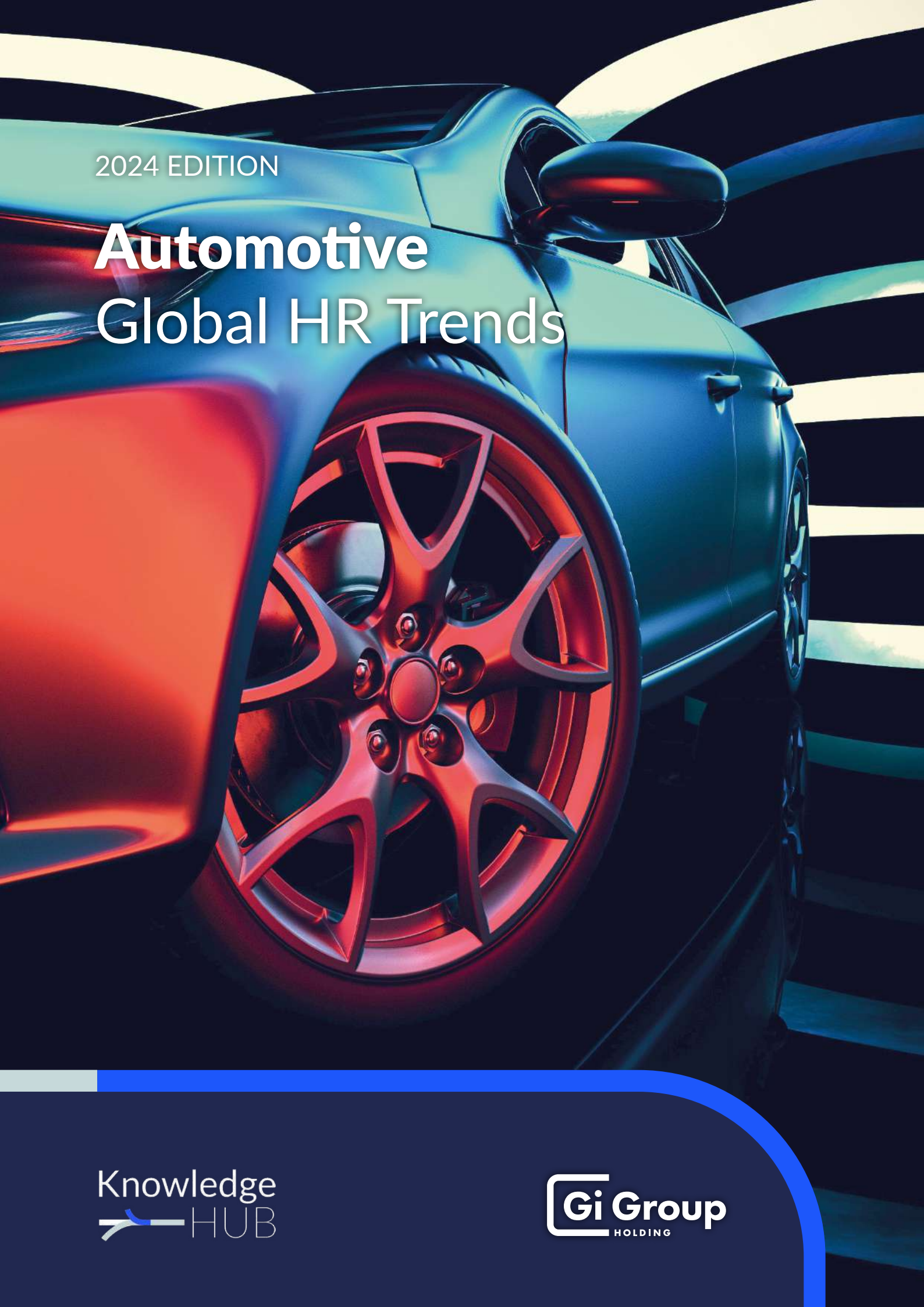

2024 EDITION

# Automotive
# Global HR Trends

Knowledge HUB

Gi Group HOLDING

2024 EDITION

# **Automotive**
# Global HR Trends

Gi Group HOLDING

Knowledge HUB

**The Knowledge Hub is Gi Group Holding's dedicated intelligence unit** whose goal is to procure and disseminate knowledge on the evolution of the global labour market.
The unit works with recognised research centres and academic institutions, collecting verified data from candidates, unions, governments and corporations, to produce authoritative reports covering a wide range of sectors. In line with Gi Group Holding's values, **the Knowledge Hub aims to find and share information and recommendations which contribute to a sustainable and enjoyable Labour Market.**

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Global HR Trends


2023 Edition

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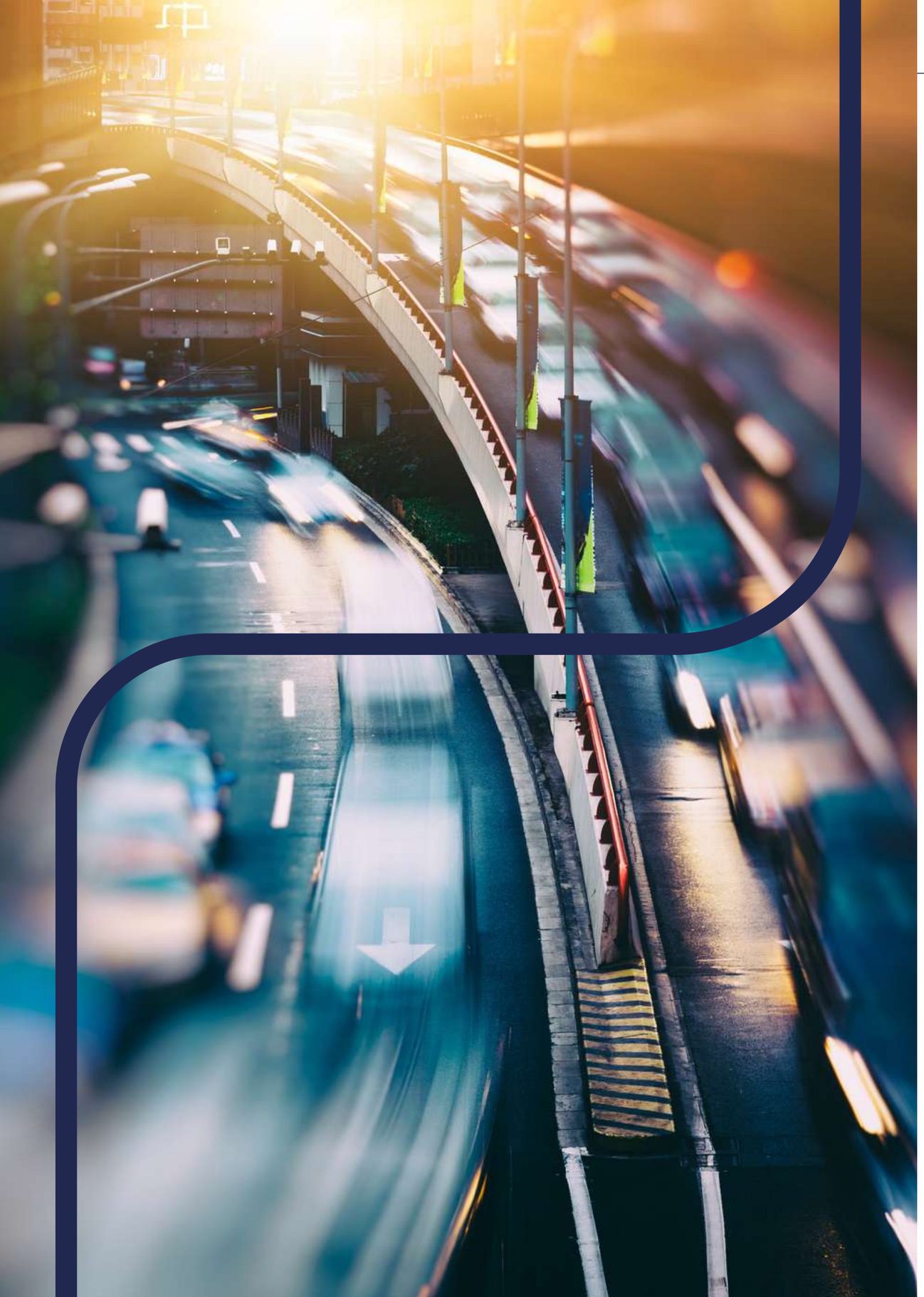

# Contents

# Introduction

## The Automotive industry is undergoing a revolutionary transformation

Technological advancements, particularly in vehicles' production, are pushing boundaries and reshaping the traditional concept of mobility.
Implementation of automation systems aimed at enhancing safety and productivity is becoming more prevalent. Sharing economy trends, including ride-hailing services, further reflect changing consumer behaviours and preferences. Sustainability has become a key focus, with a global push towards reducing carbon footprints driving demand for electric cars.

Our rigorous study, conducted among 6,500 people in 11 countries, reveals that while the industry is still perceived by the public as physically strenuous and conservative, the change in mobility systems has the potential to make it more inclusive and alluring.

This evolution not only suggests a dynamic future for the Automotive industry but also an exciting time for the labour market.
If companies want to thrive in this fast-paced transformation, they must be ready to embrace change and invest in their employees by providing them with strategic opportunities to upskill and reskill and fostering ownership on their teams.

By putting people first, the Automotive industry will be more likely to attract and retain top talent, adapt to changing market demands efficiently and maintain a robust, positive brand image among consumers who are increasingly demanding sustainable practices from businesses.

Let's commit to shaping a future where the ever-changing Automotive industry thrives by synchronising its growth with the empowerment of its workforce.

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.2
.3
.4
.5
.6
.7

# Industry Overview



The Automotive industry has seen a decline in the last four years, made evident by in a loss of revenue and fewer vehicles being manufactured. While the global economy has affected most sectors to some degree, automotive has experienced some unique challenges:

- **Perception and pricing of fuel sources** such as gas are leading consumers to postpone or cancel their vehicle purchases.
- **Consumer doubts over electric vehicles** are affecting sales, as potential buyers experience uncertainty over vehicle performance.
- **Price increases** for components used in vehicle manufacturing are forcing automakers to re-evaluate the materials they use.
- **Changing mobility habits** are affecting sales, with some customer segments opting for rental and ride-sharing instead of purchasing vehicles.
- **Raw material and chip shortages** are forcing manufacturers to rethink the components they use in their vehicles.

The **Covid-19 pandemic** was a driver of many of these challenges. As well as contributing to the material shortages, it kick-started the move towards **remote working** that has reduced the amount of people commuting to work. Naturally, the global reduction in workers commuting has had a knock-on effect upon automobile sales.

### Semiconductor shortages: a global slowdown

Shortages in materials have been extremely problematic for some manufacturers.
For example, the global shortage in semiconductors has increased manufacturing lead times from an average of **3-4 months to 10-12 months.**

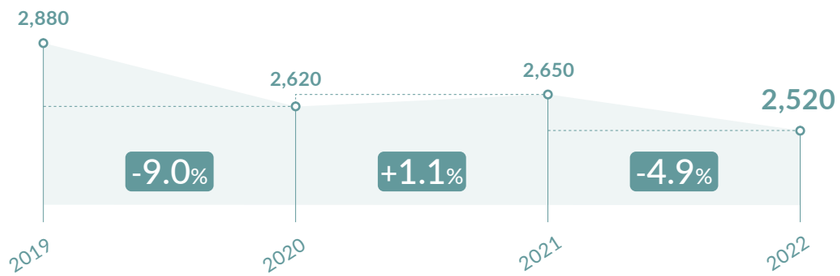
# How have these challenges affected the industry?

This decline began in 2020, with the sector's total revenue dropping 9% from $2.88 billion in 2019. However, the market is now in a slow recovery phase. Its revenue was $2.52 trillion[1] in 2022 and is expected to reach $2.56 trillion in 2023.

1. Source: IBISworld, 2023

**Source**
IBISWorld, 2023

Global car manufacturing industry revenue ('000000000s), 2019-2022



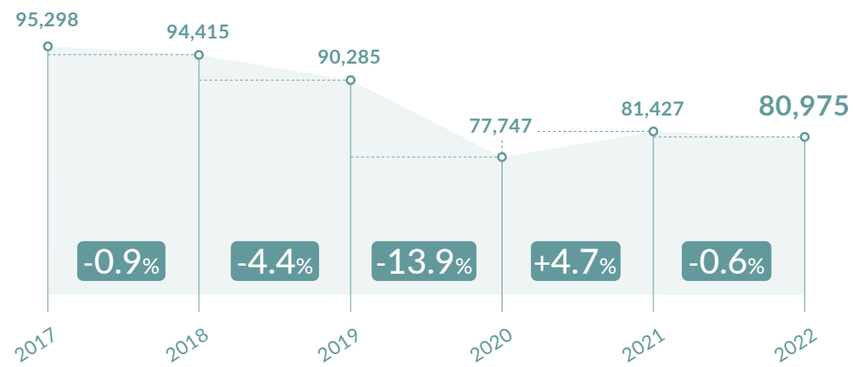

These fluctuations are reflected in the sector's sales volumes. Sales began to drop in 2018, but we saw a steep 13.9% drop in 2020, with sales falling to 77.7 million units[2].

2. Source: Marklines, 2023

Sales began to increase again from 2021, rising to 81.4 million units worldwide.

**Source**
MarkLines, 2023

Global light vehicle sales ('000s), 2017-2022

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# How is Automotive Evolving?



For a long time, the Automotive industry has been seen as stagnant. Many perceive it to be male dominated, highly competitive, and offering inferior career paths compared to more desirable sectors. But **the Automotive industry is now on the precipice of a transformation.**

Businesses are facing logistical and legal pressures that are forcing them to update their products. Consumers are re-thinking what they want from cars - and how they want to access them. And finally, new technologies are enabling automakers to **deliver the sustainable, smart, energy-efficient vehicles of tomorrow.**

Automotive businesses have no choice but to move with the times, but many within the sector are now seeing this is an **opportunity for growth.** The sector has a new chance to embrace **innovation,** support **sustainability,** and modernise its **hiring practices to attract** the best talent possible.

Our research revealed that businesses are already making big changes - but the road ahead is likely to have some unexpected twists and turns. In this chapter, we'll explore how the industry is changing.

## Giovanni De Maria

*Senior Consultant General Management, KFT Gruppo Zucchetti Automotive*

> *Due to raw material shortages, we need to redesign devices so they don't rely on unobtainable chips. Fulfilling this need is challenging for our R&D structures. To update our product ranges, we need to fill a skills gap in software and firmware professionals. In this regard, academic training for the automotive industry should be based on highly specialised paths, to allow in-depth knowledge of the new connected world.*

# What are the major shifts ahead?

Major changes are just around the corner. According to the data we reviewed in our research, there are **four key trends** happening within the Automotive industry.

## 1. The rise of electric vehicles

Consumer tastes in vehicles are undergoing a major evolution. Today's vehicle users are looking for ways to **save costs** and **be kinder to the environment** - and electric vehicles offer significant advantages in both these areas.

This trend is already apparent from recent sales figures. Manufacturers sold **10.52 million new electric and plug-in hybrid cars in 2022,** up from 6.76 million in 2021 - a 55% jump.

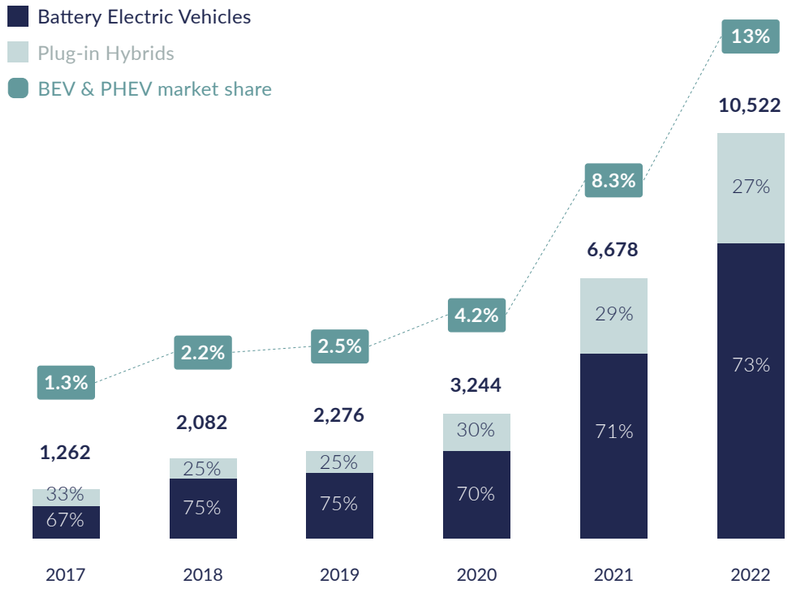
Experts predict that 40 million more cars will be sold annually in the next seven years. This is due not only to changing consumer demands, but also **government targets** to phase out internal combustion engines (ICEs) in 36 countries.

Based on these trends, by 2030, the rollout of electric vehicles will eliminate the need for five million barrels of oil per day[1].

1. Source: IEA

**Source**
EV-Volumes, 2023

Global BEV & PHEV sales ('000s), 2017-2022





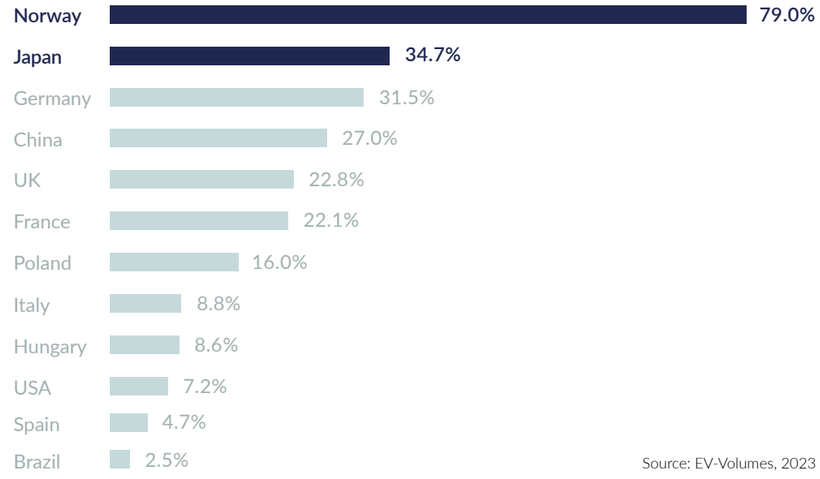

Experts predict that three-fifths of current vehicle manufacturing jobs will switch to EVs and their batteries. EVs have fewer parts and are less labour-intensive to assemble but will likely create new jobs in the battery supply chain outside of car factories.

This key shift there will be a growing demand for professionals who specialise in designing, developing, and producing electric vehicles. Manufacturers will likely be looking to hire roles like **electric vehicle engineers, battery specialists,** and **experts in charging infrastructure.**

### Who's leading the race in electric and hybrid vehicles?

Electric vehicles are most popular in Norway, where they have 79% of the market share. However, China has the highest total volume of sales, reaching eight million in 2022.

BEV & PHEV market share (as a percentage of total vehicle sales in 2022)




Source: EV-Volumes, 2023

## 2. Increasing pressure to reduce carbon emissions and harness clean energy

Governments around the world are increasing their **sustainability efforts** by rolling out new legislation to control emissions of CO2. Many countries and continents are now aiming for 'Net Zero' carbon emissions in order to combat climate change.

Some car manufacturers see e-fuels as the most practical solution. But this perspective is not shared by everyone, particularly as e-fuels are more expensive. Accordingly, **many car manufacturers see electric vehicles as the only viable solution.**

Regardless, Automotive manufacturers are now under pressure to make major changes to their vehicles. In the coming decades, the world will likely see the phasing out of ICE vehicles in favour of electric vehicles and those that can use alternative fuels.

## What Net Zero initiatives are in motion?

At least 36 countries have Net Zero programs in place, with many rolling out legislation that specifically targets vehicles.

- **The UK** will ban the sale of cars with internal combustion engines ICE by 2030.
- **The USA** also has a target for 50% of all new passenger cars and light duty trucks to be zero emissions vehicles by 2030.
- **The European Union** is rolling out legislation to phase out carbon emissions from vehicles. New vehicles must emit 55% less CO2 by 2030 (compared to 2021 levels) and must emit zero CO2 by 2030.
- **Japan** is aiming for sales of 100% electric vehicles (including hybrids) for passenger vehicles by 2035 and for light commercial vehicles by 2040.
- **Korea** aims for 50% of passenger car sales to be hybrid or plug-in hybrid vehicles and 33% to be electric vehicles by 2030.

These initiatives are also a huge source of employment growth. Clean energy jobs already exceed those in fossil fuels worldwide, and experts have projected them to grow from around 33 million today to almost 55 million in 2030[1].

1. Source: IEA, International Energy Association. Data from World Energy Outlook 2022

## 3. Breakthroughs in technology

In recent years, technologists have been designing and developing Connected and Autonomous Vehicles (CAVs). Governments around the world are now beginning to grant autonomous vehicle licenses, and mobility experts agree that CAVs will change the world.

CAVs have the potential to deliver massive value for the Automotive industry and generate billions of dollars in revenue over the next decade. **The integration of advanced technologies,** such as IoT connectivity, autonomous capabilities, and data analytics, **will change the concept of cars.** Car manufacturers who can make CAV innovations available to the masses will position themselves to win big.

As the industry shifts its focus towards these areas, manufacturers will increasingly need white-collar professionals in areas like autonomous vehicle engineering, data science and cybersecurity. At the same time, manufacturers will likely become less reliant on blue-collar workers who don't have these skills.

### Nicola Marsala

*General Manager, Nio Italy*

*Once, it was strategic to design and manufacture in-house the chassis, mechanical parts & engines. However, nowadays the core is to have an advanced in-house know-how of software development, autonomous driving, electric motors, batteries & microchips technologies, because just like other consumer digital devices, the UI experience is becoming the new distinctive elements of the brand.*

### Mario Del Vecchio

*Managing Director, Enginium*

*Keeping ahead in the market requires swift adoption of new technologies, trends, and a software-driven mindset. Emerging technologies like AI and connectivity are transforming consumer expectations and the services they demand, making vehicles more efficient and appealing. However, these advances create new technical challenges such as cybersecurity.*

# 4. The shift towards subscription-based mobility

Today's consumers are embracing new business models that offer convenient, flexible ways to access the products they need. Many businesses are now selling to customers through subscription models, where **the user pays solely for access to the product.**

In an increasingly digital world where fewer people need to drive to work, these subscription models are gaining ground in the Automotive industry. **The subscription-based Automotive industry** - which started at $3.6 billion in 2019 - **is expected to grow to $12 billion by 2027.**

## What kinds of subscriptions are companies offering?

| | |
|---|---|
| **Fixed Package** | Consumers buy a fixed package of products or services at an advantageous recurring price (e.g., insurance, roadside assistance, vehicle maintenance). |
| **Membership** | Consumers subscribe to a paid program with several benefits or exclusive services (e.g., discounts, special events, VIP access). |
| **Curated Box** | Consumers subscribe to a standardised box where the product mix is decided by the company according to the consumer's profile/behaviour. |
| **Pay-per-use** | Consumers subscribe to a service with a usage-based fee that is calculated at the end of the billing period (e.g., consumers pay for the kilometres they travelled). |
| **Replenishment & IoT** | Consumers subscribe to a service that automatically grants the replenishment of a certain product/bundle, based on their consumption. |

# How the circular economy can re-ignite the job market for blue-collar workers

Remanufacturing - the renovation of used or defective parts - is a sub-industry that's also growing. Its market size, which was $60.78 billion in 2022, is expected to reach $124.62 billion by 2030.

There are **numerous benefits to remanufacturing vehicle parts** such as the high-capacity lithium batteries that power electric vehicles. First, **manufacturers are able to boost their profits** without additional investment in expensive materials, while gaining new access to Automotive 4.0 business models.

In addition, **the consumer spends less due to the lower price of recycled goods.** At the same time, **the environment benefits** because of the reduced requirement to process raw materials and energy creating components, along with a decrease in waste produced.

Finally, **the job market grows because remanufacturing requires manual labour at every stage.** Robotics are simply impractical for many of the processes required, like unscrewing a screw or prying open a battery casing. Robotics also cannot deliver the problem-solving skills needed to disassemble a wide range of products when each one requires an individual approach.

Naturally, this is fantastic news for blue-collar workers whose jobs are threatened by automation. As this new market grows, there will be **plenty of new opportunities for workers** who wish to re-train and continue their employment in the Automotive industry.

## Sonia Bonfiglioli

*President, Bonfiglioli Group*

*Nowadays, there is a need to invent new recycling solutions to meet the challenge of raw material shortages. We are very committed to providing mechatronic and digitised solutions to meet these needs. The market will likely split into sub-segments, for instance, the textile market and the textile recycling market. It's very likely that the same will happen for semiconductors, raw materials and rare-earth metals.*



### Battery Recycling: a route to new revenue?

Electric vehicle batteries can still retain 80% of their capacity even when they no longer meet the standards for use in EVs. Because the remaining capacity represents terawatt hours of storage, they can potentially **be used in a variety of different electronic applications.**

Accordingly, **EV batteries represent a clear revenue opportunity for remanufacturers.** But while businesses have already begun conducting second-life trials with them, a number of technological and regulatory challenges remain ahead.

Because of the materials used in them, remanufacturers will require **clear guidance on the repackaging, certification, standardisation, and warranty liability of used EV batteries.** The European Union Battery Directive is currently being updated to offer guidance on important issues, like the minimum levels of recycled metals used in batteries.

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.6
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# Reputation of the Industry



Due to the changing economic, technological, and political landscape, the Automotive industry is under pressure to evolve quickly. Now is a critical time for Automotive companies to **attract and retain employees who can deliver the specialist skills** they need.

However, Automotive faces a multitude of **challenges** when it comes to recruitment.

As a result, **it's never been more important for Automotive companies to consider the reputation of their sector** - both for employees inside and outside of the industry. Professionals who seek careers in dynamic, forward-thinking companies may be deterred if the Automotive industry doesn't appear to be innovating enough.

What's more, Automotive companies will have to stack up against sectors that are known to offer competitive salaries, benefits, and career development opportunities.

## Victor González Franco

*Plant Manager, Eurostyle Systems*

*We have to adapt to the needs of a younger, evolving generation of workers. The most attractive opportunities we can offer involve continued career development. When candidates apply to work for us, they can be sure that we deliver what I might call "evolving stability". We provide employees the opportunity to grow within the company and give them access to promotions. Candidates work with the newest technologies and learn the latest production or building methods which is both interesting and challenging. Because of our involvement in regional clusters of production facilities, our employees have access to future labour mobility with roles at different plants around the world.*

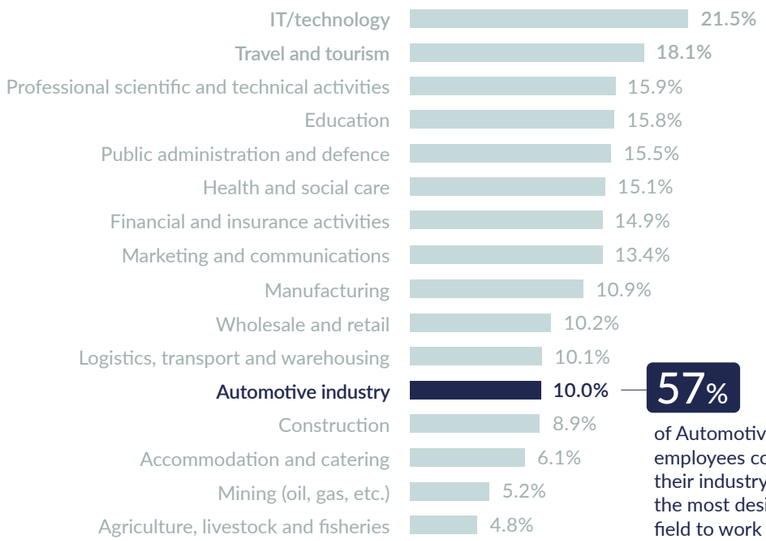
# How attractive is automotive compared to other industries?

As part of our research, we asked **both Automotive and non-Automotive workers** 'What do you think is the best sector to work in?'

Looking at the aggregated scores of both groups, the Automotive industry ranked 12th - a clear indicator that it has challenges with its reputation.

**Source**
Gi Group Holding, Automotive International Survey – 2023

## Industry investment in DEI targets and quotas




It's evident that the Automotive industry has plenty of room for improvement compared to other industries. But does everyone within the industry feel the same way?

To explore this question, we divide the data by gender as well as age group. The industry was slightly more attractive to men, who ranked the industry at number nine, compared to 12 for women.

The data also showed that younger workers - i.e. Gen Z and Millennials - found the sector slightly more attractive than Gen X and Baby Boomers did. But the most useful insight here is that Gen Z and Millennials both found IT the most attractive sector.

By positioning themselves as highly innovative and tech-focused, Automotive companies can make themselves attractive to younger workers who are in interested in IT. The sector's **high demand for specialised roles and increasing focus on innovation** could interest candidates looking for alternative career paths in tech.



**Source**
Gi Group Holding, Automotive International Survey – 2023

## Reputation of the Automotive sector across countries by generation


## Marco Santucci

*Chief Executive Officer, Jaguar Land Rover Italia*

*The question is not whether the automotive sector is attractive or not, but whether the company itself can be the best choice for a young graduate. Organisations must try to be innovative, projected towards the future and offer new forms of recruitment and work experience.*

# What are the top motivational drivers for Automotive talent?

In order to attract the best talent, companies need to understand what's currently drawing workers to the sector. To explore the issue, we asked experts and workers 'What factors do you think influence the decision to apply for a role or company in the Automotive industry?'

The most popular reason (at 35%) was the **reputation of the brand/company.** Automotive companies have the unique advantage of being well-known publicly, so having a well-recognised brand on their CV can be a major advantage for professionals.

However, the two lowest items on the list were **work-life balance and flexible planning options** (20.5%) and **opportunities for professional development and training** (26.1%). While it's positive that these answers were chosen at all, it's clear that the Automotive industry isn't perceived desirable in areas that a lot of workers value.

**Source**
Gi Group Holding, Automotive International Survey – 2023

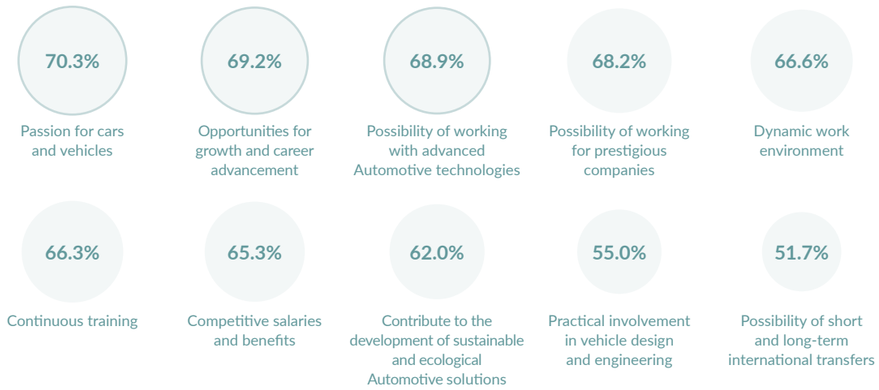
What factors do you think influence the decision to apply for a role or a company in the automotive sector?


# Why do people find the Automotive industry attractive?

For workers already in the industry, **passion for cars and vehicles** is the number one factor that makes the industry attractive. Automotive workers also rate the **opportunities for growth and career advancement** highly, along with the **possibility of working with advanced Automotive technologies.**

**Source**
Gi Group Holding, Automotive International Survey – 2023

Why do people find the Automotive industry attractive?





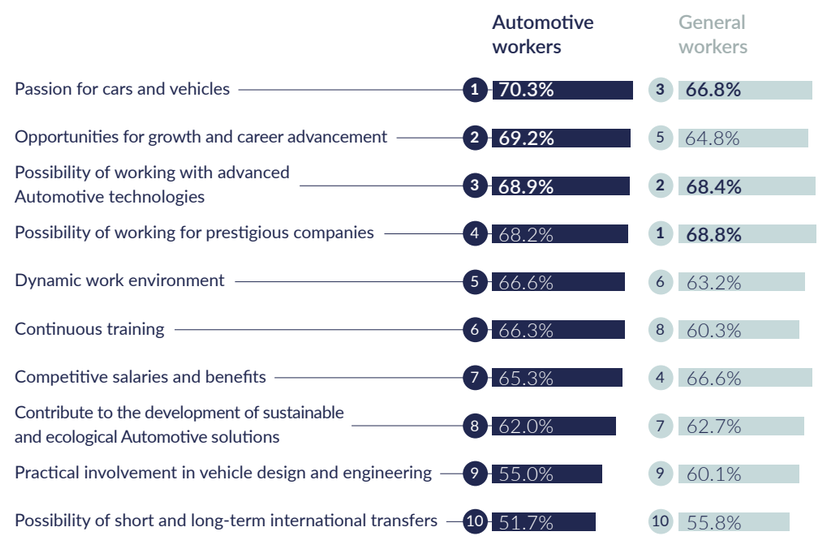

# So how does this compare with workers viewing the industry from the outside in?

For non-automotive workers, the **possibility of working for prestigious companies** is the number one factor making the industry attractive. Clearly, general workers find the prospect of working for big household brands exciting.

Both Automotive and general workers rank **possibility of short and long-term international transfers** the lowest.

**Source**
Gi Group Holding, Automotive International Survey – 2023

Why do you find the Automotive sector attractive?



# What do Automotive workers find unattractive about their industry?

For Automotive workers, the **high level of competition and pressure** is the worst aspect of the industry.

This is followed by **limited opportunities for professional growth** in second place, and salary levels in third.

**Source**
Gi Group Holding, Automotive International Survey – 2023

### Why do people find the Automotive sector unattractive or worse than others?



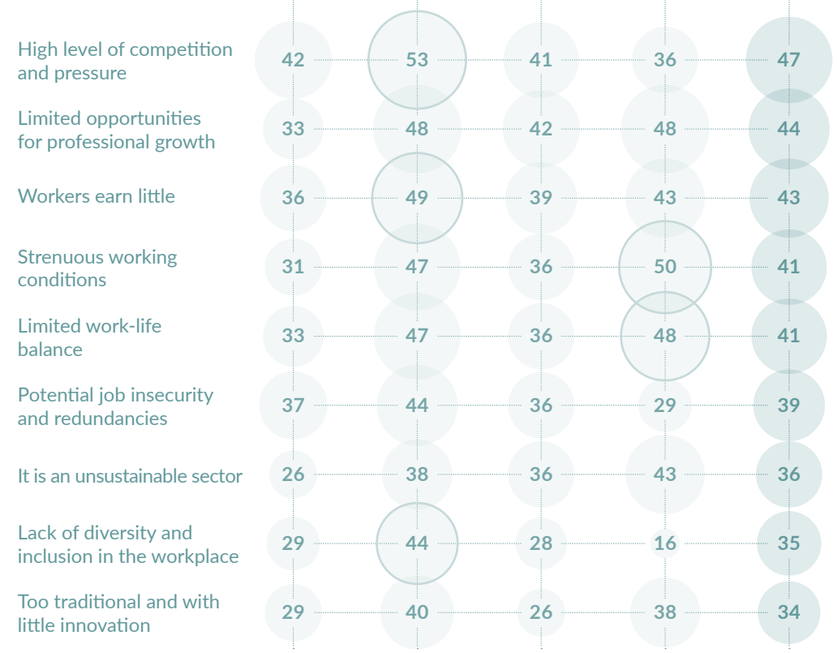

## Generations apart

### How do different age groups compare?

A closer look at the data revealed that these concerns vary between older and younger age groups:

- **Baby boomers** are at a stage of life where their physical capabilities are declining. Understandably, they are more concerned about strenuous work and conditions and the lack of work-life balance.
- **Millennials and Gen Z** are newer to the workforce and are seeking to establish themselves in a highly competitive sector. They are more concerned about high levels of pressure, lower compensation, and limited opportunities for growth.

### Why do you find the Automotive sector unattractive? (by generation)




Source: Gi Group Holding, Automotive International Survey – 2023

# How does this compare with views from outside the industry?

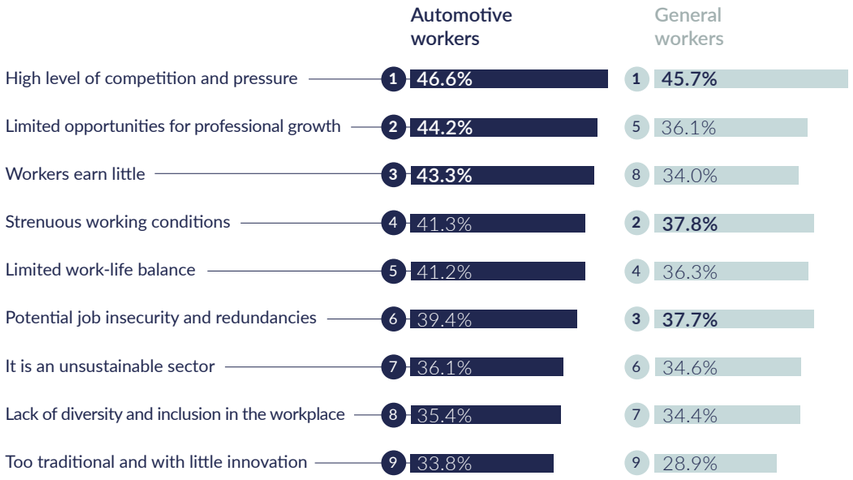
Even workers from outside the industry recognise the **competition and pressure in the industry,** with this factor also reaching number 1.

General workers were less concerned about **salary levels** and **limited opportunities** for personal growth but were more concerned about **strenuous working conditions** and **potential job insecurity and redundancies.**

It's clear that the sector as a whole suffers from an image problem. Workers see automotive as a stressful and insecure career path, and this will be a challenge for companies who wish to recruit from other sectors.

**Source**
Gi Group Holding, Automotive International Survey – 2023

Why do you find the Automotive sector unattractive or worse than others?






# How satisfied are Automotive workers with their jobs?

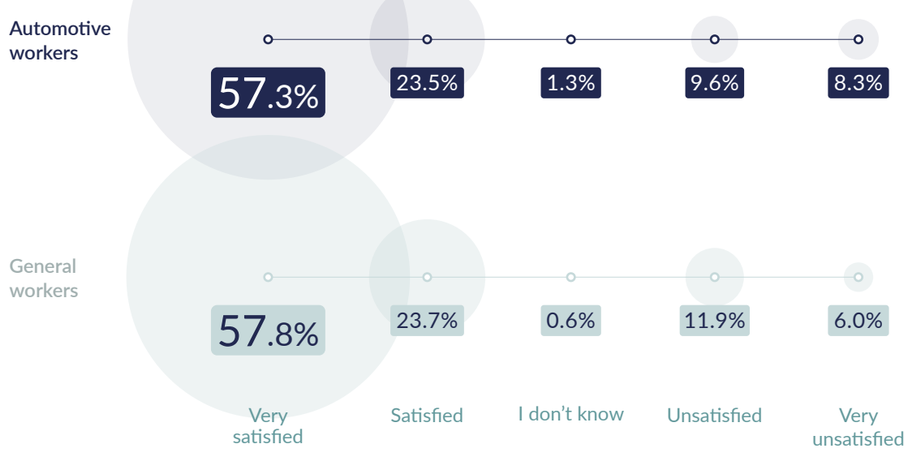
While workers don't rate the sector as highly attractive, they are generally satisfied with their jobs. In total, **80.8%** of workers are either **satisfied or very satisfied** with their jobs.

These satisfaction levels match up closely with the satisfaction levels of workers who aren't in the Automotive industry. Overall, Automotive workers appear to be no more or less satisfied with their jobs than workers in other industries.

Millennials (82.4%) and Gen Z (86.6%) were generally more satisfied with their jobs, compared to Gen X (72.6%) and baby boomers (72.7%).

**Source**
Gi Group Holding, Automotive International Survey – 2023

How satisfied are you with the company in which you work?

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# Impact of New Technologies



Today, the very concept of the car is changing. While older generations saw large, powerful vehicles as a status symbol, today's younger generations see them as dangerous for the climate and impractical for modern life.

Accordingly, Automotive companies are now **moving away from traditional gas and fuel-powered vehicles and placing increased focus on electric vehicles.** This change is not only due to changing consumer desires, but by governments' 'Net Zero' pledges, which are introducing legislature that restricts gas-powered vehicles.

This move towards electric vehicles will have **a profound impact upon the workforce.** Electric vehicles have fewer components, which means a reduced need for traditional manual workers who would typically assemble them.

What's more, modern consumers **expect the products they use to synchronise with other technology ecosystems** - and cars are no exception. Automotive companies are therefore recruiting technical workers with expertise in software engineering, data science, connected technologies and more.

However, the shift in workforce requirements is not only about the vehicles themselves, but the processes and equipment used to manufacture them. Companies are also taking advantage of new technologies that can streamline and automate their manufacturing processes.

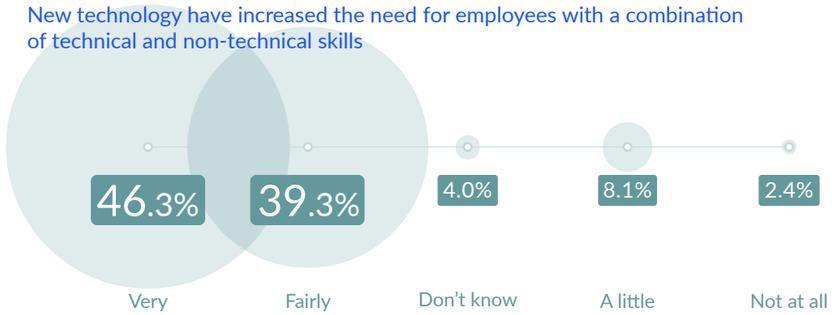
**So which workers will be most affected by these changes - and how are Automotive companies adapting?** This chapter will explore the latest findings from our primary and secondary research.

## How is technology shaping the workforce?

We asked experts in our study 'How much do you agree with the following statements about the impact of new technologies on the Automotive workforce?'

Experts overwhelmingly agreed with the statement that new technologies have **increased the need for employees with a combination of technical and non-technical skills.**

New technology have increased the need for employees with a combination of technical and non-technical skills



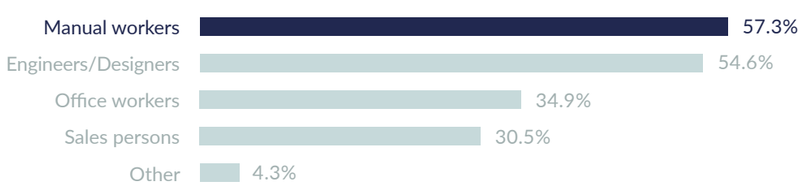

Source: Gi Group Holding, Automotive International Survey – 2023

# Which types of job are changing due to technology?

We asked Automotive decision-makers to explain which sections of their workforce were being most heavily impacted by new technologies in the workplace. Manual workers came first in the results (57.3%), with engineers and designers in close second place (54.6%).

**Source**
Gi Group Holding, Automotive International Survey – 2023

What categories of workers have been most impacted by the introduction of new technologies?




# How does the impact of new technologies vary across countries?

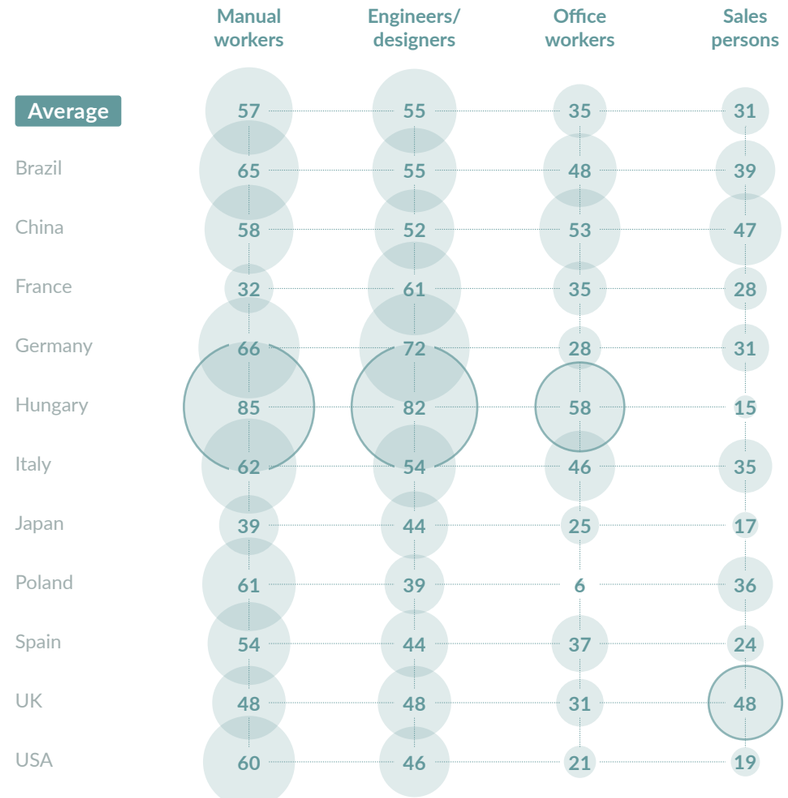
Automotive workers in Hungary reported the heaviest impact on their workforce due to technology. Some 85% of experts there said that **manual workers' tasks are changing,** and 82% said that engineers' and designers' tasks are changing.

At the other end of the spectrum, workers in Japan reported the lowest overall impact of all the countries mentioned. While Japanese Automotive companies are known for innovation, these numbers may reflect that their working culture is highly people centric.

In France, Germany, and Japan, engineers and designers were more greatly impacted by technology than manual workers.

**Source**
Gi Group Holding, Automotive International Survey – 2023

The impact of automation on workers: differences across countries



### Nicola Marsala

*General Manager, Nio Italy*

*The candidate search pattern is very different between China and Europe. In Asia, the focus is not on the candidate's knowledge of the sector, but their technical skills and background of international experiences. In Europe, we are anchored to the passion for the Automotive industry as a criterion of choice. Asia has a more pragmatic approach aimed at efficiency.*

# How new technology helps older workers go the distance

Many older workers, particularly those in blue-collar roles, struggle in the later stages of their careers due to their reduced physical capabilities. However, it's beneficial for Automotive companies to retain them due to the **valuable experience and skills** they have built up. What's more, society benefits when older can workers stay in work, particularly when the alternative would be drastic re-skilling or unemployment.

Recent advances in technology now facilitate older workers in continuing or starting roles that would otherwise be inaccessible to them. In particular, robotics and exoskeletons are improving their capabilities to carry out physically demanding tasks.

- **Lifting and material handling device:** equipment that assists or helps the operator in moving and picking objects and parts and/or during the assembly tasks.
- **Exoskeleton:** technical device worn by the operator, which allows a direct exchange of mechanical power and information signals.
- **Intelligent/Smart tool:** advanced active tool that is able to communicate and adapt itself to the environment of use.
- **Collaborative Robot:** robot that can physically interact with operators during assembly and manufacturing activities.

### Victor González Franco

*Plant Manager, Eurostyle Systems*

*So much of the human-machine work divide is about attitude. Some employees may try to push back against the new, machine-driven era, but quite a few have mentioned that they see lots of opportunities in the human-machine collaborative space. We actually have people reaching out to us asking for trainings in machine maintenance and operations and looking to learn machine-support skills. This is a positive sign that employees are willing to adapt.*

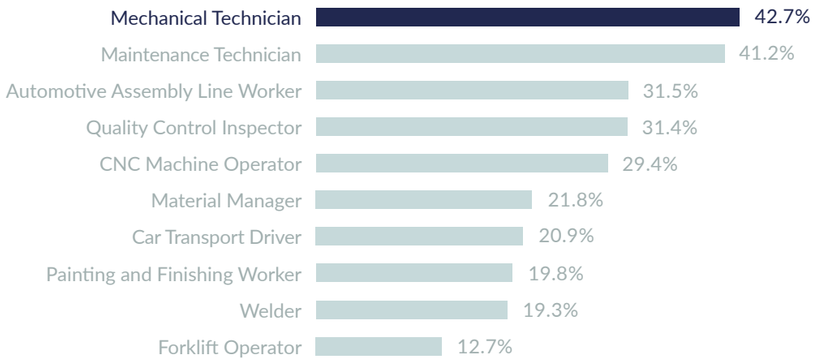
# How is the job landscape changing for blue-collar workers?

Many sectors now expect technology to have the biggest impact of blue-collar workers, whose jobs are traditionally less technical and more physical. So how can blue-collar workers re-skill accordingly—and which roles will employers need to fill? To explore how blue-collar jobs will change, we asked professionals which jobs would be most in demand in the next five years.

Across the board, our respondents said that **Mechanical Technicians** (42.7%) and **Maintenance Technicians** (41.2%) would be the most in demand.

**Source**
Gi Group Holding, Automotive International Survey – 2023

For which of the following blue-collar roles in Automotive sector will there be greater demand in the next 5 years?



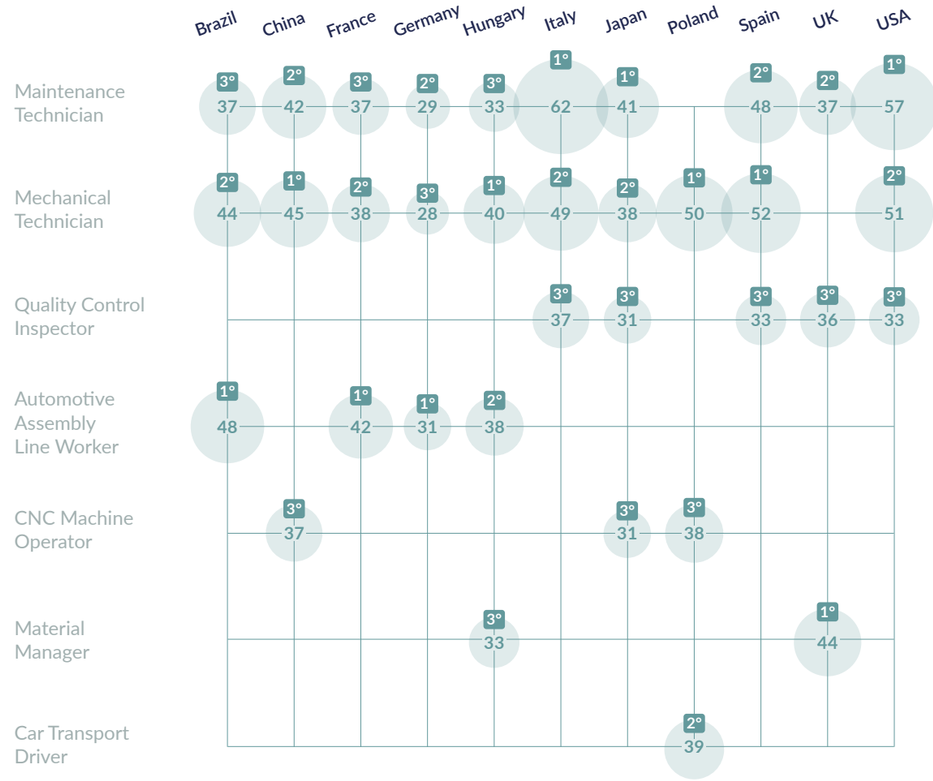

# How does the demand for blue-collar jobs vary across countries?

The trends in blue-collar jobs are similar across all the countries in our study, with Maintenance Technicians and Mechanical Technicians being most in demand. However, there are some notable exceptions:

- USA, Poland, Spain and China all listed **CNC Machine Operators** in their top roles;
- Poland also expects **Car Transport Drivers** to be highly in demand;
- UK respondents said **Material Managers** would be the most in demand.

**Source**
Gi Group Holding, Automotive International Survey – 2023

How does the demand for blue-collar jobs vary across countries?




# How is the job landscape changing for white-collar workers?

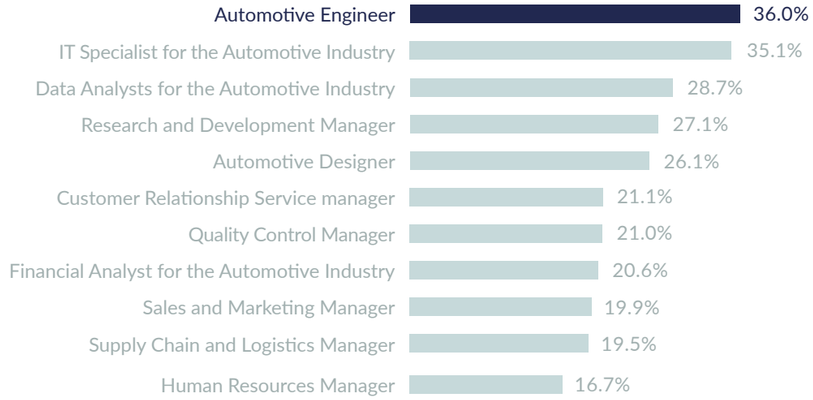
The white-collar workforce is also evolving due to the increasing need for specialists who can help adopt to changing demands for innovative technologies and business models. What's more, Automotive companies are seeing the need to modernise in order to attract customers and talent—and this will have a knock-on effect upon white collar roles.

To explore these changes, we asked our respondents which white-collar jobs would have the greatest demand in the coming years.

- **Automotive Engineers, IT Specialists** and **Data Specialists** were the most common answers;
- While they ranked lower, there is also greater demand for non-technical roles like **Customer Service Relationship Managers, Financial Analysts** and **Sales and Marketing Managers.**

**Source**
Gi Group Holding, Automotive International Survey – 2023

For which of the following white-collar roles in Automotive sector will there be greater demand in the next 5 years?




# How does the demand for white-collar jobs vary across countries?

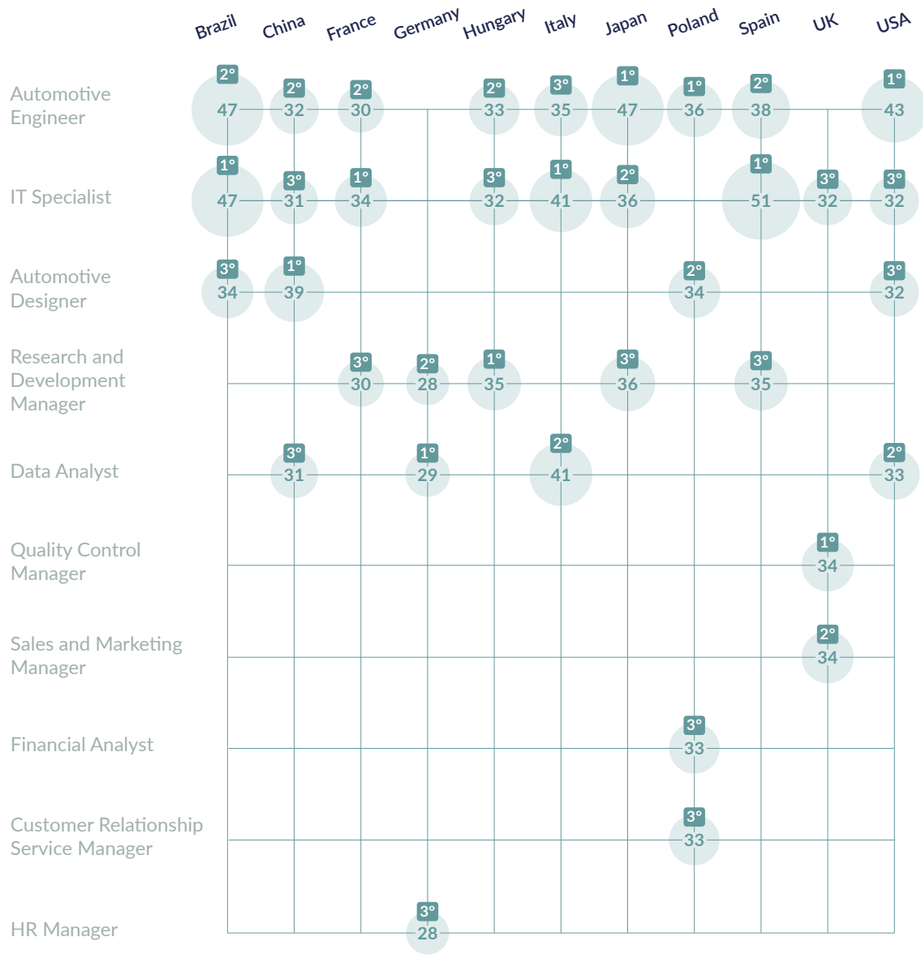
Looking at the difference between countries, there is slightly more variation in the demand for white-collar roles. This may reflect the availability of specialists in those **countries, along with the changing demands from customers, governments, and supply chain.**



- France, Germany, and Hungary all ranked **Research and Development Managers** in their top roles;
- Germany was the only country to have **HR Managers** in its top three in demand roles;
- The UK is an interesting outlier again, with its most in demand roles being **Quality Control Managers** and **Sales and Marketing Managers.**

**Source**
Gi Group Holding, Automotive International Survey – 2023

White-collar roles demand: differences across countries



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# Workforce of the Future



The Automotive industry is already seeing a fundamental shift in its skill requirements, which will only accelerate in the coming years. Demand for electric vehicles is increasing rapidly, and automakers are already competing for **electric vehicle engineers, battery specialists,** and **experts in charging infrastructure.**

At the same time, **automakers have a growing requirement for software specialists** who can help to create the cars of the future. Autonomous driving is already becoming a reality, as are advanced driving assistance innovations.

But to integrate these technologies in their products, automakers will need to recruit software developers and computer engineers who have expertise in these fields. However, there is already a global shortage of software engineers, with experts predicting that this shortage will reach 1.2 million by 2026[1].

So, **is the Automotive industry adapting quickly enough to the current landscape?** Perhaps not: a 2020 survey of Automotive supply firms after the Covid-19 pandemic found that just 30% felt confident that they had the capabilities to respond to current trends[2]. What's more, just 9% of companies were prioritising recruiting for software architect, developer, and system integrator roles, despite the growing importance of these positions.

So which skills are most lacking, and **how are companies attempting to bridge the skills gap?** We talked to the experts and workers in our study to find out.

1. Source: Bureau of Labor Statistics, 2023

2. Source: "Winning the race for talent: A road map for the automotive industry", McKinsey, 2020

# Skills challenges

## A spotlight on the Automotive manufacturing industry

As Automotive manufacturing industry evolves to offer new products and business models, businesses need workers with specialist skillsets. Yet 31% of businesses[1] in the industry report that growing labour costs and skills shortages are a significant challenge for them.

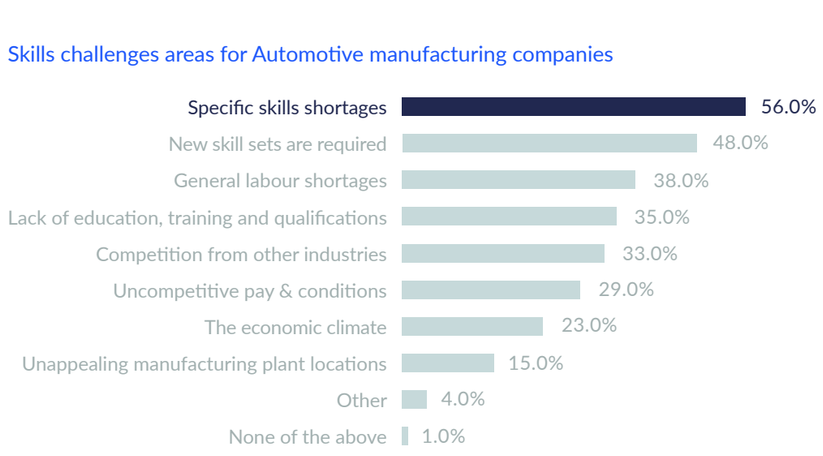
When asked what their skills struggles are, **56% of companies said they have specific skills shortages,** while **48% said they require new skill sets.**

What's more, **33% of companies face competition from other industries when hiring staff.** While this is good news for employees with the right skills, it means employers must work harder to make themselves attractive to suitably skilled professionals.

1. Source: AMS & ABB Automotive Manufacturing Outlook Survey, AMS & ABB, 2022

**Source**
"AMS & ABB Automotive Manufacturing Outlook Survey", AMS & ABB, 2022

Skills challenges areas for Automotive manufacturing companies




### Ana Paola Reginatto

*Global Head of e-mobility and Connectivity, Maserati*

*More than a general candidate shortage, what we observe is a shortage of quality candidates. These are candidates who are already experienced in connectivity and software but have been working in other consumer-focused industries and are willing to move to the Automotive field. It is difficult to find candidates who are curious and interested, above all, in the automotive sector.*



### Patrick Klaus Beyer

*Customer Experience HUB & Loyalty Manager, Mazda*

*Looking at things differently, challenging the status quo, and adopting a more curious perspective can help to address the issue of skills shortage. In Mazda, when recruiting, there is a willingness to strike a balance in terms of available skills by bringing in outsiders of the industry to shake things up, provide a different point of view, and stimulate internal innovation as well as industry growth.*

### Marco Santucci

*Chief Executive Officer, Jaguar Land Rover Italia*

*Smart working, and the possibility of hiring remotely engineers from around the world, paves the way for acquisition of new skills beyond national borders. This can help satisfy the demand for otherwise vacant job positions, effectively reducing the phenomenon of candidate shortage.*

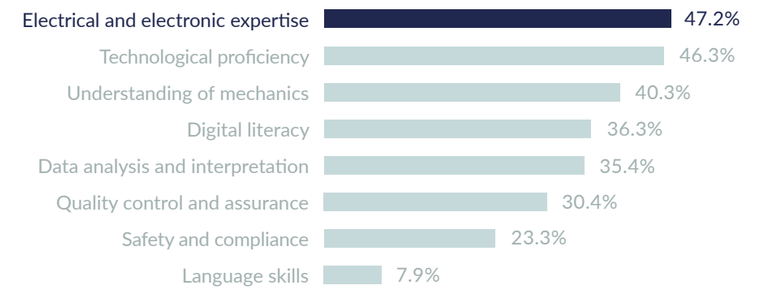
# Which skills are needed for blue-collar positions?

We asked our professionals what skills will be the most important for blue-collar positions in the next five years. Respondents marked their top three skills from a list of multiple-choice questions, compiled after preliminary research.

The results show that while mechanical skills will still be coveted in future, technical skills are becoming increasingly important for blue-collar jobs. **Electrical and electronic expertise** (47.2%) and **Technological proficiency** (46.3%) topped the list, and **Data analysis and interpretation** (35.4%) in fifth place.

**Source**
Gi Group Holding, Automotive International Survey – 2023

What will be the blue-collar workers' skills that will be the most in demand in the next 5 years?



## What do these skill categories involve?

These blue-collar skill categories are applicable to a wide range of manufacturing, engineering, testing and operational roles.

| | |
|---|---|
| Electrical and electronic expertise | Knowledge of electrical systems, wiring, and electronic components used in modern vehicles, including electric and hybrid vehicles. |
| Data analysis and interpretation | Ability to collect, interpret, and analyse data from vehicle sensors, diagnostic tools, and performance metrics to identify and resolve issues. |
| Digital literacy | Ability to navigate and utilise relevant digital tools and software in the Automotive industry, including diagnostic equipment, data analytics tools, and production automation systems. |
| Understanding of mechanics | Strong foundation in traditional mechanical skills such as engine repair, maintenance, troubleshooting, as well as knowledge of advanced mechanical systems in newer vehicles. |
| Quality control and assurance | Knowledge of quality standards and procedures to ensure the production of high-quality vehicles and components. |
| Safety and compliance | Awareness of workplace health and safety protocols and environmental regulations. |

### Martina Mauri

*HR Innovation Practices Observatory Director, Politecnico di Milano*

*The older population is more resistant to the changes imposed by new technologies because it involves altering a context that is familiar to them and that they have been accustomed to for several years. It is crucial to involve this population from the early stages of change, helping them understand the importance of acquiring new skills and how their role and impact on the entire organisation will transform. The Automotive industry offers various opportunities for the older population to engage in a new context enabled by digital technologies.*



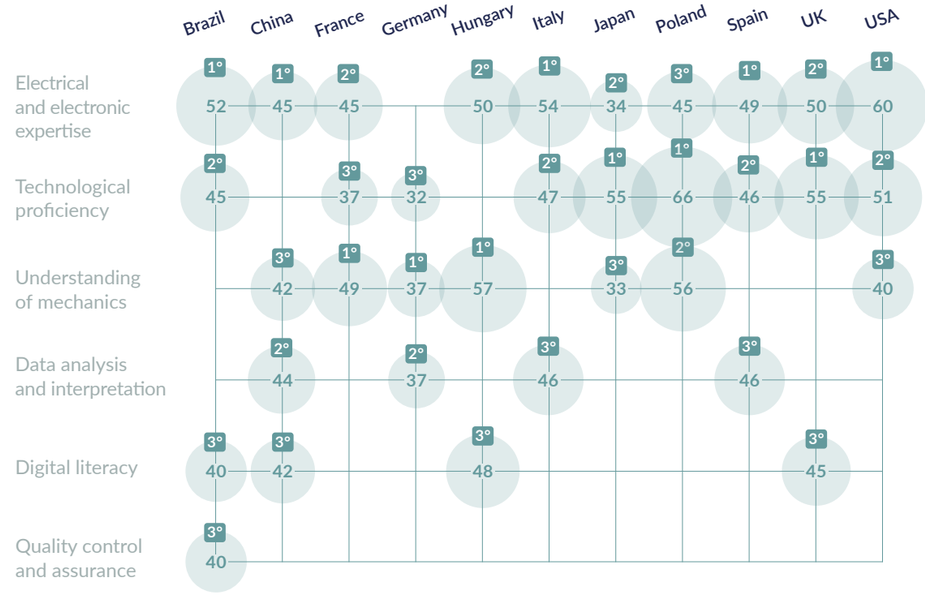
# How does the demand for blue-collar skills change across countries?

When looking at the in demand skills from countries, the results are fairly consistent. Seven out of the 11 countries we researched ranked **understanding of mechanics** in their top three blue-collar skills.

However, only the UK, Hungary, China, and Brazil ranked **digital literacy** in their top three skills. And only Italy, Germany, Spain, and China ranked **data analysis and interpretation** in their top three skills.

**Source**
Gi Group Holding, Automotive International Survey – 2023

Blue-collar skills demand: differences across countries




### Ignazio Dentici

*Vice President Global Automotive & eMobility Industry - Manufacturing Intelligence division, Hexagon*

*The operator in the factory must have not only manufacturing skills, but also digital skills to manage machinery, and to analyse and read the data coming from the production systems.*

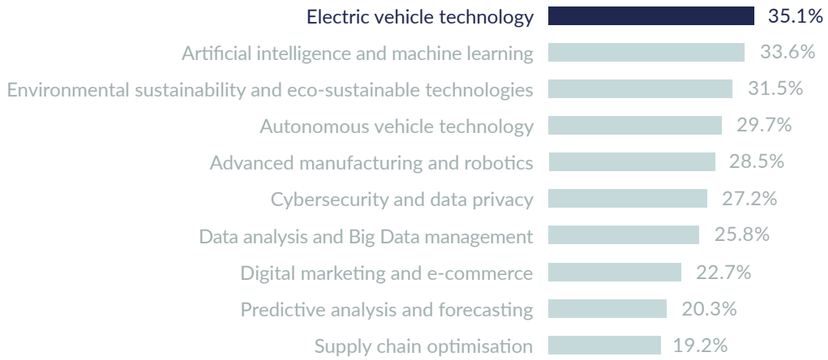
# Which skills are most in demand for white-collar positions?

To explore this topic, we asked respondents to rank the skills they expected to be most in demand in the next five years.

Not surprisingly, the most in demand skills represent the current trends for vehicle design and engineering: **electric vehicle technology, AI and machine learning skills,** and **sustainable technologies** take the top three spots.

**Source**
Gi Group Holding, Automotive International Survey – 2023

What will be the white-collar workers' skills that will be the most in demand in the next 5 years?




## Nicolas Chavelas

***Manager Division IT & Digital, Grafton***

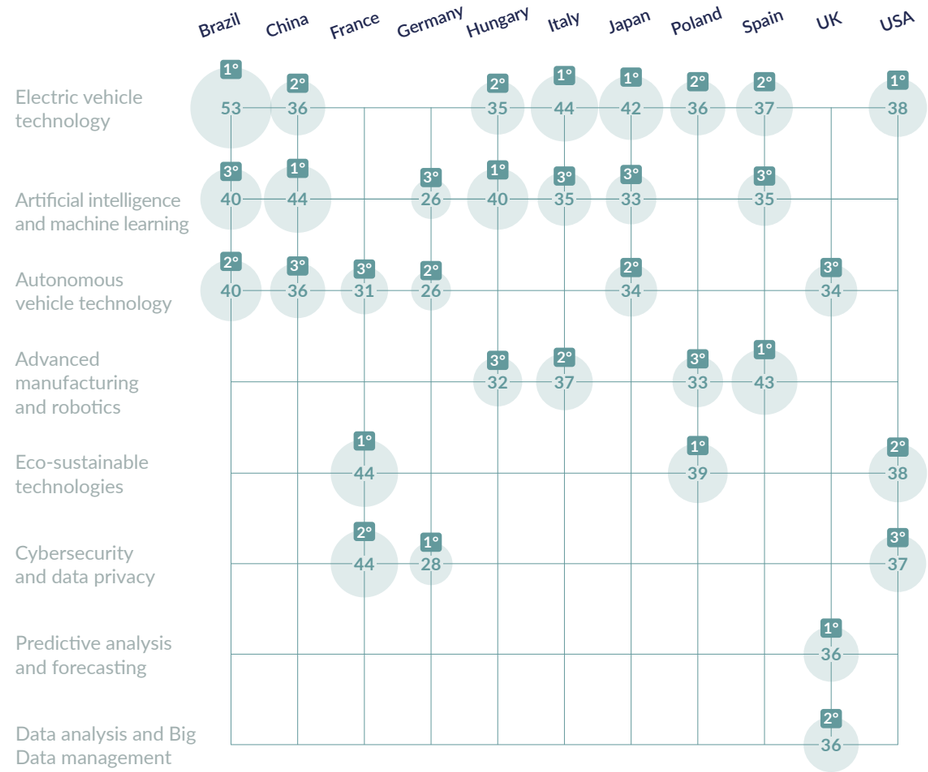
*In the shifting landscape of the Tech roles market, the trend clearly remains in the favour of job seekers. Conventional application approaches, which typically involve CV submission and attending standard interviews, still dominate the hiring process, posing challenges for those from non-IT backgrounds. Moreover, as more individuals from sectors like finance and sales transition to IT through additional training, securing roles can still prove difficult. Within the IT sector, distinct divisions such as development, infrastructure, and data demand unique hiring strategies. As we navigate these nuances, companies should remain innovative and open, welcoming talent from diverse fields and areas around the globe to effectively fulfil their IT requirements.*

# How do in demand white-collar skills differ across countries?

- France and the USA were the only countries to list **Data security and privacy** in their top three;
- Despite the upcoming regulations that will ban $CO^2$ emissions from cars in the EU, neither France nor Germany had **Electric Vehicle technology** in their top results;
- The UK was the only country to feature **Predictive analytics and Forecasting,** as well as **Data analysis and Big data management,** in its top three.

**Source**
Gi Group Holding, Automotive International Survey – 2023

White-collar skills demand: differences across countries



## Giulio Salvadori

*Director at Osservatorio IoT and Connected Cars, Politecnico di Milano*

*In such a fast-moving, unpredictable environment, enterprises - regardless of their position along the automotive value chain - need to have confidence in their own workforce's talents, and to be capable of acquiring or developing the skills required to remain competitive."*

## Marco Santucci

*Chief Executive Officer, Jaguar Land Rover Italia*

*"Several key roles will be indispensable for the future automotive supply chain. First, individuals who know the job and are capable of training AI in performing important tasks. Second, digital marketing experts who can help us use the increasing amounts of data. Third, customer experience specialists who can understand market needs and build services around customers."*

# Labour and Skills challenges

## How the Automotive manufacturing industry is adapting

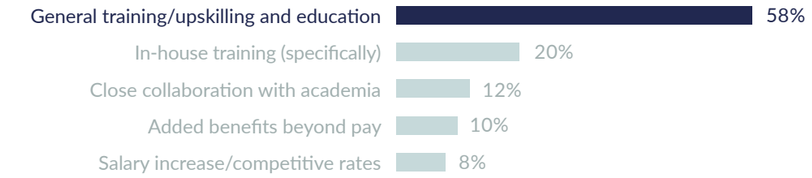
It's clear that the sector has significant challenges when it comes to sourcing staff with key skills. So how are businesses within the industry adapting to these new challenges?

According to 2022 data on the Automotive manufacturing industry, 58% of businesses are running **training, upskilling and education programs,** while 20% are specifically holding **in-house training.**

Just 8% of companies are attempting to attract skilled employees by offering them greater pay. This indicates that companies are not willing to compete with salaries or are instead prioritising investing in their existing employees.

**Source**
"AMS & ABB Automotive Manufacturing Outlook Survey", AMS & ABB, 2022

Labour and Skills challenges: how the industry is adapting




# Upskilling and reskilling

## Companies

Companies are rolling out a broad range of training initiatives to reskill and upskill their workforces. In particular, **training on digital skills** (39.1%) and **workshops and vocational training courses** (36.6%) were the most common amongst our respondents' answers.

However, these training initiatives appear focused on general skills - it's not clear whether they're intended to develop the specialisms required in artificial intelligence, autonomous driving, or other key areas of innovation.

**Source**
Gi Group Holding, Automotive International Survey – 2023

Which of the following initiatives is your company implementing to ensure the continuous training of its employees?


## Patrick Klaus Beyer

*Customer Experience HUB & Loyalty Manager, Mazda*

*Finding candidates who have the necessary skills and are ready for the job is challenging across industries. Mazda has recognised the importance of internal retraining to address this issue. We promote knowledge and best practice sharing within the teams and across departments. This helps us gain a comprehensive understanding of the challenges in digital and connectivity areas, which can become problematic if not addressed.*

## Ezio Fregnan

*Comau Academy & Education Business Director*

*Comau believes in people's fundamental role in the Fourth Industrial Revolution, as reflected in our reskilling and upskilling efforts involving over 1,000 employees. Our E-Skill program enhances skills in electrification and e-Mobility, reinforced by collaborations with businesses and academia to exchange knowledge, support research, and harness young talent. Given the rise in investments in electric mobility and decarbonization in Europe, we see growing demand for experts with diverse expertise from electrochemistry to industrial digitisation.*

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# Accelerating International Recruitment



International migrants could be the answer to the skill and labour challenges that Automotive companies are facing. Some of the countries that are struggling most with labour and skills challenges, such as the USA, are already popular destinations for migrants. So could Automotive companies in these countries recruit workers from untapped talent pools abroad?

When considering the possibilities, we must start by understanding why and how migrants move to other countries. According to the International Migration Data report, UN, 2020, **differences in income, wages and opportunities for socioeconomic advancement** are some of the main drivers of international migration. What's more, most migrants move to a place with higher income, suggesting that countries like the USA, UK, and France will have significant advantages.

However, trends also show that migrants from poorer countries tend to migrate to nearby countries. This is likely to be due to the costs of moving to a different continent where the cost of living is significantly higher - but may also be due to concerns around languages, culture, and family ties.

Automotive companies will need to **keep these factors in mind when creating international recruitment programs** that are attractive to migrant workers. Besides the worker's salary, the hiring company may also need to offer **relocation transport, temporary accommodation, language training, cultural integration programs,** and **healthcare** - in some cases, for the migrant's entire family.

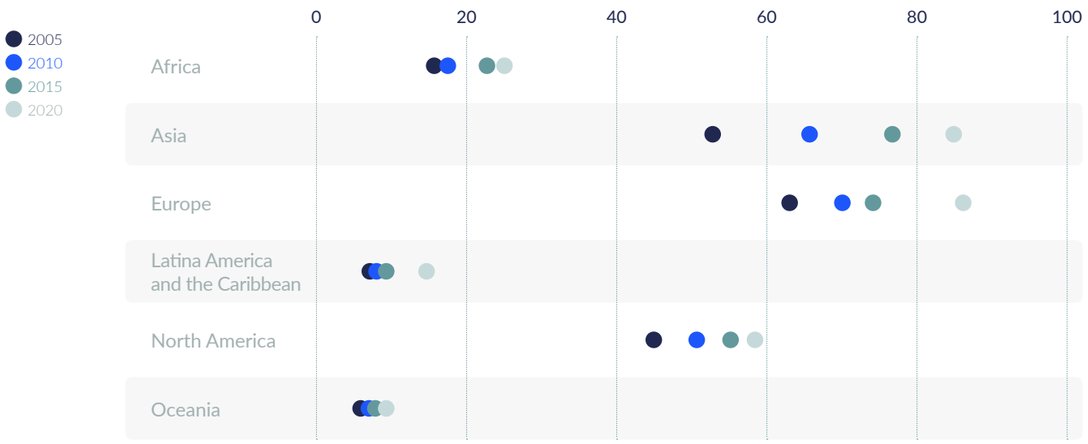
Companies will also need to consider the many financial and legal complexities of bringing in workers from abroad. Most countries offer preferential treatment to skilled workers, reducing the requirements for entry and residency. But despite this, immigration can still be a lengthy and expensive process.

To explore this topic further, we conducted primary and secondary research into the current trends around hiring migrant workers.

## What are the most attractive destinations for international migrants?

According to UN data, **Europe** is currently the most popular destination for international migrants, receiving 30.9% of the global migrant population. **Asia** is in close second place, receiving 30.5% of migrants, while **North America** receives 20.9%.

**Source**
UN. DESA, 2021




# Which countries offer the best wages to Automotive workers?

While salary is not the only consideration for migrants moving abroad for work, **it's often a major factor in their decisions**. For migrants going after the highest salaries, the UK and USA present the best opportunities for Automotive workers.

Conversely, Poland and Hungary are the least competitive European countries, offering similar salaries to Brazil.

Notably, while Japan has a considerably lower 'high wage' than countries like Germany and France, its average salary is similar to those countries.

**Source**
Salaries Explorer


# International recruiting

## What are the common challenges for employers?

Attracting international workers may be **a potential strategy for Automotive companies looking to fill a skills gap.** However, migration is typically a complex process, and companies may need to allocate extra resources towards making it a viable solution.
To explore the challenges at play, we asked our respondents what makes it difficult to hire workers from abroad.

The greatest concern was **language barriers and communication difficulties,** with 42.4% of respondents stating they have this challenge.

However, many of the other challenges revolve around the administrative costs and complexities of hiring migrant workers:

- Complexity of immigration laws (34.8%);
- Administrative burdens and bureaucratic practices (32.6%);
- Ensuring compliance with tax and social security obligations (29%).

The implication here is that while **recruiting migrant workers is a potential solution,** it will **require dedicated resources.** Automotive companies will require internal or external assistance to navigate the legal, financial, and administrative challenges of recruiting suitable workers. What's more, they may need to invest in language programs for both existing and incoming staff.

**Source**
Gi Group Holding, Automotive International Survey – 2023

What elements make it difficult to hire workers from abroad in the automotive sector?


## What are the differences between countries?

The majority of countries cite language issues in their top challenges. This includes countries like the UK and Spain, along with countries whose languages are less widely spoken: Italy, Brazil, Japan, Poland and Hungary.

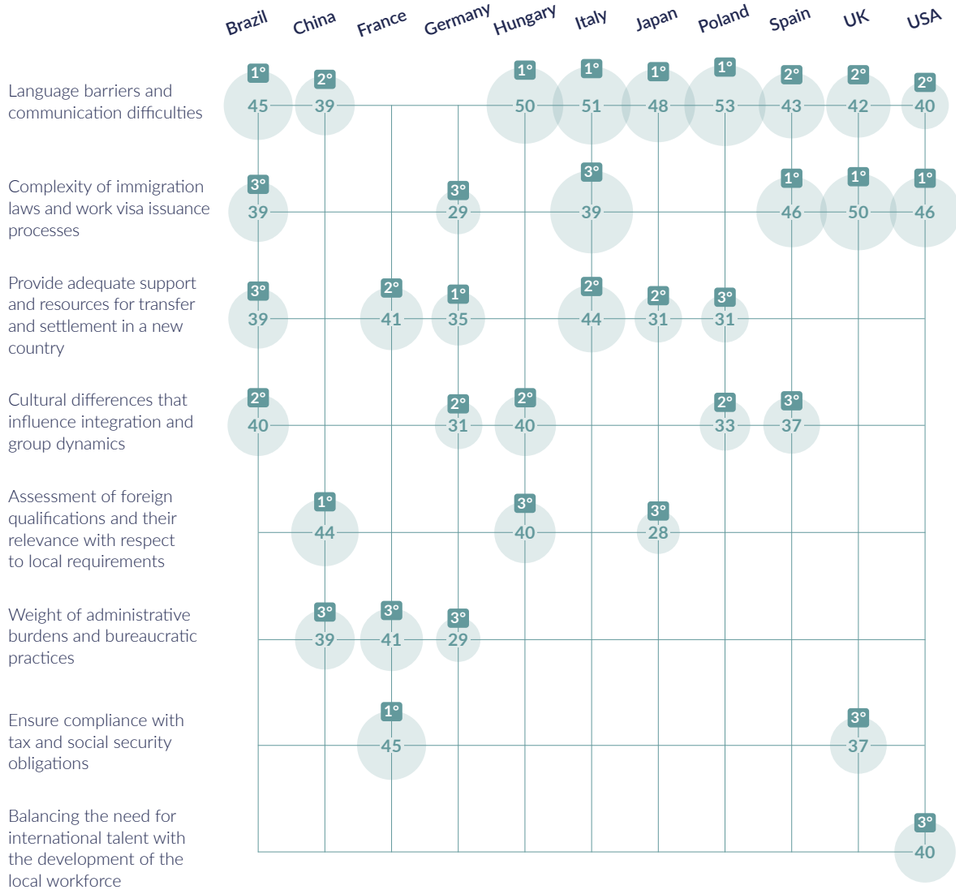
Most countries had similar responses, with some interesting exceptions:

- Japan, China, and Hungary all listed **assessment of foreign qualifications** in their top three challenges;
- UK, USA, Spain and Italy put **complexities of immigration law** in their top three concerns;
- The USA was the sole country to have **balancing the need for international talent with the needs of the local workforce** as a top challenge.



**Source**
Gi Group Holding, Automotive International Survey – 2023

International mobility: differences across countries




### Camilla Negri

*HR Manager, Robert Bosch GmbH Branch in Italy*

*"International mobility and Diversity are related topics for Bosch. We have a large database of open positions worldwide, and every candidate or associates can apply to work in destinations other than their home country. We believe that employees in high-level positions must have at least one period of international experience, because our managers must be able to manage diversified teams by understanding different cultures and realities."*

# Equality in Automotive



The Automotive industry has traditionally been male-dominated, and this is a trend that continues even today. According to Deloitte, **just 20%[1] of the UK Automotive workforce is comprised of women.** The European Commission has also reported similar numbers, measuring women at 20% of the workforce in 2021[2].

However, the Automotive industry is waking up to the advantages women can bring - not just in skills, but also in consumer perspectives. Data suggests that in the women buy 54% of all cars and are more likely to buy cars online than men. **Bringing more women into the workforce could help vehicle manufacturers better cater to the needs and preferences of this important consumer segment.**

What's more, new technologies and working practices can empower greater numbers of women to join the Automotive workforce. Offering **remote** and **hybrid working** means that women in administrative, sales and marketing positions can get the flexibility they need to balance work and home life. Even women in 'hands-on' manufacturing roles can now access more flexible working arrangements, thanks to **augmented reality** and **robotics innovations** that let them operate machinery remotely.

Like much of the private sector, Automotive companies are now taking steps to **attract and retain women.** To explore exactly what this looks like in 2023, we conducted primary and secondary research on equality in the Automotive industry.

1. Source: Deloitte, 2020 Women in Automotive Industry Study

2. Source: Europarl, Women and Transport

# What discourages women from working in Automotive?

It's well-known that Automotive is a male-dominated industry - but why is that? We researched the topic by asking our respondents what factors might discourage women from working in automotive.

The responses seem to indicate that the problem is largely with how the sector is perceived. The most common answer was the **poor visibility of female leaders in the Automotive industry** (38.4% of respondents agreed with this statement). Respondents also agreed that poor perception of gender representation within companies (31.5%) and lack of awareness and recruitment campaigns aimed at women (27.1%) were important factors.

However, it seems that there are practical disadvantages affecting women's choices too, such as **work-life balance** (35.1%) and **career advancement inequality** (34.4%). The conclusion, perhaps, is that outside perceptions of the sector are justified.

**Source**
Gi Group Holding, Automotive International Survey – 2023

What factors could discourage female employment in the Automotive industry?



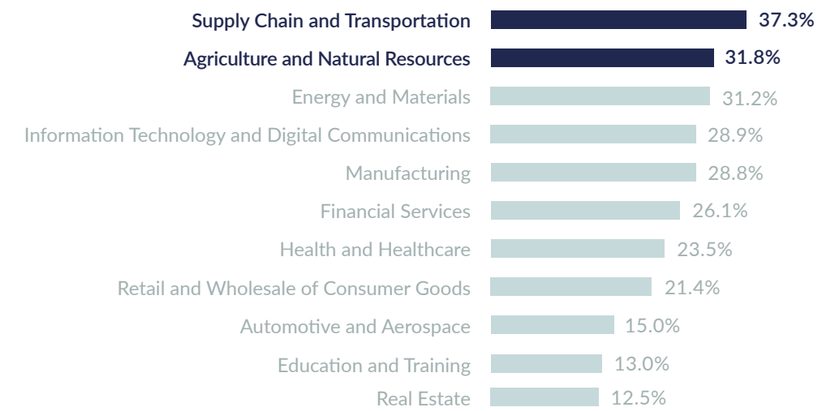

# Is the Automotive industry investing enough in equality programs?

According to WEF data, more than two thirds of organisations have implemented diversity, equity and inclusion programs in the workplace. However, the Automotive industry is one of the sectors that has invested the least - ranking just third from bottom.

Data also shows that **79% of organisations are investing in DEI programs** that aim to achieve gender parity for women. But once again, the Automotive industry ranks third from the bottom in its investment levels.

**Source**
World Economic Forum's 2023 Future of Jobs survey

Industry investment in DEI targets and quotas



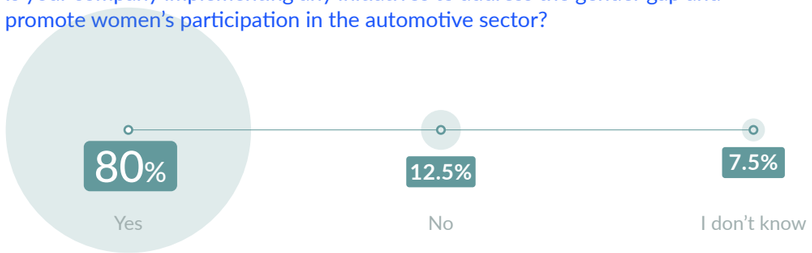

# How many companies are working to close the gender gap?

Existing data suggests that Automotive companies could be doing more to attract and retain women. But just how many companies are proactively working on this?

To investigate, we asked our Automotive workers and experts 'is your company taking actions to bridge the gender gap and encourage women to enter the Automotive sector?' Across all the countries we researched, on average **80% of our respondents answered yes.**

**Source**
Gi Group Holding, Automotive International Survey – 2023

Is your company implementing any initiatives to address the gender gap and promote women's participation in the automotive sector?



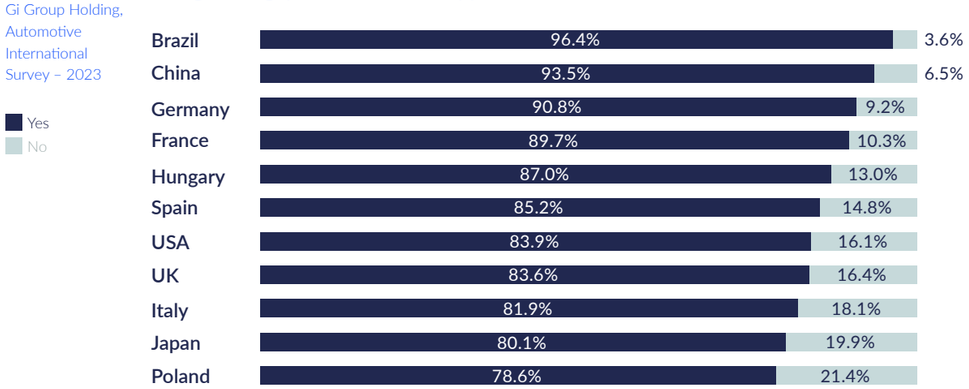

# Which countries are focusing more on gender parity in the Automotive industry?

In all of the countries features in our research, the majority of companies were working to close the gender gap. However, there were some variations between countries:

- Brazil (96.4%) and China (93.5%) had the biggest proportion of companies working to achieve gender parity;
- Japan (80.1%) and Poland (78.6%) had the smallest number of companies.

**Source**
Gi Group Holding, Automotive International Survey – 2023

The gender gap issue: a shared approach across countries






# What actions are companies in the Automotive sector taking?

As we saw earlier in the chapter, Automotive companies have multiple challenges to address. To attract more women, they need to change the **public perception** of the sector while ensuring women get fair opportunities for career advancement.

So what efforts are Automotive companies making to change the status quo? To investigate, we asked our respondents what kind of initiatives their companies were undertaking.

While it's clear that companies are making changes, the results suggest that there is still room for improvement within the sector. Just **50.3%** of respondents said their company **was guaranteeing equal pay and opportunities for women.** And just 40.8% were offering women flexible working, maternity leave, and child support.

**Source**
Gi Group Holding, Automotive International Survey – 2023

Which of the following actions have been implemented?


# How do gender equality initiatives differ across countries?

Most countries are undertaking a similar blend of initiatives to help women succeed in the Automotive industry.
However, some countries are leading the way in specific areas:

- Italy is the most focused on guaranteeing **equal pay and opportunities** for career advancement (66%);
- Hungary is conducting **training on unconscious biases and prejudices** more than any other country (72%);
- Brazil is the most focused on **promoting female models and leaders** within the company (56%).

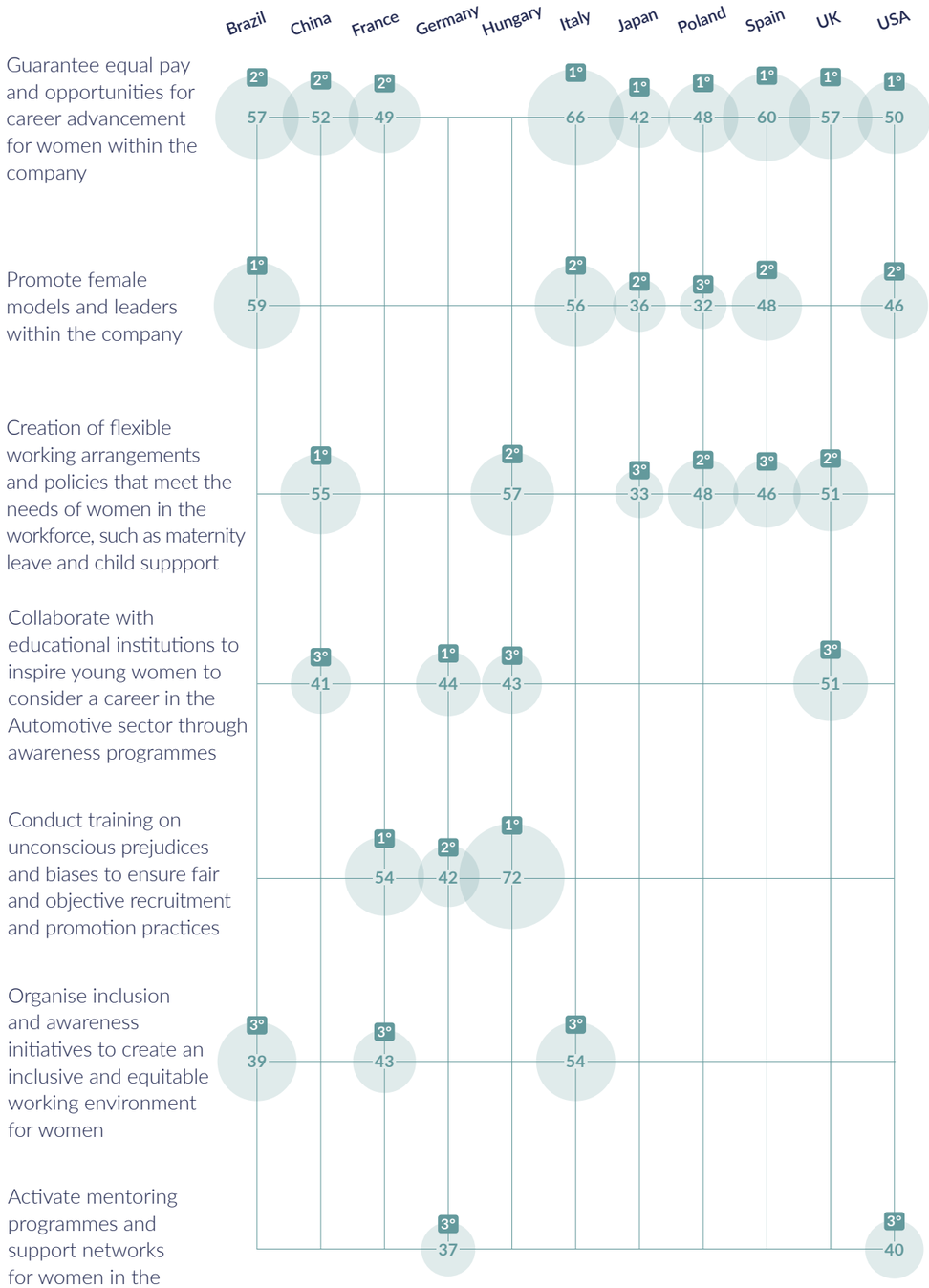
## Patrick Klaus Beyer

*Customer Experience HUB & Loyalty Manager, Mazda*

*"If we look at consumption data, there are more female consumers than male consumers. Therefore, if we continue to advertise cars in a male-dominated way, we end up alienating over half of the consumers. It is important to raise awareness about the significance of women in the automotive industry, including through journalism. For example, in the UK, there is a willingness to engage women in the industry by recognising female talents and awarding Autocar Great Women of the year."*

**Source**
Gi Group Holding, Automotive International Survey – 2023

Actions to address gender cap: differences across countries




## RACING TEAM

*"As a part of its commitment to promote Sustainable Work, Gi Group Holding strongly supports the 511 Racing Team, taking a stand for diversity and inclusion.*

*The 511 Racing Team is a cohesive all-female motorsport team, dedicated, strong, and primed for competition. Their ambition to win is driven by their expertise and passion.*

*They promote gender equality, and through their commitment, they support women's careers in motorsport, demonstrating the true potential that women bring to this field, and showing that their achievements are not merely related to gender issues."*

# Conclusions

## Domiziano Pontone

Chief Corporate Sales Officer, Gi Group Holding

## Gearing Up for Change

### Promoting Female Participation in the Automotive Industry

*Why are women not keen to work in Automotive?*

*When we asked both general and Automotive workers, we found out that it's mostly due to the industry being widely perceived as male-dominated. Our global survey also revealed that people are concerned about the lack of female representation in the industry, from shopfloor jobs to leadership positions, as well as practical issues like work-life balance and unfair chances for career growth.*

*As 80% of companies are now making efforts to fight the gender gap and encourage women to join the field, for example by enhancing the visibility of female leaders and creating flexible working policies, there's still a lot to improve. In fact, only half of the decision-makers we interviewed said their companies are taking action to ensure men and women can enjoy equal pay and career development opportunities.*

*Today, cars are becoming computers on wheels and traditional engines are rapidly being replaced by high-tech counterparts, fuelling the need for a workforce equipped with a variety of digital skills to drive the industry forward. Clearly, this change calls for HR decision-makers who intend to shape a new narrative of the industry and actively work to debunk the outdated myth of a male-dominated Automotive world. It is the only road businesses can take to outpace their competitors and attract the new generation of top talent they need to succeed in this ever-changing industry.*

*Without women, there is no future for Automotive. It is high time to advocate for this long overdue change and create more inclusive workplaces that encourage aspiring female leaders to accelerate their career and take the wheel in this revolutionary journey.*

## Barbara Bruno

Chief Practice Officer, Gi Group Holding

## Accelerating the Future

### How Technology Will Drive the Automotive Industry's Appeal to Top Talent

*In this age of technological advancements and increasing emphasis on diversity, it's essential that industries adapt to the changing landscape. The Automotive industry is no exception. Our global survey shows that candidates have an outdated view of what it means to work in Automotive – yet, right now the industry is just as much about tech development as anything else.*

*All major car producers are headed in this direction, and they need the tech and engineering talent to make electric and autonomous vehicle production a reality. As we dive deeper into the latest insights, it is clear to me that the industry needs to reframe its messaging when it comes to talent acquisition.*

*The evolution of Automotive is turning the spotlight on transferable skills. Today, the usual assembly line jobs are being replaced by a whole new set of workers who can work together to deliver the cars of tomorrow, and the use of advanced tech is taking centre stage, overcoming barriers that once limited the career mobility of specialised professionals.*

*Also, the outdated idea that women in Automotive can only work in HR or procurement is wrong. Thanks to new technologies, there's a big opportunity to change these stereotypes and show the significant roles women can play in modern production jobs. This makes the industry a place where a variety of talents can succeed and significantly contribute to its transformation.*

*The key call to action for employers in this new Automotive world? To effectively communicate these benefits and attract a highly skilled workforce that will keep steering the industry towards a future of innovation and increased competitiveness.*

## Cetti Galante

Chief Practice Officer Career Transition & Employability,
Gi Group Holding

# Finding the Silver Lining

## Empowering Senior Talent for the Automotive Digital Era

*When exploring the topic of digital transformation in Automotive, age matters. As new technologies reshape the industry, it's important to remember that the true driving force behind meaningful decision-making and innovative ideas remains human.*

*Consider the automotive industry, where people aged 50+ make up a substantial portion of the workforce: as people live and work for longer, companies play a crucial role in integrating every worker into this new narrative.*

*Being in a more complex environment we need senior people to manage complexity and to transfer a know how that otherwise will be loss. Intergenerational peer coaching or reverse mentoring for example can lead to a more balanced workplace that respects and enhances the unique strengths of each generation. Older employees can impart years of practical experience and insights, while the younger generation can share their understanding of new technologies and innovate dated business processes. This creates a balanced and flexible working environment where great ideas – and great people – can really flourish.*

*However, businesses must assess their team's full skill set before moving on to the training phase or before excluding senior people from the organization. In fact, many individuals are already well-suited for transitioning to new roles because they gained valuable competences from previous working experiences or personal interests often unknown to their employer. Mindset counts more than age, experience counts to manage complex projects, our senior people are a value to use in these times of people scarcity.*

*Perhaps we've been looking at this matter from the wrong end of the telescope. The automotive industry's journey is not just technology-based; it's about leveraging human innovation, critical thinking, and adaptability to bridge the gap between the industry's historical legacy and its dynamic future.*

## Agnieszka Kaczmarczyk

Global S&S and Professional Practice Director,
Gi Group Holding

# Winning the Race for Talent

## Revolutionising Talent Management in the Evolving Automotive Landscape

*Technology, new business models, and consumer-preference disruptions affects the Automotive industry. To stay competitive, attract, develop and retain top talent, automakers must embrace new methods of finding, hiring, and managing highly skilled digital staff.*

*The Automotive sector must be willing to adopt a total talent strategy and explore new ways of finding compelling candidates by utilising multiple talent sourcing channels in concert with one another—permanent, contingent, on-demand, and freelance— thanks to that, organisations will be better positioned to obtain the talent they need when needed. Today's top talent craves autonomy and flexibility, amenities, and development opportunities that provide exciting carrier paths and job rotation. To win competition against non-Automotive technology and start-ups companies, they need to create nimbler organisations and grow effective leaders who can think strategically and can thrive in uncertainty.*

*To drive innovation and avoid falling behind as the industry evolves, automakers and their suppliers must be willing to implement best practices established in and outside of their industry. Leverage the role of employer branding- development of EVP that attract and grow company awareness (strategic for smaller and less well-known companies), the role of the HR function that improve engagement (carrier paths, upskilling), ensure deep understanding of the skills the organisation will need to execute its strategy and guarantee access to new digital and analytical tools that support transformation and growth.*

# Who we are

Founded in 1998 in Milan, Italy, Gi Group Holding is **one of the world's leading providers of services for the evolution of the Labour Market.** Through a global staffing and recruitment business ecosystem that counts with eight individual yet **complementary brands** – Gi Group Holding, Gi Group, Grafton, Wyser, Gi BPO, Jobtome, Tack/TMI, INTOO –, the Group offers a 360° suite of offerings that generate relevant and impactful solutions. Gi Group Holding works to promote a sustainable and enjoyable global market for people, companies, and society, reflecting the ever-changing Labour Market needs. The company employs over 8,000 staff and is active in 34 countries across Europe, APAC, and the Americas. Providing services to more than 20,000 client companies and with revenues of +3.6 BLN € in 2022, Gi Group Holding is the **8th largest European staffing firm** and the 15th worldwide (according to Staffing Industry Analysts).

## Our Vision

We firmly believe that people must be supported so that they remain employed for the majority of their working life. Work must be transformed to eliminate any factors that discourage or hinder workers from staying in, or entering the workforce.

To that end, our vision is to be recognised as the worldwide player responsible for creating a sustainable and enjoyable **Global Labour Market for Candidates and Companies,** reflecting Market needs.

## Our Mission

Through our services we want to contribute, as a key player and on a global basis, to the **evolution of the Labour Market and to emphasise the personal and social value of work.**

## Our Brands

Temporary and Permanent Staffing

Middle and Senior Manager Search & Selection

Programmatic Job Advertising Platform

Career Transition and Employability

Professional Staffing

Businesses Process Outsourcing

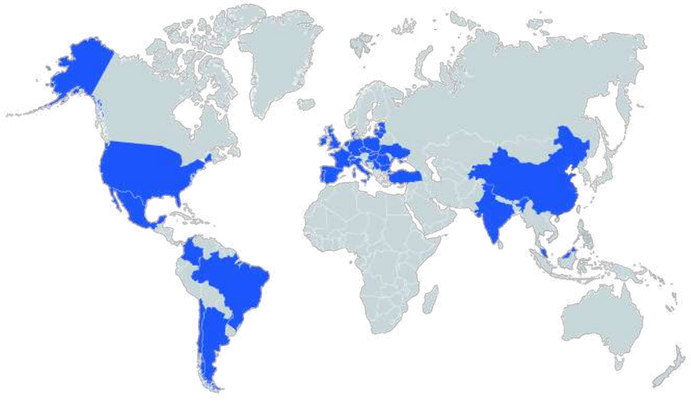
Learning and Development

## Our Global Presence

Today we have a direct presence in **more than 30 countries** across Europe, APAC and the Americas.

**+650**
branches and offices

**+8,000**
employees



## Our Direct Presence

**34**
countries with direct presence

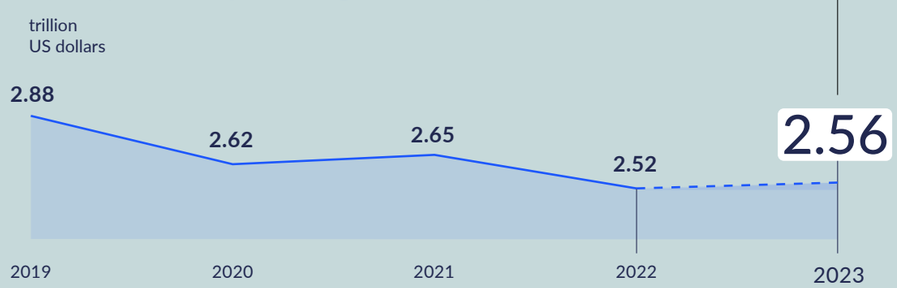
- Argentina
- Brazil
- Bulgaria
- Chile
- Colombia
- Croatia
- Denmark
- Estonia
- Czech Republic
- France
- Germany
- Greater China
- Hungary
- India
- Ireland
- Italy
- Latvia
- Liechtenstein
- Lithuania
- Malaysia
- Mexico
- Montenegro
- Poland
- Portugal
- Romania
- Serbia
- Slovakia
- Spain
- Switzerland
- The Netherlands
- Türkiye
- Ukraine
- United Kingdom
- USA

# Automotive... *at a glance*

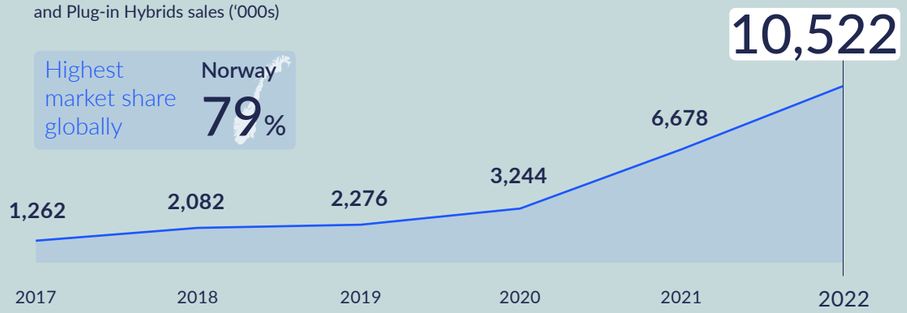
## ...has seen a **decline** in the last four years
with loss of revenues and fewer vehicles being manufactured

**-4.9%**
of trillion US dollars
2021 to 2022

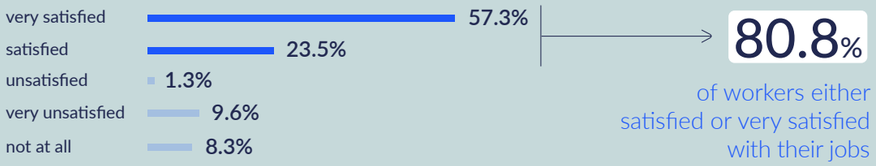
## ...is experiencing a **slow growth,** projected to reach




## ...is **evolving:** new technologies are enabling automakers to deliver the **sustainable, smart, energy-efficient vehicles** of tomorrow




## ...is a **satisfying** industry to work in




**80.8%**
of workers either satisfied or very satisfied with their jobs

## ...from the outside, is an **attractive** sector mainly for the possibility of working for prestigious companies

| | | |
|---|---|---|
| Automotive workers | Passion for cars and vehicles | 70.3% |
| | Opportunities for growth and career advancement | 69.2% |
| General workers | Possibility of working for prestigious companies | 68.8% |
| | Possibility of working with advanced automotive technologies | 68.4% |

## *Needs identified*

### New technologies are changing the **global job landscape** and Automotive companies are facing **skills shortages**

| High-demand profiles | | Key competencies for future employees according to experts 1° | 2° |
|---|---|---|---|
| Blue collar workers | Mechanical Technician<br>Maintenance Technician<br>Automotive Assembly Line Worker | **47.2%** **electrical and electronic expertise** | **46.3%** technological proficiency |
| White collar workers | Automotive Engineer<br>IT Specialist<br>Data Analyst | **35.1%** **electric vehicle technology** | **33.6%** artificial intelligence and machine learning |

## *Solutions*

### **Continuous training** is key to constantly reskilling and upskilling the Automotive workforce

**58%**
of businesses are running training, upskilling and education programs

| | |
|---|---|
| Training on digital skills | 39.1% |
| Workshops and vocational training courses | 36.6% |
| Mentoring programmes for professional growth and guidance | 33.4% |

# Salary Guide

## Technical Operators

The Cost of Living Index is calculated as a comparison with a pre-established location.
The following tables show the comparison between 8 countries and Italy (= 100).




Cost of Living Index
100.0

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 26,310 | 30,239 | 34,849 | 5.4% |
| Maintenance Mechanic | 23,987 | 26,695 | 29,710 | 6.3% |
| Assembly Line Worker | 23,306 | 25,943 | 28,878 | 5.8% |
| Quality Control Inspector | 26,095 | 29,749 | 34,284 | 5.0% |
| CNC Machinist | 23,882 | 26,585 | 29,593 | 5.4% |
| Industrial Welder | 23,685 | 26,364 | 29,348 | 5.0% |
| Auto Mechanic | 23,728 | 26,413 | 29,402 | 5.4% |
| Electric Vehicle Mechanic | 24,913 | 27,727 | 30,858 | 5.1% |
| Automotive Electrician | 23,525 | 26,182 | 29,139 | 6.2% |
| Vehicle Painter/Finisher | 23,771 | 26,461 | 29,455 | 5.2% |
| Automotive Model Maker | 25,784 | 29,634 | 34,152 | 5.4% |
| Robotic Welder | 24,869 | 27,682 | 30,815 | 5.0% |




Cost of Living Index
113.3

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 28,527 | 33,746 | 42,626 | 6.8% |
| Maintenance Mechanic | 35,114 | 41,806 | 53,221 | 6.9% |
| Assembly Line Worker | 24,394 | 28,213 | 34,554 | 5.6% |
| Quality Control Inspector | 29,399 | 34,727 | 43,823 | 5.1% |
| CNC Machinist | 28,674 | 33,655 | 42,094 | 4.2% |
| Industrial Welder | 32,089 | 37,986 | 48,076 | 4.6% |
| Auto Mechanic | 30,071 | 35,674 | 45,237 | 4.1% |
| Electric Vehicle Mechanic | 32,499 | 38,582 | 48,973 | 6.1% |
| Automotive Electrician | 24,220 | 28,347 | 35,350 | 5.5% |
| Vehicle Painter/Finisher | 32,617 | 38,722 | 49,151 | 5.1% |
| Automotive Model Maker | 34,086 | 40,905 | 52,430 | 5.7% |
| Robotic Welder | 31,869 | 37,645 | 47,458 | 6.0% |




Cost of Living Index
108.2

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 34,516 | 40,818 | 51,594 | 4.1% |
| Maintenance Mechanic | 42,485 | 50,567 | 64,418 | 3.8% |
| Assembly Line Worker | 29,183 | 33,741 | 41,353 | 4.9% |
| Quality Control Inspector | 35,570 | 42,005 | 53,042 | 3.1% |
| CNC Machinist | 38,505 | 45,181 | 56,549 | 5.0% |
| Industrial Welder | 38,825 | 45,947 | 58,190 | 3.5% |
| Auto Mechanic | 36,383 | 43,149 | 54,754 | 5.7% |
| Electric Vehicle Mechanic | 39,321 | 46,667 | 59,276 | 5.9% |
| Automotive Electrician | 32,524 | 38,056 | 47,489 | 3.1% |
| Vehicle Painter/Finisher | 39,464 | 46,837 | 59,492 | 3.8% |
| Automotive Model Maker | 41,242 | 49,478 | 63,459 | 2.5% |
| Robotic Welder | 36,754 | 43,403 | 54,754 | 4.6% |




Cost of Living Index
81.8

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 25,146 | 29,765 | 37,543 | 2.3% |
| Maintenance Mechanic | 30,951 | 36,874 | 46,875 | 4.7% |
| Assembly Line Worker | 19,692 | 22,789 | 27,871 | 3.4% |
| Quality Control Inspector | 25,914 | 30,630 | 38,597 | 2.9% |
| CNC Machinist | 24,971 | 29,328 | 36,630 | 3.5% |
| Industrial Welder | 28,285 | 33,505 | 42,343 | 4.4% |
| Auto Mechanic | 26,506 | 31,465 | 39,843 | 3.4% |
| Electric Vehicle Mechanic | 28,647 | 34,030 | 43,134 | 4.9% |
| Automotive Electrician | 21,092 | 24,703 | 30,761 | 4.0% |
| Vehicle Painter/Finisher | 28,751 | 34,154 | 43,290 | 2.8% |
| Automotive Model Maker | 30,046 | 36,079 | 46,177 | 3.1% |
| Robotic Welder | 24,991 | 29,539 | 37,185 | 3.2% |

Cost of Living Index
104.3

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 29,288 | 34,635 | 43,780 | 4.6% |
| Maintenance Mechanic | 36,049 | 42,908 | 54,661 | 6.3% |
| Assembly Line Worker | 26,462 | 30,595 | 37,497 | 6.5% |
| Quality Control Inspector | 30,182 | 35,642 | 45,008 | 4.7% |
| CNC Machinist | 31,268 | 36,688 | 45,919 | 5.0% |
| Industrial Welder | 32,945 | 38,988 | 49,377 | 4.4% |
| Auto Mechanic | 30,872 | 36,613 | 46,461 | 6.6% |
| Electric Vehicle Mechanic | 33,366 | 39,599 | 50,298 | 4.7% |
| Automotive Electrician | 26,410 | 30,902 | 38,562 | 4.2% |
| Vehicle Painter/Finisher | 33,487 | 39,743 | 50,480 | 6.1% |
| Automotive Model Maker | 34,995 | 41,983 | 53,847 | 6.1% |
| Robotic Welder | 29,397 | 34,715 | 43,794 | 6.6% |




Cost of Living Index
73.3

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 13,444 | 15,896 | 20,099 | 3.1% |
| Maintenance Mechanic | 16,548 | 19,693 | 25,095 | 4.1% |
| Assembly Line Worker | 11,031 | 12,752 | 15,634 | 4.9% |
| Quality Control Inspector | 13,854 | 16,358 | 20,663 | 3.6% |
| CNC Machinist | 14,240 | 16,707 | 20,918 | 4.4% |
| Industrial Welder | 15,122 | 17,893 | 22,669 | 5.7% |
| Auto Mechanic | 14,171 | 16,804 | 21,330 | 5.2% |
| Electric Vehicle Mechanic | 15,315 | 18,174 | 23,092 | 4.0% |
| Automotive Electrician | 12,029 | 14,072 | 17,566 | 3.0% |
| Vehicle Painter/Finisher | 15,371 | 18,240 | 23,176 | 5.5% |
| Automotive Model Maker | 16,063 | 19,268 | 24,721 | 4.8% |
| Robotic Welder | 13,209 | 15,597 | 19,682 | 5.7% |




Cost of Living Index
61.8

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 9,809 | 11,553 | 14,738 | 7.1% |
| Maintenance Mechanic | 12,074 | 14,313 | 18,401 | 7.8% |
| Assembly Line Worker | 7,248 | 8,346 | 10,323 | 6.5% |
| Quality Control Inspector | 10,109 | 11,889 | 15,151 | 7.8% |
| CNC Machinist | 9,363 | 10,942 | 13,821 | 8.0% |
| Industrial Welder | 11,034 | 13,005 | 16,622 | 7.3% |
| Auto Mechanic | 10,340 | 12,213 | 15,640 | 5.9% |
| Electric Vehicle Mechanic | 11,175 | 13,209 | 16,932 | 5.1% |
| Automotive Electrician | 7,909 | 9,216 | 11,606 | 5.6% |
| Vehicle Painter/Finisher | 11,215 | 13,257 | 16,994 | 6.8% |
| Automotive Model Maker | 11,720 | 14,004 | 18,127 | 7.2% |
| Robotic Welder | 10,907 | 12,828 | 16,332 | 7.6% |




Cost of Living Index
59.8

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 14,405 | 16,940 | 21,683 | 4.4% |
| Maintenance Mechanic | 17,730 | 20,986 | 27,072 | 5.4% |
| Assembly Line Worker | 7,464 | 8,581 | 10,650 | 5.0% |
| Quality Control Inspector | 14,845 | 17,433 | 22,292 | 5.8% |
| CNC Machinist | 12,682 | 14,797 | 18,754 | 4.8% |
| Industrial Welder | 16,203 | 19,069 | 24,455 | 3.8% |
| Auto Mechanic | 15,184 | 17,908 | 23,011 | 4.2% |
| Electric Vehicle Mechanic | 16,410 | 19,368 | 24,911 | 5.5% |
| Automotive Electrician | 10,712 | 12,463 | 15,750 | 2.8% |
| Vehicle Painter/Finisher | 16,469 | 19,438 | 25,002 | 5.1% |
| Automotive Model Maker | 17,210 | 20,534 | 26,669 | 5.4% |
| Robotic Welder | 14,221 | 16,700 | 21,334 | 4.6% |

Cost of Living Index
37.5

| JOB TITLE | ABS - ANNUAL BASE SALARY (EUR) | | | VARIABLE PAY (% ON ABS) |
|---|---|---|---|---|
| | 1st QUARTILE | MEDIAN | 3rd QUARTILE | MEDIAN |
| Automotive Technician | 5,688 | 6,674 | 8,588 | 2.1% |
| Maintenance Mechanic | 7,001 | 8,268 | 10,723 | 3.3% |
| Assembly Line Worker | 3,245 | 3,721 | 4,644 | 4.0% |
| Quality Control Inspector | 5,862 | 6,868 | 8,829 | 3.0% |
| CNC Machinist | 5,167 | 6,014 | 7,664 | 3.6% |
| Industrial Welder | 6,399 | 7,512 | 9,686 | 3.6% |
| Auto Mechanic | 5,996 | 7,055 | 9,114 | 4.6% |
| Electric Vehicle Mechanic | 6,480 | 7,630 | 9,867 | 3.4% |
| Automotive Electrician | 4,364 | 5,066 | 6,436 | 2.8% |
| Vehicle Painter/Finisher | 6,504 | 7,658 | 9,903 | 3.7% |
| Automotive Model Maker | 6,796 | 8,090 | 10,563 | 2.9% |
| Robotic Welder | 6,498 | 7,613 | 9,777 | 4.2% |



# Salary Guide

## Professionals, Middle & Senior Management




| JOB TITLE | SALARY CURRENCY (EUR) | | |
|---|---|---|---|
| | MINIMUM | MID | MAXIMUM |
| Plant Manager/Director | 90,000 | 110,000 | 150,000 |
| Maintenance Manager | 60,000 | 75,000 | 90,000 |
| Production Manager | 60,000 | 80,000 | 95,000 |
| Quality Manager | 60,000 | 80,000 | 95,000 |
| Quality Engineer | 35,000 | 45,000 | 55,000 |
| SQA Engineer | 35,000 | 45,000 | 55,000 |
| Maintenance Engineer | 35,000 | 45,000 | 55,000 |
| Process Engineer | 35,000 | 45,000 | 55,000 |
| R&D Engineer | 40,000 | 50,000 | 60,000 |
| CNC Programmer | 25,000 | 33,000 | 42,000 |
| Design Engineer | 30,000 | 40,000 | 50,000 |
| Technologist | 35,000 | 45,000 | 55,000 |




| | | | |
|---|---|---|---|
| Quality Engineer | 43,104 | 48,384 | 51,283 |
| SQA Engineer | 43,104 | 48,384 | 51,283 |
| Maintenance Engineer | 43,104 | 48,384 | 51,283 |
| Process Engineer | 40,588 | 44,083 | 47,270 |
| R&D Engineer | 40,588 | 44,083 | 47,270 |
| CNC Programmer | 40,588 | 44,083 | 47,270 |
| Technologist | 34,080 | 36,134 | 37,228 |

| JOB TITLE | SALARY CURRENCY (EUR) | | |
|---|---|---|---|
| | MINIMUM | MID | MAXIMUM |
| Plant Manager/Director | 65,000 | 80,000 | 100,000 |
| Maintenance Manager | 40,000 | 55,000 | 70,000 |
| Production Manager | 55,000 | 65,000 | 80,000 |
| Quality Manager | 45,000 | 55,000 | 70,000 |
| Quality Engineer | 30,000 | 37,000 | 45,000 |
| SQA Engineer | 30,000 | 37,000 | 45,000 |
| Maintenance Engineer | 30,000 | 37,000 | 45,000 |
| Process Engineer | 30,000 | 37,000 | 45,000 |
| R&D Engineer | 28,000 | 33,000 | 42,000 |
| CNC Programmer | 28,000 | 33,000 | 42,000 |
| Design Engineer | 28,000 | 33,000 | 42,000 |
| Technologist | 22,000 | 26,000 | 30,000 |




| JOB TITLE | SALARY CURRENCY (EUR) | | |
|---|---|---|---|
| | MINIMUM | MID | MAXIMUM |
| Plant Manager/Director | 69,000 | 92,000 | 115,000 |
| Maintenance Manager | 51,000 | 63,000 | 74,000 |
| Production Manager | 46,000 | 57,000 | 69,000 |
| Quality Manager | 51,000 | 57,000 | 69,000 |
| Quality Engineer | 34,000 | 49,000 | 58,000 |
| SQA Engineer | 46,000 | 51,000 | 57,000 |
| Maintenance Engineer | 40,000 | 51,000 | 63,000 |
| Process Engineer | 40,000 | 51,000 | 63,000 |
| R&D Engineer | 37,000 | 46,000 | 57,000 |
| CNC Programmer | 34,000 | 40,000 | 40,000 |
| Design Engineer | 34,000 | 43,000 | 51,000 |
| Technologist | 34,000 | 43,000 | 51,000 |




| JOB TITLE | SALARY CURRENCY (EUR) | | |
|---|---|---|---|
| | MINIMUM | MID | MAXIMUM |
| Plant Manager/Director | 47,040 | 73,200 | 99,360 |
| Maintenance Manager | 28,800 | 37,200 | 47,040 |
| Production Manager | 31,380 | 41,760 | 54,840 |
| Quality Manager | 28,800 | 41,760 | 54,840 |
| Quality Engineer | 15,720 | 20,880 | 31,380 |
| SQA Engineer | 18,240 | 23,520 | 31,380 |
| Maintenance Engineer | 15,720 | 20,880 | 31,380 |
| Process Engineer | 15,720 | 20,880 | 31,380 |
| R&D Engineer | 26,160 | 35,400 | 44,400 |
| CNC Programmer | 15,720 | 19,560 | 23,520 |
| Design Engineer | 18,240 | 23,520 | 31,380 |
| Technologist | 15,720 | 20,880 | 28,080 |

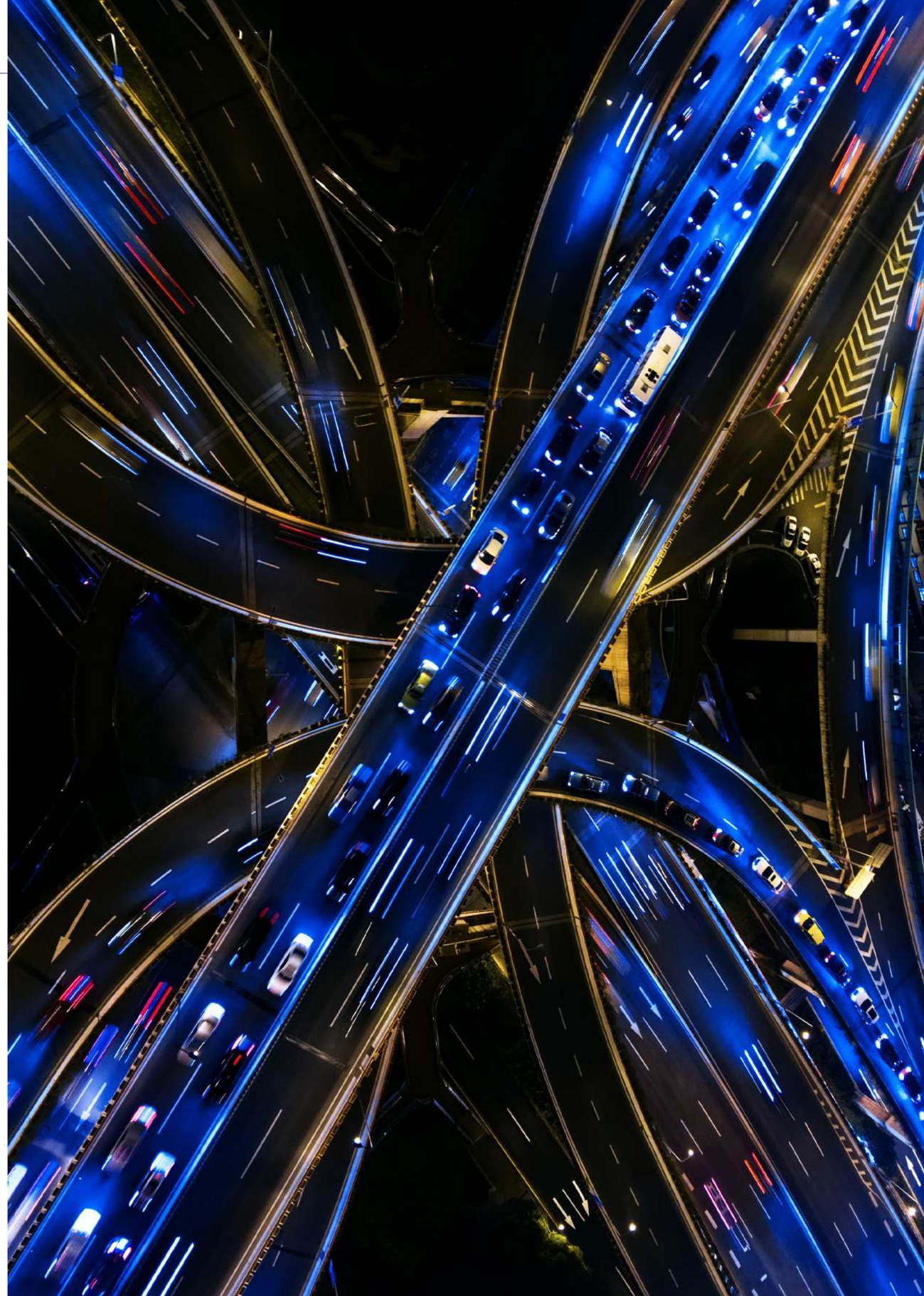


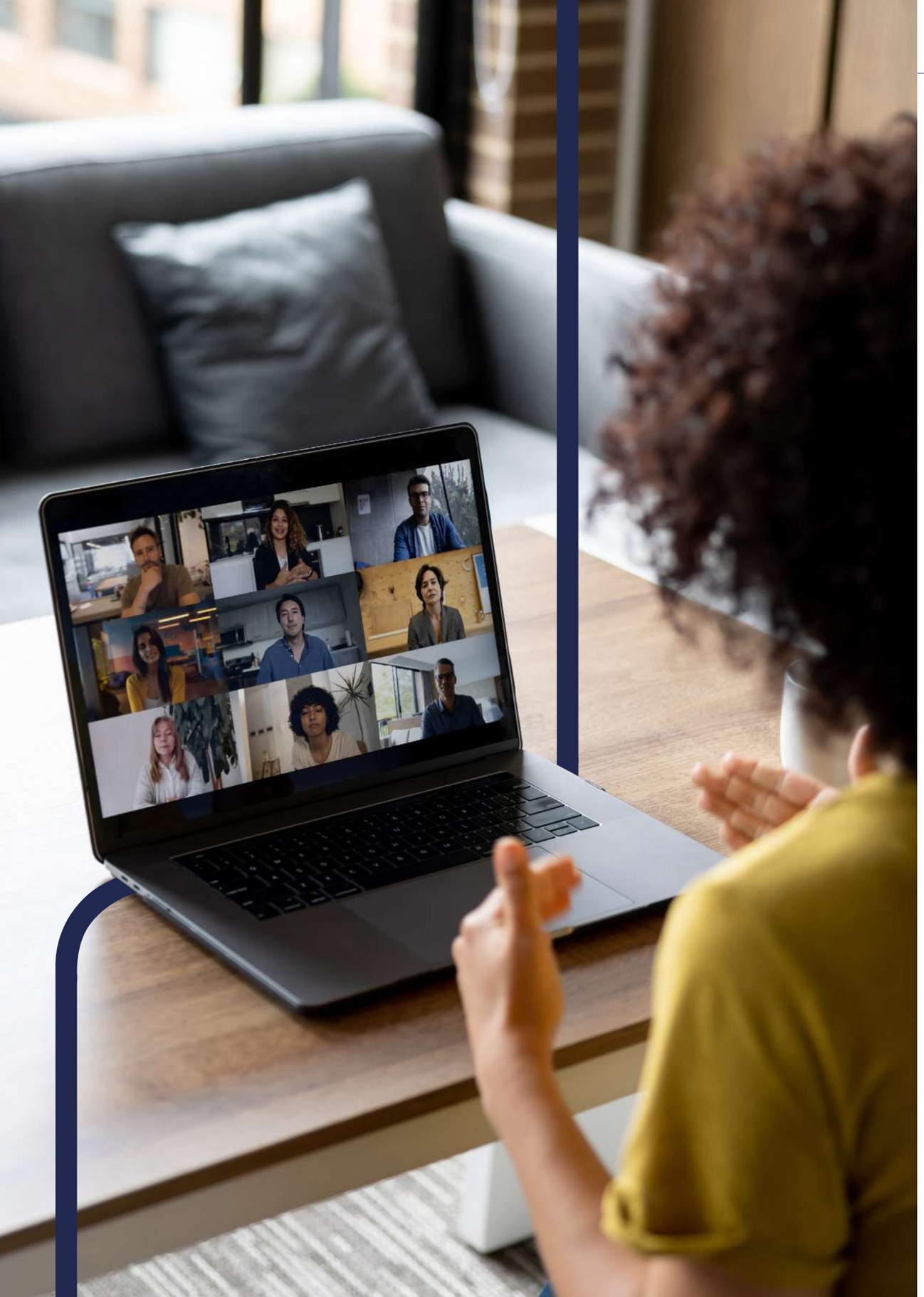

| JOB TITLE | SALARY CURRENCY (EUR) | | |
|---|---|---|---|
| | MINIMUM | MID | MAXIMUM |
| Plant Manager/Director | 44,794 | 54,756 | 111,720 |
| Maintenance Manager | 44,799 | 58,573 | 77,154 |
| Production Manager | 47,288 | 57,243 | 69,688 |
| Quality Manager | 49,777 | 62,221 | 79,643 |
| Quality Engineer | 23,823 | 24,492 | 46,617 |
| SQA Engineer | 29,368 | 39,075 | 46,043 |
| Maintenance Engineer | 23,069 | 23,761 | 46,686 |
| Process Engineer | 23,626 | 25,640 | 46,163 |
| R&D Engineer | 23,395 | 30,613 | 46,541 |
| CNC Programmer | 5,602 | 6,846 | 9,333 |
| Design Engineer | 22,399 | 32,355 | 40,899 |
| Technologist | 5,487 | 7,543 | 17,377 |

| JOB TITLE | SALARY CURRENCY (EUR) MINIMUM | MID | MAXIMUM |
|---|---|---|---|
| Plant Manager/Director | 78,000 | 104,000 | 156,000 |
| Maintenance Manager | 45,500 | 65,019 | 91,000 |
| Production Manager | 52,000 | 78,000 | 91,000 |
| Quality Manager | 52,000 | 84,500 | 104,000 |
| Quality Engineer | 23,400 | 39,000 | 58,500 |
| SQA Engineer | 23,400 | 37,500 | 58,500 |
| Maintenance Engineer | 23,400 | 36,000 | 52,000 |
| Process Engineer | 23,400 | 37,000 | 58,500 |
| R&D Engineer | 23,400 | 37,500 | 58,500 |
| CNC Programmer | 15,600 | 23,400 | 31,200 |
| Design Engineer | 23,407 | 32,510 | 45,514 |
| Technologist | 15,605 | 23,407 | 31,209 |




| | | | |
|---|---|---|---|
| Plant Manager/Director | 28,354 | 39,695 | 56,708 |
| Maintenance Manager | 17,012 | 20,415 | 22,683 |
| Production Manager | 17,012 | 20,415 | 22,683 |
| Quality Manager | 13,610 | 17,012 | 20,415 |
| Quality Engineer | 9,073 | 10,207 | 11,341 |
| SQA Engineer | 9,073 | 11,341 | 13,610 |
| Maintenance Engineer | 11,341 | 12,475 | 13,610 |
| Process Engineer | 9,073 | 10,207 | 11,341 |
| R&D Engineer | 11,341 | 13,610 | 17,012 |
| CNC Programmer | 17,012 | 22,683 | 28,354 |
| Design Engineer | 9,073 | 11,341 | 13,610 |
| Technologist | 17,012 | 20,415 | 22,683 |





# Methodology

This report is the result of research conducted by the Connected Car & Mobility Observatory of the Politecnico di Milano and the Data Intelligence company INTWIG.

The study was conducted in 11 countries (Brazil, China, Germany, France, Hungary, Italy, Japan, Poland, Spain, USA and the United Kingdom) and was structured following a rigorous methodology developed in 4 phases:

**Desk Analysis:** collection and systematisation of public data able to provide a broad and articulate reading of the Automotive sector worldwide;

**Opinion leader interviews:** 37 in-depth interviews with Opinion Leaders in the 11 countries surveyed;

**International Survey:** indicated as *"Gi Group Holding, Automotive International Survey – 2023"* a CAWI survey conducted on a sample of 5,610 residents in 11 countries, aged 18 to 65 (including at least 100 workers in the Automotive sector);

**Salary guide:** in 9 countries surveyed, market pay (base salary + variable pay) benchmark focused on 12 job positions, with following structure:

- **first quartile:** splits off the lowest 25% of data from the highest 75%;
- **median:** cuts data set in half – 50% of the data set is higher than median, the other 50% is lower;
- **third quartile:** splits off the highest 25% of data from the lowest 75%.

## Data Research *and* Analysis

POLITECNICO MILANO 1863 SCHOOL OF MANAGEMENT | osservatori.net digital innovation

The **Digital Innovation Observatories of the School of Management** of the Politecnico di Milano were born in 1999 with the aim of creating culture in all the main areas of Digital Innovation. Nowadays, Observatories are a qualified reference point on Digital Innovation that integrates Research, Communication, Continuous Updating and Networking activities.

Established in 2019, the **Connected Car & Mobility Observatory** aims to generate and share knowledge on the evolution of vehicles in "smart" terms and, more in general, on the role of mobility supporting digital technologies, ultimately to contribute to the market development in a context that is characterised by insufficient clarity regarding the status of applications, the enabled benefits, and the expected evolution of enabling technologies.

## Data Research *and* Analysis + Graphic Design

IN.TWIG make data work

INTWIG is a **Data Intelligence company** that has been developing data management strategies since 2016. It offers support to companies to understand the context they move into, anticipate trends, optimise processes and make decisions quickly. INTWIG's method is customised, rigorous and covers the **entire Data Lifecycle:** collection, analysis, interpretation and visualization. Customised tools and solutions are developed by a team of researchers, analysts, data managers and communication experts with technical and cross-functional skills.

# Notes

# More than **Work**

Knowledge HUB

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