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1 ONE PARTNER, ONE VIEW

SIC TRANSIT GLORIA MUNDI? MORE THAN JUST A MAJOR REPLACEMENT, THESE ARE THE TIMES THAT HERALD THE RENEWAL OF THE EUROPEAN CAR INDUSTRY!



Frédéric Recordon
Partner, Accracy

In just a few years, the automotive world has changed radically.

In China, Europe and some emerging countries, **electrification has become a reality**. The world can rejoice at this development, one that is in line with the crucial green transition.

On the industrial front, **both the design and manufacture of vehicles have been revolutionised**. We are now seeing big tech, led by China¹, becoming key manufacturers and actors on the scene.

On the commercial front, **the success of Chinese brands is undeniable**: their share of car registrations in China has doubled², and in Europe, their entry is disrupting the market and unsettling established brands. But it is not just carmakers that are feeling the heat; **equipment manufacturers** are also under attack from their Chinese counterparts.

In social terms, these developments represent high stakes for Europe.³

Uses are also changing. For example, robot taxis are now operational in several Chinese cities.⁴

It is rather facile to attribute all this Chinese success exclusively to subsidies and unfair competition. The Chinese have learned, and they are revolutionising the industry.

Against this backdrop, the 120th anniversary of the European car industry takes on a bitter taste. There appears little cause for celebration.

But the time for shock and surprise has passed; now, it is **time to wake up**.

All is not lost for those actors willing to take on this immense technological, industrial, political and human challenge. It calls for clarity of vision, a strategic direction, consistency in action, a stable and industry-friendly regulatory framework, private and perhaps public financing. But above all, **it requires collective will and effort**. It is up to us to make the automotive industry **a major European ambition for the next decade**.

The European car industry has weathered many storms in its history. There is no doubt it will rise again. **But the time for change is now!**

¹ Xiaomi, Huawei

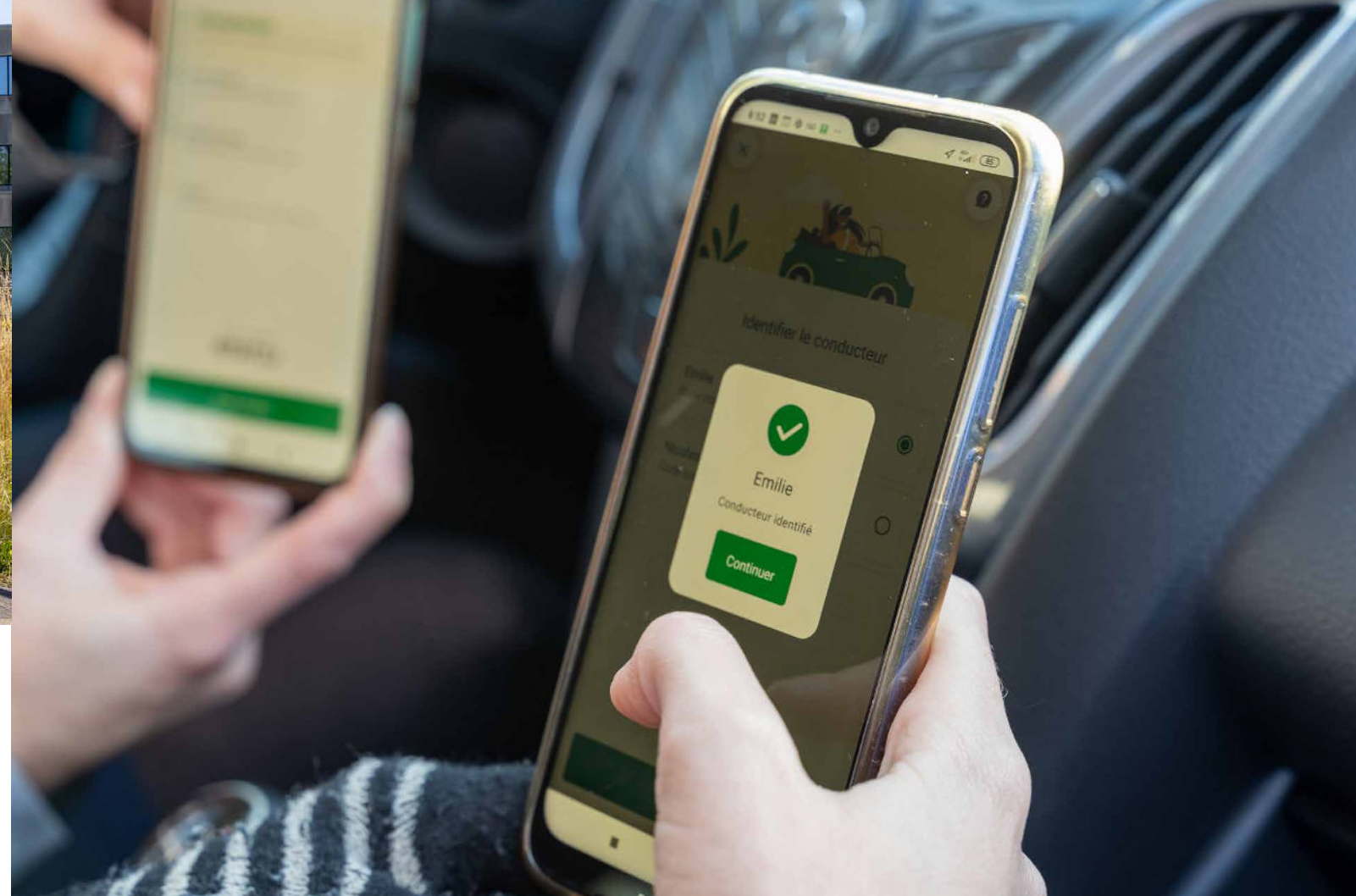
² From 36% in 2020 to a cumulative 69% by the end of August 2025 (source CPCA).

³ The automotive industry accounts for 14 million direct and indirect jobs in Europe.

⁴ Robot taxis are in commercial operation in Beijing, Chongqing, Guangzhou, Hefei, Shanghai and Shenzhen, and Wuhan, China's historical automotive capital, is leading the way.



Carpool stop at Magny-Mérantais on Line 1 between Saint Quentin and Cernay, Île-de-France



Passenger validation on the MCovoit Lignes+ network on the outskirts of Grenoble

START-UP STORIES

ECOV: THE START-UP TURNING PRIVATE CARS INTO PUBLIC TRANSPORT



Romain Proglio
Partner, Accuracy

In France, over 20 million people live in areas with limited access to public transport. **The young start-up Ecov has set itself an ambitious mission:** to transform the private car into a form of everyday shared transport. **Founded in 2014 by Thomas Matagne, Ecov designs and operates carpooling lines on behalf of local authorities.** These lines are conceived as public services, with physical stops, passenger information and guaranteed departures – all without the need for booking.

From a user's perspective, a carpooling line functions much like any other public transport service. The key difference is that available seats are offered by passing cars. Drivers follow their usual routes, naturally passing through designated stops, where they can signal their availability via an app and pick up waiting passengers.

For passengers, the experience is comparable to high-quality public transport: frequent, reliable and no booking required. They head to the nearest stop, request a

ride via the app and wait for the next driver to arrive. Once on board, they validate their journey just like on a bus. **The result?** An average wait time of under four minutes.

Ecov stands out as a unique technological solution serving local authorities, **helping to expand the reach of public transport.** Beyond software and data science, **the start-up designs, deploys, operates and promotes express carpooling lines,** often under white-label arrangements and integrated into existing transport networks. Local authorities fund the lines – covering infrastructure, software, operations and more – and support their growth.

For Ecov, this is a way to build a high-quality transport offering that provides a viable alternative to private car use, especially in low-density areas where frequent buses or trains are not feasible. Today, **Ecov operates around 60 lines across 30 territories** and employs nearly 100 people.

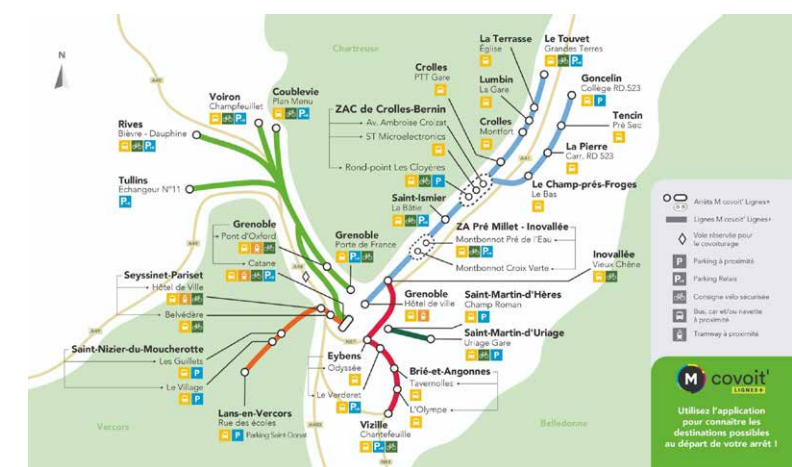
THE START-UP
DESIGNS, DEPLOYS, OPERATES
AND PROMOTES
EXPRESS CARPOOLING LINES

In 2023, the start-up raised €11.75 million from impact investors such as Banque des Territoires, MAIF Impact, BNP Paribas and ADEME to scale its operations. **Field results are promising:** on some lines, 80% of passengers were previously solo drivers. **A significant number of regular users eventually give up a vehicle,** with 'demotorisation' rates reaching up to 21%. A multimodal system combining carpooling lines, frequent coach services, and regional trains (TER) could generate societal savings of around €2.4 billion per year, by reducing car travel by 26.5 billion kilometres annually.

For users, the financial benefits are clear: around €1,295 per year for regular passengers, and €780 for drivers. **Ecov has also demonstrated the economic sustainability of its model.** Once a line reaches full capacity, the cost of transporting a passenger is less than that of solo car use or even high-quality public transport (under €0.30 per passenger-kilometre). **This efficiency opens the door to large-scale deployment.**

But success depends on a delicate balance. Ecov is challenging deeply ingrained mobility habits centred around solo car use. As a result, it often takes more than a year for a new line to gain traction, and utilisation can remain fragile without strong local political support.

In some rural areas, costs per journey remain high if population density does not support regular use. Yet, where the system takes root, it proves effective. By breaking down symbolic barriers between infrastructure, services and vehicles, **Ecov offers a new vision for everyday mobility** – one that is more sustainable, inclusive and focused on the collective good.



MCovoit Lignes+ carpooling network in the Grenoble area

2 INDUSTRY INSIGHT

THE EVOLUTION OF THE AUTOMOTIVE INDUSTRY



Amaury Pouradier Duteil
Partner, Accuracy



Maxime Exbrayat
Manager, Accuracy

At the crossroads of profound technological and societal changes, the car is the leading consumer good in OECD countries. It has undergone major transformations in recent years.

CO² tax, weight-related penalties, low-emission zones, purchase bonuses... These are all tools deployed in Europe to accelerate the adoption of electric vehicles (EVs).

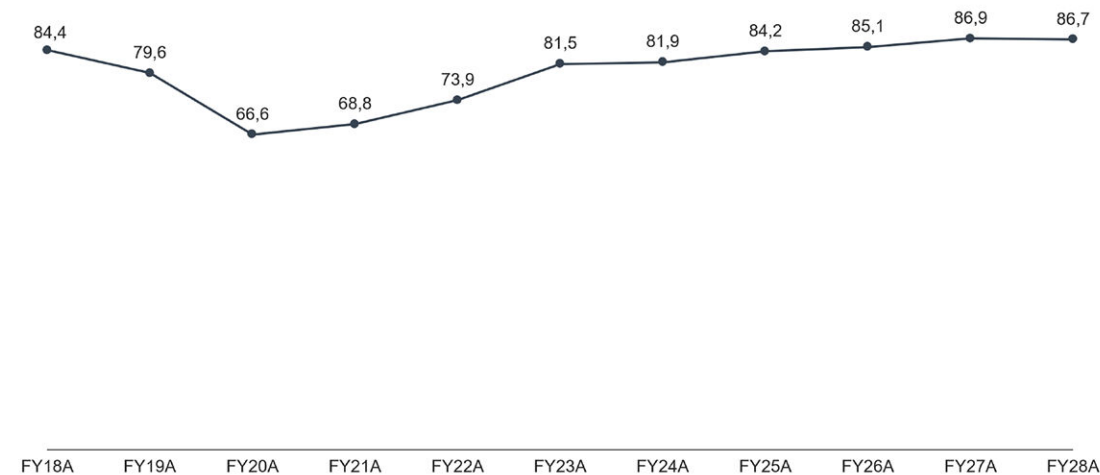
This shift towards electrification is reshaping an industrial model that is more than a century old, upending its ecosystem, from supplier to manufacturer and from distributor to consumer.

What challenges are raised by this fast-paced change in value chains, and what impact will it have on the competitive landscape?

1 - AN INDUSTRIAL MODEL IN THE THROES OF DISRUPTION

After a disruptive health crisis period and the years that followed when certain production lines were shut down, vehicle production is gradually returning to growth, despite a somewhat turbulent environment:

VOLUMES PRODUCED GLOBALLY (MILLION UNITS)





1. A three-tier value chain

The car industry was essentially structured during the 30-year post-WWII boom through the standardisation of models and assembly lines, under the influence of early 20th century Fordist theories. Its value chain can be broken down into three main components.

1 PRODUCTION	2 DISTRIBUTION	3 FINANCING
<p>Original Equipment Manufacturers (OEMs) assemble and sell vehicles using parts provided by equipment suppliers. They are responsible for promoting the product content developed in collaboration with suppliers on a technological level.</p>	<p>At national and local levels, brands are represented by dedicated subsidiaries or importers.</p> <p>The dealers, who are responsible for distribution, carry the stock. They are also responsible for marketing.</p>	<p>This occurs at various levels: with OEMs during assembly; via export credit upstream of distribution; downstream financing at the distribution level to enable dealers to finance stock; and financing for final purchasers.</p>

2. Electrification, digitalisation and regulation: what impact on the value chain?

In 1990, California passed a law in favour of the **Zero-Emission Vehicle (ZEV)**, requiring that a minimum of 2% of vehicles produced by manufacturers for sale in the state be ‘green’ by 1998. Although the law was repealed in 2003, it has given rise to major programmes to develop greener vehicles. This fundamental trend is in play the world over, and it will lead to an accelerated shift towards electrification, transforming every link in the value chain.

1 Production

The centre of gravity of production sites is shifting as a result of changes in the industrial model and the components required. Traditional vehicle production, based on the internal combustion engine (ICE), has historically been concentrated in the United States, Europe and Japan. But this is gradually giving way to the production of electrified vehicles in Asia.

In 2024, China was the world’s leading car producer (35%), well ahead of Europe (19%) and the United States (10%).²

Ultimately, ‘Dieselgate’ or the **rigged engine scandal of 2015** – mostly associated with Volkswagen – only accelerated this transformation.

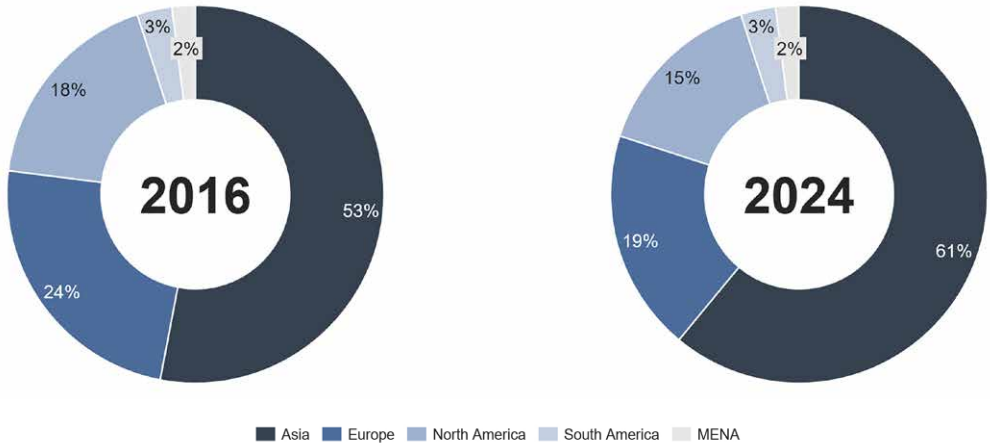
2 Distribution

The digital revolution is challenging **dealers’ monopoly on physical distribution**. Tesla, for example, is banking on its own distribution model, based on a more reasonable network with a limited number of sales outlets, supplemented by a few logistics centres. Some OEMs are also considering light models that capitalise on digital technology (to the detriment of the traditional dealer model), with the counterparty risk transferred to the brand’s national representative, who bears the stock.

3 Financing

Increasing regulatory pressure for **greater transparency** in financing activities is reducing the share of value captured by distributors on financing products. In the United Kingdom, for example, the FCA’s ban on discretionary commission via distributors has had a major impact on finance companies whose distribution relied on automotive intermediaries.

GLOBAL PRODUCTION BY REGION



² Source: ACEA 2024 Report

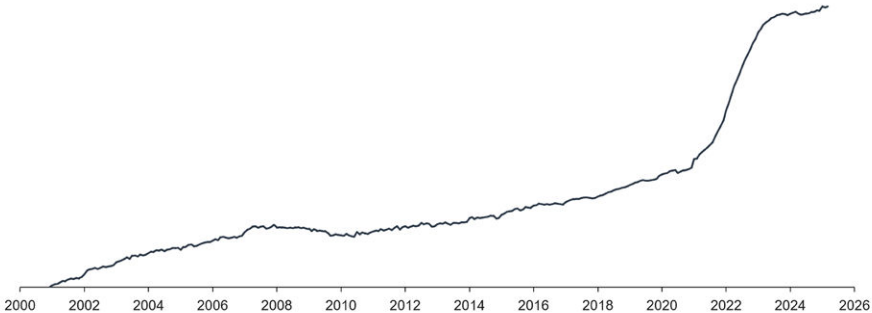
More broadly, the new European CCD2 directive brings lease purchases within the scope of consumer credit, with the obligation to display an APR. In France, lease purchases will be subject to the usury rate from 2026, which should result in a **reduction in the distribution margin captured via financing**, possibly leading to a complete overhaul of remuneration mechanisms.

2 - A CHANGING RELATIONSHIP WITH THE CAR

1. Cost: a catalyst for change in relation to ownership

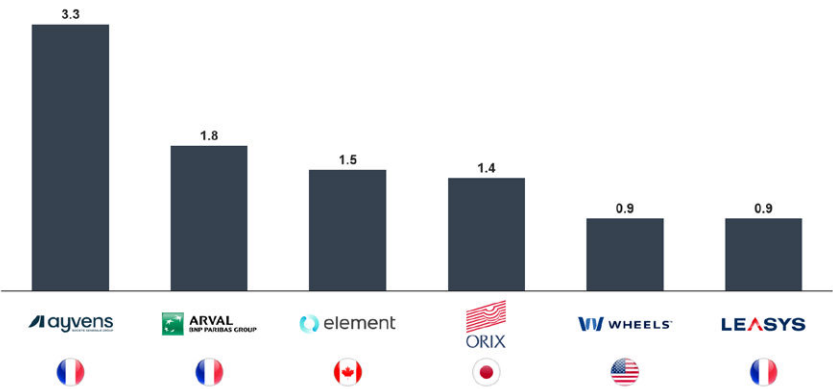
The price of new and used vehicles has **risen significantly** in recent years, mainly due to the combined effect of an increase in technological components and an overall rise in production costs.

EVOLUTION OF THE HARMONISED INDEX OF CONSUMER PRICES – VEHICLES (BASE 100 IN 2000)



Vehicle prices (new and used) rose by around 40% between 2000 and 2024 in the European Union, compared with a more limited increase in purchasing power. Outright purchases, which have traditionally accounted for the majority of sales, are gradually giving way to **alternative financing solutions**, centred on leasing with an option to purchase or on long-term leasing. Leasing allows consumers to control their budget and free themselves from any constraints linked to resale, with the residual value risk falling to the leasing company.

LEADERS IN AUTOMOTIVE LEASING (MILLIONS OF VEHICLES IN 2024)



Sources: Financial results; Results of the major car leasing companies in 2024; Top 4 Car Leasing Companies, Expert Market Research, 2025

Since the long-term leasing business benefits large players who have strong negotiating power over OEMs, **sector consolidation manoeuvres** and other **industrially synergistic projects** are increasing. In 2023, for example, the merger of ALD (a subsidiary of Société Générale) with the Dutch player LeasePlan created a new leader, Ayvens, with a fleet of **over 3 million vehicles**.

2. Use: redefining the driver experience

Technology is also changing the way the car is viewed. The pleasure of driving, once a key concern alongside safety, is now being overtaken by autonomous driving and embedded software. **This fundamental change requires a rethink in the way the car is organised and designed.** Well aware of this development, **manufacturers are looking to create unified software platforms** as a key element in the deployment of their new strategies. This is a matter of urgency for incumbent players, particularly as the **digital natives**, like the Chinese, already have a clear lead in this area, with their user-centric models.

Rank 2024	Carmaker	Sales 2024 (Million vehicles)	Global market share (%)	EV share of sales (hybrid + BEV)
1	Toyota	11.0	11.6 %	1 %
2	Volkswagen Group	9.0	9.5 %	8 %
3	Hyundai-Kia	7.2	7.6 %	3 %
4	General Motors	6.0	6.3 %	2 %
5	Renault-Nissan-Mitsubishi ¹	5.6	5.9 %	26 %
6	Stellantis ¹	5.5	5.8 %	16 %
7	Ford	4.5	4.7 %	6 %
8	BYD	4.3	4.5 %	100 %
9	Honda	3.7	3.9 %	25 %
10	Geely	3.3	3.5 %	41 %
11	Suzuki	3.2	3.4 %	30 %
12	Changan	2.7	2.8 %	27 %
13	BMW Group	2.5	2.6 %	24 %
14	Mercedes-Benz	2.4	2.5 %	18 %
15	Tesla	1.8	1.9 %	100 %

Note: [1] Consideration of the entire group despite acquisitions and disposals between 2013 and 2024 in order to obtain a comparable base

3 - THE COMPLETE REDEFINITION OF THE MARKET BALANCE

1. A manufacturing landscape in transformation...

The shift towards electrification is fuelling the emergence of new players (Tesla, BYD, etc.). Their challenge to the established order is compounded by other issues related to securing supply chains, dominating new markets – particularly in Asia – and shifting from a manufacturing model to an assembly model. **Europe, still focused on ICE or hybrid models** despite numerous initiatives and heavy investment to develop its industrial model, is seeing **new exclusive leaders in electric vehicles** emerge beyond its borders, ones whose production lines have been conceived, designed and developed around EV technology from the outset. **In less than a decade, fledgling manufacturers such as BYD and Tesla have become market leaders.**

2....reshaping the supplier landscape

With electrification, the supplier landscape is also changing, in light of the components now needed to manufacture cars: **fewer engine parts and fewer fluids.** **Today's key supply issues** concern batteries and electronics more so than yesterday's mechanical parts. The main consequences of this shift are **significant disruption** among traditional suppliers and the recent emergence of new key players, such as CATL (batteries).

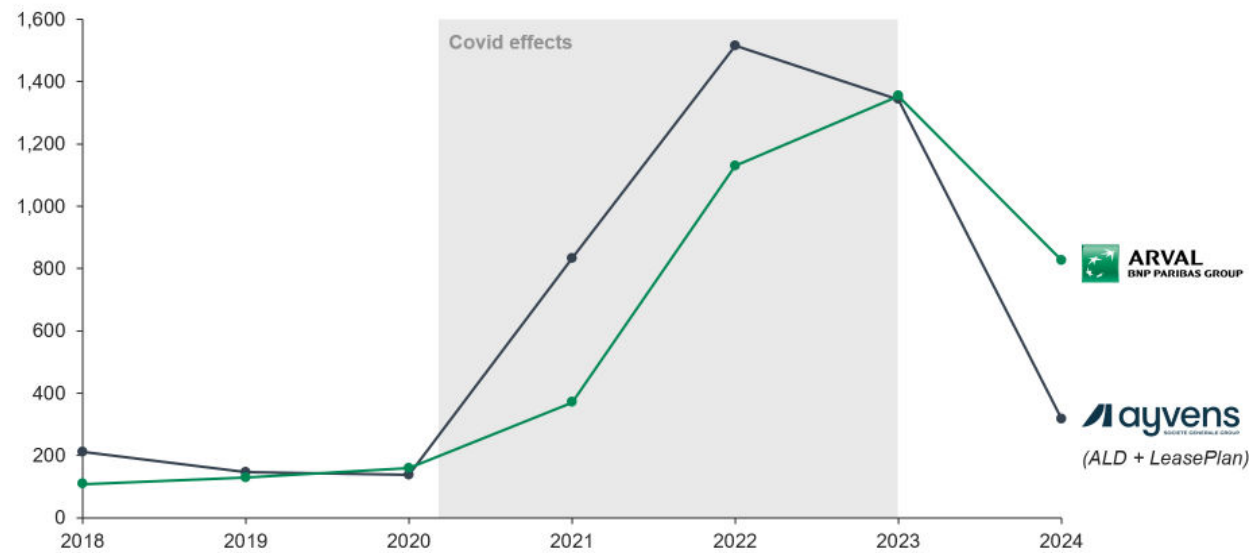
MAIN AUTOMOTIVE SUPPLIERS IN 2024: CATL ENTERS THE TOP 10

Rank 2024	Supplier	Revenue 2024 (€m)	Share of top 10 (%)
1	Bosch	55,795	15.1 %
2	Denso	42,522	11.5 %
3	Continental	39,719	10.7 %
4	Magna	39,575	10.7 %
5	Hyundai Mobis	38,794	10.5 %
6	ZF Friedrichshafen	38,097	10.3 %
7	CATL	32,493	8.8 %
8	Aisin	28,442	7.7 %
9	Michelin	27,193	7.4 %
10	Faurecia / Forvia	26,974	7.3 %

3. In this changing ecosystem, leasing companies need to rethink the issues surrounding residual value

Leasing groups recorded **significant capital gains on disposals in the wake of the health crisis**, linked to a tight second-hand market as production lines were disrupted.

RESULT FROM VEHICLE SALES (€M)



Note: Consideration of the entire Ayvens group formed via ALD's acquisition of LeasePlan in order to obtain a comparable base from 2018 to 2024

Thanks to granular historical data on resale values, the residual values estimated at the time of the lease were generally reliable for ICE models, when excluding market anomalies (e.g. Covid). **The story is very different in the EV segment**, however, given the lack of hindsight and the many uncertainties surrounding the accelerated obsolescence of these vehicles – not just because of the battery, whose range is constantly increasing, but also because of the embedded software.

This is a major challenge when the chassis and running gear (frame, bodywork, engine, mechanics, etc.) account for only ~20% of the value of an electric vehicle, compared with ~80% for its predecessor with an internal combustion engine, and when new contracts related to electric vehicles already represent 35% of production for some major leasing companies.

Leasing companies will therefore have to adjust their models to calculate the residual values of electric vehicles. Over the next few years, it is not unreasonable to expect a high degree of volatility in the results of disposals, with significant provision reversals for the most conservative leasing companies, and conversely large capital losses on disposals for the most ambitious.

Insurance companies will also have to adapt by gradually recalibrating premium levels, because while there are fewer parts in an electric vehicle, the cost of replacing them in the event of an accident is much higher.

CONCLUSION

After developing around a relatively stable industrial model for almost a century, **the automotive industry has faced in recent years a range of challenges in terms of both technology and use.**

In a world of heightened economic and geopolitical tensions, the issues of supply and control are crucial to the survival of some manufacturers, over and above the colossal investment required to transform their business models. Alongside these constraints, **manufacturers will have to offer upgradable models** to combat obsolescence: one of the key factors for success will be providing embedded software that is constantly updated in line with changes in customer use and expectations, in a similar vein to smartphones for which telephony is no longer the main function...





4 THE CULTURAL CORNER

AUTONOMOUS CARS: HOW SHOULD YOU DRIVE?

Beyond the technological challenge they represent, **'autonomous cars'** confront us with an unprecedented moral issue. For autonomy, in the strongest sense, belongs only to human beings, capable of setting their own rules for action. A machine, no matter how sophisticated, simply executes what has been encoded in it. The question of the illusory responsibility of autonomous vehicles is therefore ultimately a question of the ethical and cultural choices that we, as citizens, agree to delegate to the engineers who design them.



Sophie Chassat
Partner, Accracy

Originally proposed by the philosopher Philippa Foot in 1967, the **'tram dilemma'** is a good illustration of the problem. This thought experiment involves deciding whether, faced with a critical situation on the road, you should sacrifice one person to save five, an elderly person to save a child, passengers to save pedestrians. Researchers who have explored these dilemmas – such as those at MIT with their **'Moral Machine'** survey¹ – show that **our moral preferences are not universal**: they vary according to culture, tradition and personal worldview. In reality, no solution can be programmed 'objectively'.

It could be argued that, faced with the choice between a child and an old man, it goes without saying that the child must be saved. But what if that child is destined to become a tyrant? A fake advert, devised by German students, features a Mercedes avoiding all obstacles... except one: a young boy, soon revealed to be Adolf Hitler. The final slogan – 'Detect dangers before they happen' – provocatively questions technology's claim to be the judge of right and wrong. This desire to encode in advance what is a matter for human judgement embodies a fantasy of 'total control', which threatens precisely what makes us human: **our ability to decide freely.**

This is the thesis defended by Matthew B. Crawford, philosopher and mechanic, in his latest essay *Why We Drive: Toward a Philosophy of the Open Road*. Driving is not a chore from which we should be relieved, he contends, but a fundamental experience of freedom. Taking the wheel means exercising your skills, coordinating your senses, improvising in the face of the unexpected and taking responsibility among others. In this way, **driving constitutes a genuine 'cognitive extension'**: it sets us in motion, in every sense of the term, and contributes to our individual and collective fulfilment. Making us mere passengers means risking the atrophy of our human capacities.

The autonomous car thus illustrates the risk of a society obsessed with security and control, ready to sacrifice human autonomy in favour of algorithmic efficiency. Because it is based on the **'presumption of competence'** (the trust we place in others to know how to act and cooperate), democracy itself is threatened, according to Crawford. If we delegate our decision-making power to machines, we undermine the foundations of our free societies. **The question is no longer whether cars will be able to drive themselves, but whether we will still want to drive ourselves.**

¹ 'Moral Machine' is an online test in which a driverless car must choose the lesser of two evils, and compare its answers with those of other users: <https://www.moralmachine.net/hl/fr>

5 THE ACADEMIC INSIGHT
CAR ELECTRIFICATION:
'SATISFACTORY, BUT
WE CAN DO BETTER!'



Henri Philippe
Partner, Accuracy

The text below is a summary of the article published in the Polytechnique Insights newsletter on 14 May 2025, by Anaïs Marechal, Anne de Bortoli, Associate Professor at the Université du Québec à Montréal and Associate Researcher at the École des Ponts ParisTech (IP Paris), and Jean-Philippe Hermine, Director General of the Institut mobilités en transition at the Institut du développement durable et des relations internationales

The rise of electric vehicles (EVs) is one of the few recent pieces of good news in the fight against climate change. Between 2018 and 2022, the share of EVs in passenger car sales rose from 1.6% to 10%, and the trajectories envisaged by the Climate Action Tracker predict between 75% and 95% of sales in 2030, or even 100% in certain scenarios.

This dynamic is based on available and economically competitive technologies, ambitious public policies and committed manufacturers.

HOWEVER, THE SURGE
IN THE SALE OF ELECTRIC VEHICLES
MASKS SOME MAJOR
LIMITATIONS.

Firstly, the ‘EV share of sales’ indicator does not provide any information on changes in distances travelled. In other words, the increase in distances travelled may offset the gains associated with electrification.

Secondly, the reduction in emissions depends largely on the electricity mix used: **the lifecycle carbon footprint of EVs** remains lower than that of internal combustion vehicles



in most countries, but the extent of the benefit varies according to the carbon intensity of electricity generation. The growth of EVs is also heavily dependent on **geographical and political factors**. In 2023, the global share of EV sales reached 18% (≈14 million units), concentrated mainly in China, Europe and the US – with **China alone accounting for almost two-thirds of global sales**.

Targeted public policies (production/purchase subsidies, targets for ending sales of combustion engines) **have been**

decisive: Norway (where 93% of sales are EVs), Iceland, Sweden and other Nordic countries are examples.

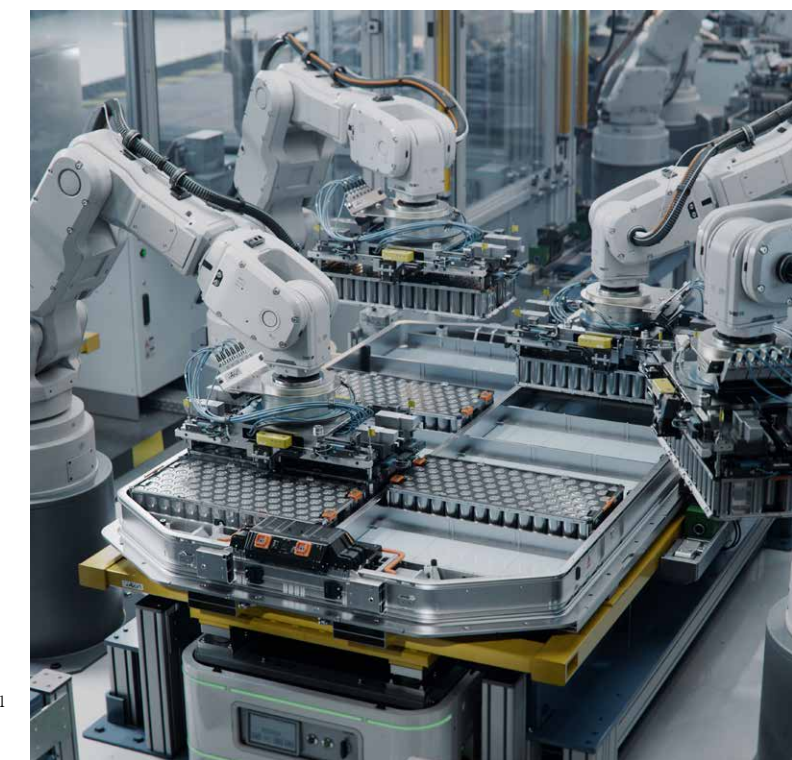
In the EU, the planned ban on the sale of combustion-powered vehicles by 2035 (with some states anticipating 2030) sends a more binding signal to the industry.

The industrial transformation is palpable: more than twenty major manufacturers, representing over 90% of global sales, have set targets for electrification. If these targets are met, **annual sales of EVs could approach 40–45 million units by 2030**, a level consistent

with current forecasts and likely to boost investment in supply chains and battery production.

It should also be noted that the **‘SUVisation’** of the fleet, with a high proportion of SUVs among electric models (around two-thirds of the range), increases the average weight of vehicles and, consequently, emissions per kilometre travelled.

As a result, **the average weight of cars has increased significantly over the last thirty years**, attenuating the unit gains linked to electrification. Corrective measures, such as **weight-based penalties and eco-scores**, have now been introduced in several European countries to limit this drift. In this context, **the growing demand for mobility remains a central issue:** even if EVs reduce emissions per vehicle, the increase in kilometres travelled and the growth of the fleet may offset any gains.





Decarbonisation therefore requires additional levers: for example, a modal shift (increasing the supply of public transport, etc.), reducing the distances travelled by private vehicles, and accelerating the phasing out of internal combustion vehicles (an acceleration factor of ≈ 7 required between now and 2040 according to some estimates).

GEOPOLITICAL AND INDUSTRIAL RISKS ARE ALSO REAL.

International tensions, political reversals (e.g. the introduction of less ambitious climate policies in some major powers) and concerns about supplies of critical metals (mining capacity, available reserves, etc.) may put the brakes on the trajectory.

In addition, **the political stakes involved in electrification undermine social acceptance and the continuity of public policies, exposing the transition to potential disruptions.**

Emerging countries are also following varied trajectories.

The share of EVs in their fleets remains low, but there are favourable factors: production incentives (India), the arrival of more affordable models (development of new

Chinese programmes, the Latino-Asian market), or the development of supply chains.

Despite these signals, **the future contribution of emerging countries** to transport-related emissions could remain lower than expected, according to certain scenarios, but **their electrification remains an important opportunity to limit the overall rise in emissions.**

As far as the short-term impact on the climate is concerned, the effect of EVs is already perceptible, albeit limited: for example, the electrification of the European car fleet should make it possible to **avoid tens of millions of tonnes of CO₂ per year** – a positive signal, but insufficient compared with the total emissions from the sector, which is growing in several regions.

To achieve the 1.5°C global warming limit, electrification must be part of a more global systemic strategy.

In conclusion, the automotive example shows that political will and clear regulatory signals **can produce rapid and significant results.**

Electrification is a proven technology offering major co-benefits (air quality, reduced dependence on fossil fuel imports) and strategic industrial leverage.

But to transform this progress into a lasting contribution to carbon neutrality, we need to:

- 1 decarbonise** the electricity mix;
- 2 curb** SUVisation and limit the average weight of vehicles;
- 3 promote** a modal shift and reduce energy demand for travel;
- 4 ensure** the resilience of critical material supply chains;
- 5 maintain** stable and coordinated public policies at the international level.

So, while the electrification of vehicles is a real **technical and industrial lever**, it is not enough.

Only a systemic approach, combining regulation, infrastructure, sobriety and industrial policy, **will make it possible to anchor the transition of the transport sector on a long-term trajectory compatible with warming of +1.5°C.**

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ECONOMIC POINT OF VIEW

AUTOMOTIVE SECTOR: NIHILNE EST NOVUM SUB SOLE OECONOMICICI?



Hervé Goulletquer
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Accuracy

What is a car? The usual definition is as follows: a light, motorised land vehicle, generally with four wheels, designed for the individual transport of people and luggage. The need for such means is enduring, but the way it is met – and therefore the product itself – can change. **The economist would add that it is a durable consumer good**, meaning a product designed for repeated and prolonged use over time. Since one does not buy a car every day, sales and production follow a cyclical pattern. Booms and slumps frame more typical periods.

Predicting what will happen tomorrow is, therefore, rather complicated. The sociologist, tempted to add her grain of salt, would note that the way we use cars, and therefore our interest in them, evolves in line with societal changes. For instance, the middle class disturbed by shifts in the economic system alters demand segmentation (entry-level and luxury vehicles gain ground to the detriment of mid-range models).

Even the anthropologist, who studies the long-term trends and the constants of human societies, finds his convictions shaken. Roland Barthes, admittedly more of a semiologist than an anthropologist, wrote in 1957 that 'cars today are almost the exact equivalent of the great Gothic cathedrals... consumed in image if not in usage by a whole population which appropriates them as a purely magical object.' The symbol of freedom long associated with the car is now being called into question. Increasing congestion on road networks makes alternative, often collective, solutions more attractive. And although internal combustion engines are efficient and inexpensive, they pollute.

In today's world, marked by a long series of transformations (from environmental and technological shifts to changes in lifestyles, mobility needs and socio-economic structures), the car must adapt. The challenges in the coming years will likely follow two main trajectories: autonomous and shared mobility on the demand side, and a circular economy on the production side (drawing here on the ideas of the futurist Michel Levy Provençal).

Reducing both urban congestion and pollutant emissions, while improving road safety, requires a rethink of mobility. In parallel to technological advances (vehicles will gradually become electric and autonomous), business models will evolve, with mobility services developing alongside vehicle sales (autonomous fleet management, leasing, shared journeys, etc.).

Of course, the challenges ahead are significant: access to appropriate technologies, the cost and financing of transformations – whether in manufacturing or infrastructure – regulatory changes and social acceptance.

The automotive sector must also embrace the circular economy, from vehicle design and manufacture to the introduction of new infrastructure, such as electric vehicle charging stations and battery reconditioning at end-of-life.

This represents a potential rupture with current practices. Over the past decades, and still today, the automotive industry has exemplified both the international division of labour and commercial integration. Producing cars (and similar professional vehicles) requires **sophisticated supply chains, often designed globally**, and the manufacturing location often depends on a mix of market size, production costs and economies of scale.

That is the roadmap. Implementing it will mean overcoming two major obstacles.

First, there is the competition from Chinese manufacturers for traditional carmakers. Backed by its government, China's electric vehicle industry has become, if not the global benchmark, then a formidable and unavoidable competitor. Is this acceptable to the big names in the sector, be they American, Korean, European or Japanese? If the answer is no, will the Chinese model, despite criticism, be one to follow (and to what extent?)?

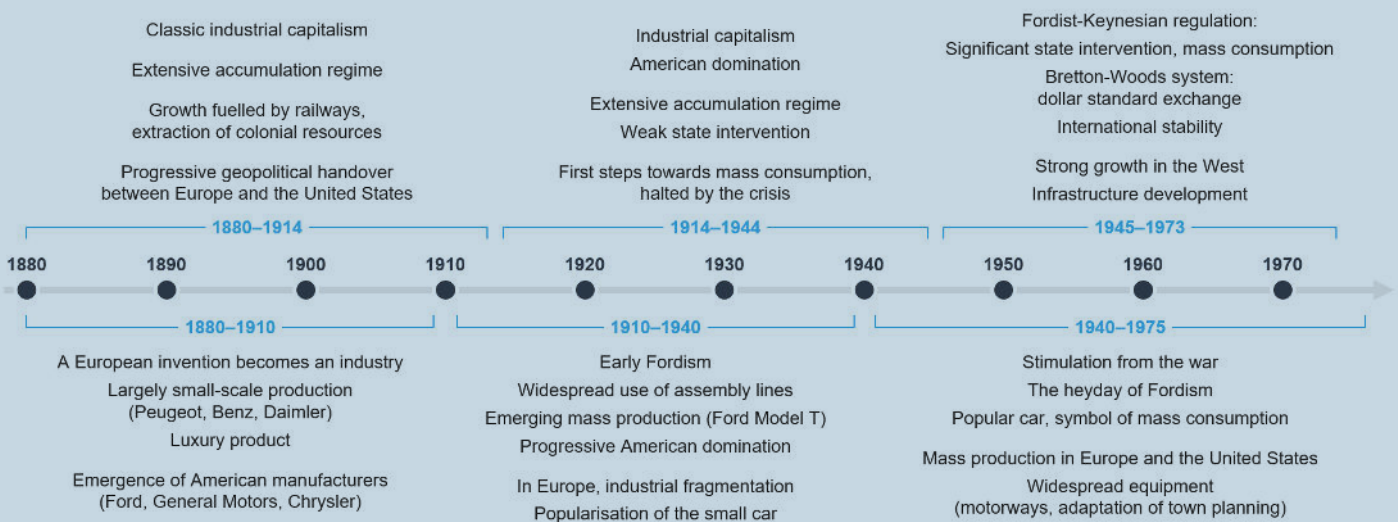
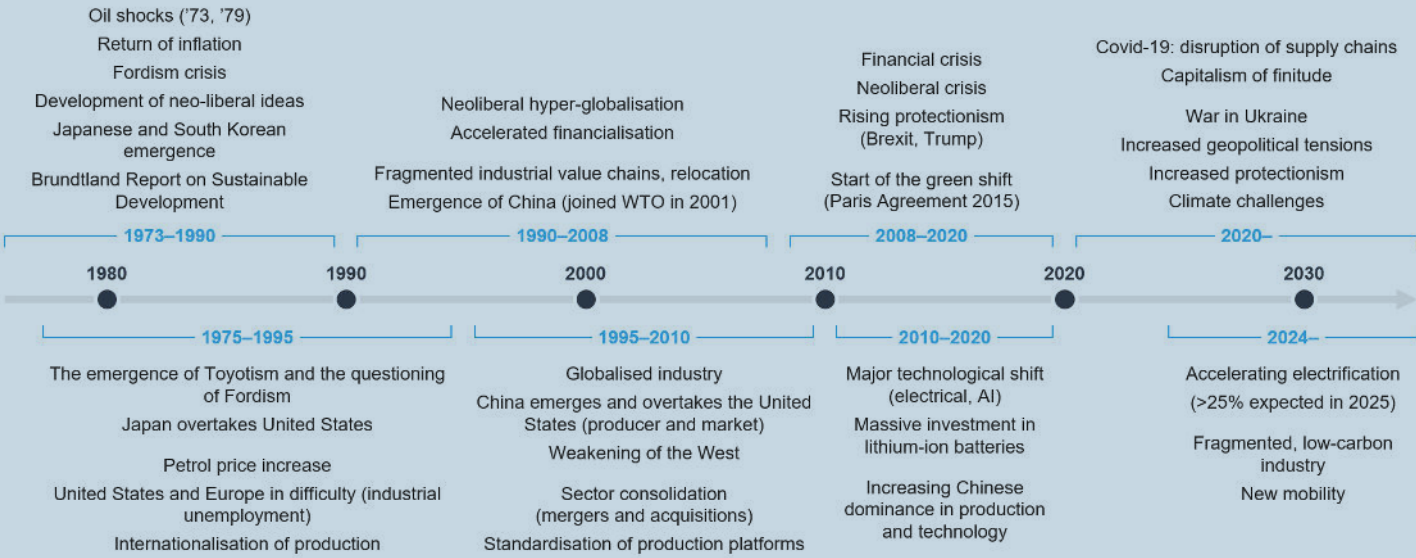
Second, there is an **uncertain international economic environment**, which is not conducive to risk-taking and therefore slows decision-making. US trade policy seems to be heading in a direction not seen for nearly a century. **What impact will this have on growth, inflation, interest rates and exchange rates?**

The diagnosis appears rather bleak, with the sense that the hurdle to adapting to the new 'rules of the game' is extremely high. **Might traditional manufacturers find that the bar is simply too high to clear?** Perhaps – at least for some of them. **Nonetheless, a look back at the automotive adventure since its beginnings almost a century and a half ago reveals two things:** a mirror effect between economic transformations and those in the automotive industry and, following this, a Schumpeterian logic of creative destruction. Everyone is seeking to adapt, but there will be winners and losers.

Can we already identify them?



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