into perspective. Beyond outsourced activities, such as temporary agency work and consulting, employment in industrial production strictly defined would decline slightly, although less than during the previous decade (Sciberras et al., 2022). Moreover, while the agrifood industry remains dynamic despite the current environment[13], employment continues to decline in low-technology sectors facing competition from emerging countries, including metallurgy, plastics, rubber, and mineral products (Sciberras et al., 2022).

Ultimately, in 2022, industry's share of employment, combining employees and the self-employed, was approximately 11.28%. This compares with 50.10% in market services and 30% in nonmarket services. Although industry's employment share had not yet returned to its 2019 level of approximately 11.59% of total employment, the total number of jobs was close to, or even slightly above, that level, with an increase of 2.16% between 2019 and 2022 in industrial employment among employees and the self-employed[14].

Developments and employment opportunities associated with the CE and ecological transition: The growing importance of maintenance and new expertise. In the context of the CE, Héry et al. (2019) particularly emphasize that maintenance is "an occupation to be renewed and reinvented" by 2040. Longer lifespans through the reuse of goods and increased recycling will affect maintenance activities through changes in both scale and purpose. This perspective contrasts with the current and past trend toward digitalized maintenance, in which computer-assisted predictive maintenance, for example, requires fewer human interventions and may eliminate certain jobs (Sciberras et al., 2022).

[9] https://www.insee.fr/fr/statistiques/7765269

[10] Of the 67.3% of people in employment, 59.1% are employees, including 50% on open-ended contracts, compared with 8.1% who are self-employed.

[11] https://www.insee.fr/fr/statistiques/serie/010564506

[12] Based on trend demographic and macroeconomic developments, excluding the Russia-Ukraine conflict.

[13] Nevertheless, at a slower pace because of the crisis associated with farmers' demands in France in 2024.

[14] Calculation based on Figure 2a of the statistical note INSEE Focus no. 315 (2023), available at: https://www.insee.fr/fr/statistiques/7733369#tableau-figure2_radio1

At the same time, financial support for ecological transition and CE projects may lead to the emergence of new jobs. The introduction in March 2024 of the tax credit for investments in green industry (C3IV) should encourage companies to undertake new industrial projects[15]. These require appropriate skills and may lead to job reorganization or new recruitment. PACTE Industrie offers another example[16]. It aims to build the skills of a cross-functional decarbonization team, covering technical, financial, and strategic aspects, to implement and drive a decarbonization strategy with a view to adopting ISO 50001. PACTE Industrie finances 40% to 80% of instructional training costs within companies in collaboration with providers listed by ADEME.

Renewed training and engineering workforces supporting "green" reindustrialization

The number of higher education graduates in industry is increasing by 10%, supporting a dynamic labor market for skilled positions. This observation aligns with an overall rise in qualifications and in higher education graduates' share of total employment, projected at 47% in 2030 compared with 43% in 2022. Alongside this trend, we are seeing an increase in the employment rate among young people ages fifteen to twenty-four, thanks to the expansion of work-study programs (see the first paragraph). A notable development is the closer relationship between industrial employment areas and apprenticeship training centers as apprenticeships expand in higher education. According to Ministry of Higher Education data, apprenticeship training centers recorded a 20% increase in student numbers in 2022 compared with the previous year, and an impressive 78% increase compared with 2020[17]. The industry minister has stated the objective, for today and the coming years, of strengthening the link between education and entry into employment through internships and work-study programs[18].

Launched in December 2021, the France 2030 plan supports green reindustrialization policy through the Compétences et Métiers d'Avenir (CMA) program. This program concerns vocational high school reform and the development of degree programs related to scientific and digital skills, future occupations in the ecological transition, and industrial-sector decarbonization[19].

The first round allocated €800 million to developing training provision and assessing skills and training needs, with half targeting industrial-sector projects. It funded 120 training initiatives, supplemented by the vocational high school program, comprising eighteen projects in seventeen regions. The government estimates that more than approximately 400,000 people will be trained each year, or about three million people across all disciplines by 2030, with one million receiving qualifications.

Support targets:

- **Vocational high schools**, with the aim of improving young people's entry into employment in an environment where occupations are changing rapidly. This support takes the form of broader training provision in sectors with demand, equipment adapted to market needs, and greater support for teachers so they can adjust teaching effectively. For the start of the 2024 school year, regional education authorities have committed to transforming more than 20,000 training places, focusing on industrial revitalization and reducing carbon emissions in the economy;

[15] Production of batteries, solar panels, wind turbines, and heat pumps, for projects approved by the tax administration and ADEME.

[16] A European program with a budget of €49 million over three years.

[17] https://www.enseignementsup-recherche.gouv.fr/fr/l-apprentissage-dans-l-enseignement-superieur-en-2022-92388#:~:text=Au%2031%20d%C3%A9cembre%202022%2C%20les,de%2078%20%25%20en%20deux%20ans.

[18] France 2030 report

[19] https://www.info.gouv.fr/upload/media/organization/0001/01/sites_default_files_contenu_piece-jointe_2023_12_20231219_france2030_dp_cma1_v3.pdf

- **Training in scientific and digital fields to develop skills and attractiveness in quantum technology, artificial intelligence, and cybersecurity**. Examples include CYBER-INDUS, providing training from ninth grade through doctoral level to strengthen cybersecurity skills in industrial occupations; IMTFOR5G+, offering a sovereign nationwide range of degree and certification programs primarily for engineering students and practicing engineers in digital sectors; and QUANTEDU-France, developing researchers' and higher education teachers' skills in quantum technologies;
- **Training for sectoral decarbonization, including support for the circular economy**—ecodesign, recycling, and reuse—and the development of biobased products and industrial biotechnologies. In the first round, four training projects concern industrial decarbonization and two concern recycling. One example is COMREVA, which provides training to develop the recycling sector, targeting both current employees and future recruits to recycling companies.

Skills: Strengthening and evolving soft skills; uncertainties surrounding hard skills

Employees' soft skills remain a major asset sought by companies, with criteria continually evolving. A 2018 World Economic Forum report highlights these changes while emphasizing the importance attached to **analytical thinking and innovation, active learning, creativity and initiative, and critical thinking**. These skills help individuals adapt to a complex environment and seek new solutions. More rigid skills, by contrast, such as manual dexterity, memory, and spatial abilities, are in decline[20].

Technical skills, for their part, are constantly evolving and closely linked to technological and digital progress. The CMA program's objectives for developing scientific and digital skills illustrate this trend, as discussed above.

New technical skills are being developed through the CE, continually supported by new technologies. Product engineers specializing in ecodesign, who are essential to the transition to the CE, must broaden their skills by acquiring an in-depth understanding of the environment, including environmental assessment tools, companies' business models, and regulations. At the same time, they must refine their expertise in advanced materials such as recycled and biobased materials and the associated manufacturing processes[21]. Héry and colleagues (2019, p. 103) established a classification of the skill levels needed for the CE transition, ranging from simple repair (Re-pair) to refinement (Re-fine), redesign (Re-design), and rethinking (Re-think)[22]. The aim is to better incorporate ecological issues into industrial companies' production models and the recognition of internal know-how.

The war for talent and new forms of work organization

Competition to attract and retain talent is no longer confined to the services sector but now extends to industrial companies. This development requires companies to adapt to their workers' new expectations, whether they are employees or self-employed. Emerging generations are more demanding about companies' societal impact and express a stronger desire for work-life balance, marked by **a more detached approach to work** and a tendency toward boundaryless careers (Malenfer et al., 2024).

The COVID-19 pandemic intensified labor market tensions, further strengthening these expectations and making talent retention even more difficult. The war for talent has never been fiercer, even for industrial companies, requiring flexible working conditions and greater mobility to remain competitive and attractive to new graduates.

[20] Future skills. Source: World Economic Forum report, September 17, 2018, p. 12

[21] https://www.cress-na.org/wp-content/uploads/2019/12/FREC_Comp%C3%A9tences-formation_rapport-final-CNCRESS-HCESSIS.pdf

[22] Inspired by Charter and Chick's original model (1997).

Remote work is not new[23], but it has become more widespread. Beyond its inevitable expansion in the services sector following the COVID-19 pandemic, **this shift also affects industrial companies and occupations**. Indeed, (Mithieux and Demauve, 2022; Dedieu, 2022). Malenfer et al.'s (2023) study of work emphasizes the greater blending of living and working spaces as remote work becomes more important. The boundaries between personal and professional tools are increasingly blurred through "bring your own device." Workspaces are being reorganized both within companies, with fewer individual offices and more open-plan spaces, and outside them, with new public coworking spaces.

3. Foresight exploration

3.1. Structural trends:

Stabilization of industrial employment: From past trends to foresight studies, the figures indicate that employment is stabilizing at 10%–11% of total employment. This structural trend partly reflects public revitalization policies introduced since 2010, slower outsourcing, and industry's refocusing on certain strategic activities, such as pharmaceuticals and computing, and on activities integral to the low-carbon transition, such as transportation.

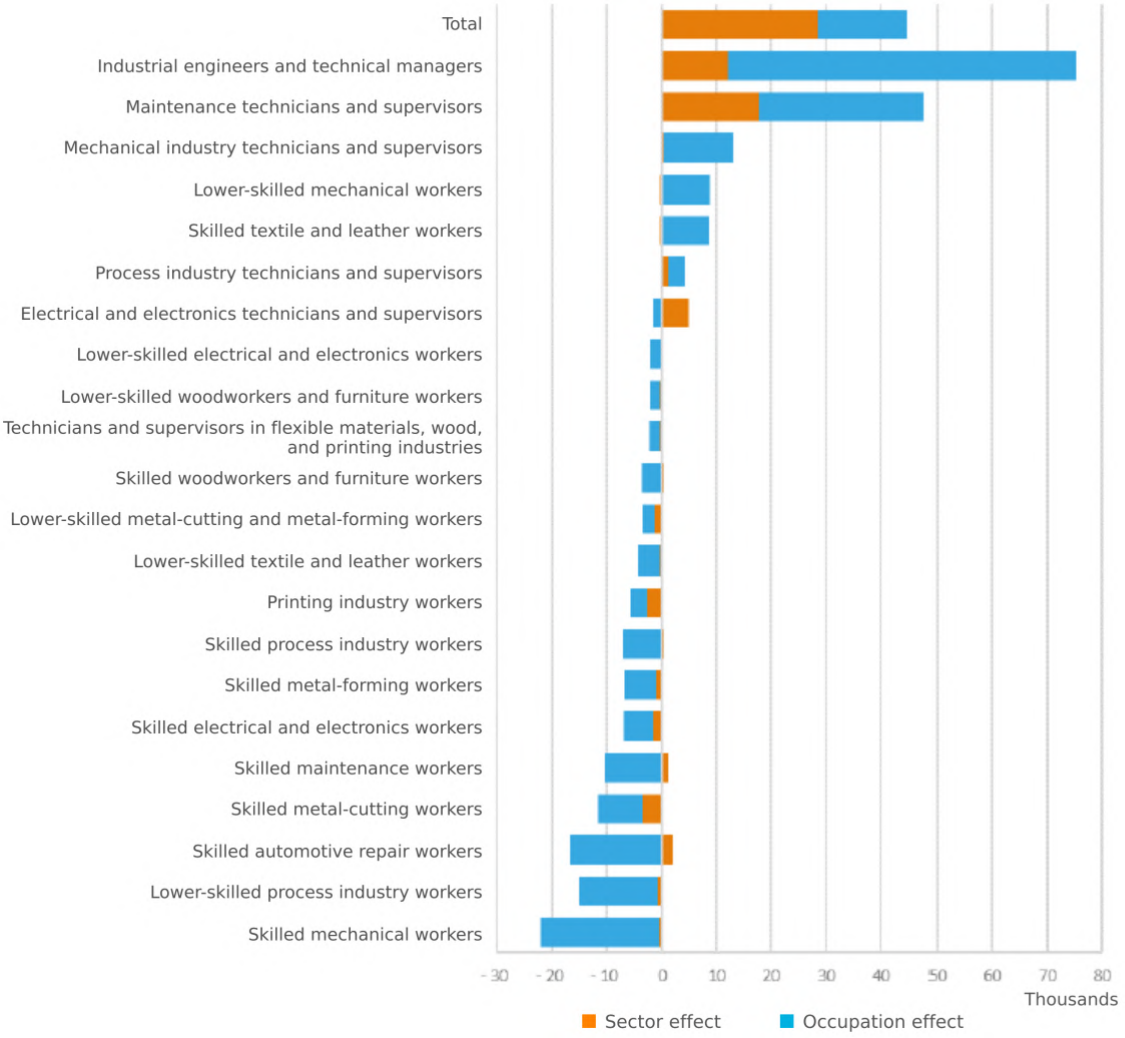
Automation as a source of efficiency and reduced strenuous work, but also partial labor substitution: The automation and digitalization of work are a structural trend leading to the creation and disappearance of occupations and the updating of skills (see Malenfer et al. 2023), particularly affecting some occupations previously classified as skilled. Robotization may also eliminate some jobs, but above all it reduces physically demanding work, for example when robots complement workers in strenuous, repetitive tasks on the production line. According to a foresight study of occupations to 2030 (Sciberras et al., 2022), computer-assisted predictive maintenance, which prevents breakdowns, requires fewer interventions and would result in 30,000 job losses over the coming decade, primarily among manual workers.

The continuing, and even growing, importance of maintenance and quality-control occupations (*Métiers 2030* report), which are increasingly linked to digitalization. This structural trend is intensified by the CE, which reinforces the importance of this occupation but also the need to renew and reinvent it, particularly to better connect global and local scales (see Héry et al. 2019).

These trends appear in the following chart, which shows employment growth in engineering and maintenance supervision occupations, but declines in many manual occupations.

[23] The 2012 law strengthening social dialogue (Article L. 1222-9 of the Labor Code) already introduced major simplifications for implementing remote work without necessarily including it in the employment contract.

Figure 18—Change in employment in industrial occupations between 2019 and 2030



Report by Sciberras (2022), p.

An upward trend in skilled salaried employment (INSEE, March 2022), including in industry, with demand for soft and digital skills; and salaried employment remaining the dominant status despite the growth of self-employment and the proliferation of employment configurations.

Population aging and labor market tensions. Globally, the population age sixty-five and older is growing faster than other age groups. According to projections in the United Nations report on the state of the world's population published in July 2019, by 2050 one in six people worldwide will be over sixty-five, or 16%, compared with one in eleven in 2019, or 9%. The population age sixty and older will reach 1.4 billion in 2030, 40% higher than in 2020. Combined with a slowing birthrate, this could leave growth in the global working population insufficient relative to the rapidly increasing number of retirees, placing growing pressure on the labor market (WAPES, 2023).

3.2. Uncertainties

Uncertainty about the evolution of technical skills through digital technology. Although companies' demand for soft skills is a structural trend enabling better adaptation to a complex environment, major uncertainty remains about tomorrow's key technical skills. For example, none of the ten most sought-after occupations in 2010 existed in 2004. Digitalization increases these uncertainties. The ubiquity of digital technology may change every dimension of work—its content, organization, and human relationships, in Malender et al. 2023—as well as future skills.

A return to older forms of technical skills cannot be ruled out in the transition to the CE, such as skills for redistributing certain products that are usually thrown directly into the trash, to sustain the circular business model. Whether companies will value these skills remains uncertain and depends on consumer attitudes—for example, whether customers actually buy when told that a medicine comes from a collection of unused medicines or that a car's steering wheel is made from recycled products.

Do migration flows offset population aging in France? The aging of the working population is also a structural trend expected to intensify observed labor market tensions and the war for talent in 2030. Current and future migration, however, offers a possible response to labor shortages in certain occupations (Malenfer et al. 2023). Geopolitical uncertainties and health crises raise questions about migration volumes to 2030 and their potential to address labor shortages.

3.3. Seeds of change

Changing education and training through more flexible alternatives and renewed traditional programs combining two areas of expertise:

- The challenges of training and adapting skills to increasingly **unpredictable future occupations are prompting new alternatives, such as MOOCs** that individuals use and receive credit for in self-directed educational pathways. **New educational institutions** associated with information and communication technologies are developing self-directed learning that is not yet recognized by the state, such as École 42.
- **More traditional provision is being renewed through the emergence of combined technical expertise, such as industry and digital technology, or industry and the environment** (see the CMA program):
- The Cyber-Indus project to strengthen industrial cybersecurity expertise, with training planned from ninth grade through doctoral level in the Hauts-de-France region.
- École de la batterie, ranging from the CAP vocational certificate through doctoral level, to train operators, technicians, engineers, and researchers, as well as teachers and professors, in electric batteries.
- Décarbo Industrie Académie, to develop expertise in training for industrial decarbonization in Hauts-de-France.
- In Grand Est, a project called C-CEDI, led by the Campus d'Excellence International de la Transition Energétique et de la Décarbonation de l'Industrie (CEITEDI), was selected in June 2023 to train 41,725 participants in the region's strategic sectors: nuclear power, hydrogen, photovoltaics, wind power, energy services, and services to industry. Grant: €6,660,000[24].

In relation to the CE, seeds of change are being observed in large companies and in the CE's impact on work. Dibia et al.'s (2020) pilot study of Winnow, Google, Coca-Cola, Danone-Evian, The Plant, and HP Instant Ink explored the relationship between human resource management and the CE. It shows that, beyond reducing resource use, the CE contributes to job creation, improved well-being, and changes in organizational culture.

When the CE also becomes part of companies' core HRM models and practices:

Pioneering European research by the think-and-do tank Pour la Solidarité, conducted from 2019 to 2022 with Belgium, Spain, France, Ireland, Italy, Lithuania, and North Macedonia, conceptualized and operationalized CE principles in HRM. Drawing on the CE's seven main principles, a new form of "circular HRM" (Circular

[24] https://www.enseignementsup-recherche.gouv.fr/sites/default/files/2023-06/annexes---france-2030---14-laur-ats-28094.pdf

HRM, 2021, p. 16) is emerging, proposing key principles for companies seeking to adopt a complete circular model:

1. Ecodesign of employees' work practices and work environment to have a positive impact throughout their experience and beyond.
2. Recycling through internal redeployment of workers according to needs, rather than recruitment from the external labor market.
3. Repair through better reintegration of employees after a prolonged absence.
4. Reuse by activating mentoring before employees leave, for example at the end of a project or on retirement, to apply their skills in a different role within the company.
5. Industrial ecology by classifying workers' skills to improve the planning and implementation of strategies focused on optimizing skills within a business ecosystem.
6. The functional economy by prioritizing human-centered optimization over contractual obligation.
7. Reemployment by supporting employees' transition to the external labor market after contracts end and/or the company's needs change.

This type of model does not yet represent a current development but a possible seed of change for the future.

3.4. Controversies

An intensifying debate over flexibility versus precarity. Controversies are growing between more flexible contracts and working arrangements for workers—freelancing, coworking spaces, and remote work—and the precarity potentially generated by hybrid work, such as "bring your own device" intensifying gender inequalities, reduced socialization, and an increase in hours worked.

Greater polarization between skilled employees and precarious self-employed workers. Similarly, labor market polarization is intensifying between skilled employees who benefit from strong corporate demand and favorable conditions, as discussed in the war for talent, and a segment of unskilled, precarious workers, even in occupations facing shortages that can be performed by the self-employed, such as transport drivers. This pattern is also evident among self-employed workers. Some possess specialized skills and enjoy a freely chosen boundaryless career through umbrella employment arrangements or freelancing; others perform unskilled self-employed work, such as deliveries for platforms, and involuntarily face financial insecurity and inadequate social protection. The controversy concerns the growing precarity of part of the working population alongside rising qualification levels and a higher overall employment rate.

Tensions between alternative, "liberated" working arrangements and excessive risks of individualization and intensification. Increasingly, companies and their workers are adopting innovative forms of organization centered on the "search for meaning," the liberated-company model, and cooperative models that promote values aligned with CE principles, particularly through their positive societal impact. At the same time, there is a growing trend toward individualized HR management practices, more complex and often more distant and rigid management methods, and intensified work in industrial operations, as emphasized by Malenfer and colleagues (2023).

Reshoring efforts do not necessarily bring a significant increase in employment. Because reshoring production partly relies on greater mechanization or robotization to offset labor costs[25], job creation will be limited. The forty-nine returns identified by Trendeo in 2022 reportedly corresponded to only 800 jobs reshored on a net basis, or 1.5% of total industrial job creation (Trendeo report, 2023).

[25] Although France currently lags behind in industrial robotization, this is an explicitly stated current government objective.

3.5. Disruptions

Skills priorities no longer focus solely on digital technology but primarily on CE objectives in the design, repair, and recycling of environmentally responsible products, potentially leading to renewed demand for "traditional" skills.

Flexible, hybrid employment statuses and working arrangements have become the norm. There is no longer a clear distinction between self-employed and employee status—for example, no significant differences in social protection or pension rights. This blending is reinforced by flexibility and the growth of multiple jobholding. Malenfer et al.'s (2023) report on work in 2040 suggests that multiple jobholding is accompanied by a four-day workweek, but also twelve-hour workdays.

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