

Preparing the workforce of the European automotive industry for the transition to electric mobility: key findings and recommendations to make the European Green Deal an employment success

The Platform for electromobility has facilitated a [report](#) (and [data set](#)) - undertaken by the Boston Consulting Group - on the impact of the shift to electric vehicles production on automotive jobs in Europe. The Platform for electromobility represents 45 organisations from industry, civil society and cities that employ around 650,000 people globally.

This study takes a deep dive into the likely opportunities and challenges that will be created by the transformation of the automotive industry in the coming 10 years. Ensuring that workers are guided and accompanied through this transition will be the key to the success of the industry and to preparing them for the jobs of the future.

Key findings: a comprehensive and inevitable transformation

The automotive industry was deeply impacted by the COVID-19 crisis, and will likely need several years to reach pre-pandemic levels of production and profitability. Prior to the pandemic, manufacturers were producing approximately 17.7 million light vehicles in Europe with an overall production value of approximately €700 billion.

The study shows that the industry will rebound, with a shift from internal combustion engines (ICEs) to electric vehicles (EVs). By 2030, some 59% of sales in Europe will come from electric vehicles (70% if plug-in hybrids are included). Alongside electrification, digitalisation will be the second pillar underpinning the carmakers’ recovery: the study projects that the value of software included in cars will increase by 11% each year. Based on the projected volumes of production and sales for 2030, the study concludes that - across the 26 industries within scope of the research, which represent 5.7 million jobs - overall employment is forecast to remain essentially stable compared to the 2019 baseline, with minimal variations in job numbers. Although electrification will contribute in part to these slight variations, the study predicts that EVs will have only a minor net impact on jobs through to 2030, contrary to what some observers expect.

This relatively small net figure should not, however, obscure the massive structural changes resulting from the shift to electrification. Changes in production will modify both the skills requirements and distribution of labour. Over the decade, direct employment in carmakers and ICE-focused suppliers will decrease by 5%, while adjacent industries’ workforce - such as those in energy production and charging

infrastructure - will increase by 34%. This transfer from core automotive industries to adjacent industries is examined in detail in the report. It shows that - with more than 580,000 new jobs created by shift to EVs - production of these vehicles will be the main driver for job creation in the automotive ecosystem.

On top of these jobs, a further 40,000 will be created each year by construction and civil works for adapting energy production and distribution infrastructures. Without the shift to EVs, these economic opportunities would not exist at all. The study also expects electromobility to act as a catalyst for further activities in other adjacent sectors to the automotive industry. In the energy domain, we expect 60,000 new jobs to be created.

Overall, the effects on employment in the core automotive sectors caused by the product changes arising from the EV shift will be compensated for by new opportunities created by the electromobility ecosystem. These will be driven, for example, by growth in battery production and charging infrastructure. This finding is all the more significant given that a failure to electrify would likely lead to competitive disadvantages and subsequent significant job losses across European industry.

The report estimates that, by 2030, 2.8 million workers will need to be hired and the job profile of 2.4 million positions will change, with different degrees of training needs to prepare them for future job demands. By 2030, 42% of all employees in the core automotive and adjacent industries will have dedicated training needs. Specifically, 1.6 million will require retraining, while remaining in their current position; another 610,000 will need requalification while remaining in the same industry cluster; 225,000 people will need support to requalify for work in other industries outside the automotive ecosystem. Some of this impact will be felt at local or regional levels, so it is vital that governments provide policies to help those regions adapt to the coming change.

Our recommendations: The need for a robust framework to master the transition

The transition to electromobility does not pose a threat but rather an upskilling opportunity for workers. With the correct political and regulatory choices, the outlook is bright for one of Europe's strategic industries and its workforce.

It is vital to support workers during this transition to electromobility: the EU, governments and companies should prioritise programmes that invest in the education, training, upskilling and reskilling of the labour force to capitalise on new opportunities, raising the bar on employment conditions, to ensure no one is left behind. This will be an investment for future generations and for the environment.

The Platform [welcomed](#) the ambitious 'Fit for 55' package unveiled in July, but the social changes this will trigger should be tackled with similar levels of ambition. A *fair* Green Deal must empower companies, governments and regional authorities to equip the workforce with new skillsets.

European Institutions: Workers in the automotive sector should benefit from a policy framework similar to that already flourishing in the energy-intensive industries, thanks to the Just Transition Fund, Just Transition Platform and Just Transition Mechanism. This new policy framework should assist industrial stakeholders, local, regional and national authorities in accomplishing the following steps:

Industrial stakeholders: For employers - and notably carmakers - support will be needed to design requalification and upskilling programmes and hiring as well as restructuring programmes. Battery manufacturing and the deployment of infrastructure both for distribution via charging stations and production via renewable energy will be a core provider of jobs during this transition. Their rapid growth should be underpinned by ambitious regulations and targets. Support should be provided, particularly for small- and medium-sized enterprises during the transitions, as they will lack the analytics and training resources of bigger companies.

Local and regional authorities: Behind these numbers lie human lives and territories where they live. Relocations should thus be avoided where possible by adapting existing production plants, and training for new skills where they are needed. Local and regional authorities will play a key role in addressing the knowledge gaps in the workforce both for EV production and for the full EV system and value chain. The new ESF+ should be an instrument for supporting local and regional authorities in this field.

National governments: Governments need to perform holistic, 'whole-of-economy' workforce planning at a national level. This needs to be done in close cooperation with regional and local authorities as well as industrial stakeholders, and must include advanced models for supply and demand, such as:

- Helping employees manage their transitions. It is essential to rethink education and reskilling and provide additional initiatives; the main challenges, such as the need to requalify workers for a different industry, should receive the highest priority.
- Tailoring educational curricula appropriately. For young people entering education, Governments will need to gear them - and for job seekers - towards new automotive technologies.
- Building new career and employment platforms. The public sector should help workers to navigate to jobs and training opportunities more quickly and easily.
- Updating social safety nets. These will need to be revised in order to promote up- and re-skilling during transitions, as well as supporting part-time workers and those people unable to adapt to new challenges.

The study, commissioned by the Platform and carried out by the BCG, covers 26 industries encompassing 5.7 million jobs across Europe and is composed of a [report](#) and a [data set](#). The Platform has shared its views on the report publicly in a [press release](#).