

# Automotive Supplier Outlook 2024

**Matthew Beecham**, Senior Research Analyst, Supply Chain and Technology

As we approach the end of yet another eventful year, we gauge the industry's pulse regarding the notable events of the past year and the outlook for the upcoming year.

To learn more or to request a demo, visit [www.spglobal.com/mobility](https://www.spglobal.com/mobility).

# Table of contents

<b>Key takeaways</b>	<b>3</b>
<b>Falken Tyre Europe GmbH</b>	<b>4</b>
<b>Harman Automotive</b>	<b>5</b>
<b>Ineos</b>	<b>7</b>
<b>McLaren Applied</b>	<b>8</b>
<b>Mobileye</b>	<b>10</b>
<b>PPG</b>	<b>12</b>
<b>Syensqo</b>	<b>14</b>
<b>Vitesco Technologies</b>	<b>16</b>
<b>Yanfeng Automotive Interiors</b>	<b>18</b>
<b>ZF</b>	<b>20</b>

# Key takeaways

**Falken** faced challenges due to market unpredictability but expanded its product range. The 2024 outlook emphasizes agility and supply chain development. Sustainability, particularly tire wear, is an emerging focus.

**Harman** overcame COVID-19 recovery challenges in 2023, transitioning to deliver new products quickly. The outlook is promising, focusing on growth through electrification and new partnerships. Rapid changes in vehicle electronics and the rise of partnership models are key emerging issues.

**Ineos Styrolution** navigated economic challenges in 2023, capitalizing on sustainability trends with their recycled ABS ECO. The outlook highlights the growing demand for sustainable solutions, focusing on establishing a closed-loop recycling system within the automotive industry.

**McLaren Applied** faced the challenge of mainstreaming EVs in 2023, necessitating battery development and charging infrastructure advancements. They also launched the IPG5-x inverter for EDUs. While optimistic about the industry's shift toward greater drivetrain efficiency, they highlighted the UK's lack of a silicon carbide semiconductor supply chain as a concern.

**Mobileye** overcame perception challenges in 2023, expanding its product offering and scaling autonomy. Post-IPO, the company has grown significantly, with notable success in the Chinese market. The focus in 2024 will be on advanced mapping, computer vision, and driving policy solutions, with keen observation of NEV trends.

**PPG** overcame supply chain challenges in 2023, focusing on resilience and customer relationships. They made strides in electric vehicle support and sustainability goals. For 2024, PPG aims to be the go-to coatings partner amidst industry electrification and decarbonization, viewing rapid industry changes as opportunities.

For **Syensqo**, the shift from ICE to BEVs has driven demand for specific products, with the company's solutions gaining traction in electric powertrains. The outlook is optimistic, particularly for eMotor and power electronics. The emerging focus is on sustainable insulation solutions for the expanding electric power grid.

Despite supply chain disruptions and transformation challenges in 2023, **Vitesco Technologies** excelled in share price performance and electromobility orders. The supplier is expecting supply chain improvements and continued electromobility growth. Potential merger activities with Schaeffler AG and a focus on scalable platforms are key emerging issues.

**Yanfeng** made strides in sustainability and business globalization in 2023. They plan to enhance customer collaboration, digital technology integration, and transformation efforts. Resilience, continuous improvement, flexibility, and teamwork are paramount in navigating market challenges.

**ZF** faced numerous challenges in 2023, including a recessionary climate and supply chain disruptions. However, they made progress in their transformation towards electric mobility, launching a magnet-free electric motor. The outlook focuses on establishing financial foundations and prioritizing profitable business areas. Geopolitical disputes, inflation, and supply chain issues are key emerging concerns.

# Falken Tyre Europe GmbH

Falken Tyre Europe GmbH is the European subsidiary of Japanese tire manufacturer Sumitomo Rubber Industries Ltd (SRI). From its headquarters in Offenbach am Main, Germany, Falken Tyre Europe oversees the marketing of a portfolio of tires for cars, trucks, vans and SUVs as a supplier of OEM products and for the European aftermarket. The company has built up a sales network of around 8,000 tire dealers throughout Europe, which act as our partners for sales and fitting of our quality products.

We spoke to Markus Bögner, managing director, president & CSO Falken Tyre Europe GmbH.



## Key takeaways:

- **Challenges:** The business encountered challenges due to a year of unpredictability, affecting pricing, shipping, and consumer spending across Europe.
- **Achievements:** Falken expanded its range, offering a comprehensive portfolio that includes, for the first time, an ultra ultra high-performance tire, the AZENIS RS820.
- **Outlook for 2024:** The focus will be on agility and preparedness for change, with continued development of the supply chain to secure tire supplies, a strategy that proved effective during the COVID-19 pandemic.
- **Emerging issues:** Sustainability is a growing concern. The company is focusing not just on materials but also on tire wear, with their tires performing well in increasing important consumer tire abrasion tests.

The following is an edited transcript of the conversation.

## S&P Global Mobility: What were the most significant challenges your business encountered this year?

Markus Bögner: Once again, we faced 12 months of unpredictability. Stability is what the sector craves. This has a particular effect on pricing, shipping, and consumer spending across Europe.

## Are there any notable achievements or positive developments you would like to highlight?

I'm very proud of how we have expanded our range to now offer our most comprehensive portfolio. This includes for the first time, a UUHP (ultra ultra high-performance tire), the AZENIS RS820

## Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?

We must remain agile and invest in being prepared for change. This approach served us well and our team during COVID-19 where Falken was able to secure supplies of tires. We will continue to develop our supply chain to achieve this.

## Is there any specific concern or emerging issue you'd like to highlight?

Sustainability and its importance grow every day. Together with our parent company, SRI, we are at the cutting edge of this, not only from a materials point of view but also from wear. Our tires continue to perform well in the abrasion tests that are increasingly an element for consumer tire testing.

# Harman Automotive

Headquartered in Stamford, Connecticut, Harman designs and engineers connected products and solutions for automakers, consumers, and enterprises worldwide, including connected car systems, audio and visual products, enterprise automation solutions; and services supporting the Internet of Things. Its brands include AKG®, Harman Kardon®, Infinity®, JBL®, Lexicon®, Mark Levinson® and Revel®. More than 50 million vehicles on the road today are equipped with Harman audio and connected car systems. Its software services power billions of mobile devices and systems that are connected, integrated, and secure across all platforms, from work and home to car and mobile. In March 2017, Harman became a wholly-owned subsidiary of Samsung Electronics Co., Ltd.

We spoke to Huibert Verhoeven, SVP of intelligent cockpit at Harman.



## Key takeaways:

- **Challenges:** The recovery from the COVID-19 impact was the main challenge in 2023. Harman Automotive focused on restoring normalcy with its partners and shifting focus towards delivering strong in-cabin innovation.
- **Achievements:** Harman Automotive transitioned to deliver innovative products at consumer development speed. They communicated to customers about their ready-to-go product families, leading to quicker adoption and major wins.
- **Outlook for 2024:** The prospects look promising with the visibility of new programs set to launch. The focus is on securing new wins both in traditional regions and globally, with growth driven by electrification. The year will see commitments delivered to existing customers and growth with new customers.
- **Emerging issues:** The rapid change in vehicle electronics content and architecture is a significant trend. The task ahead is rolling out the new architecture and ensuring optimal execution. The semiconductor business and the industry's shift towards partnership models are also crucial considerations. 2024 is seen as the year of the ecosystem, with partners working together to bring solutions to market quickly.

*The following is an edited transcript of the conversation.*

## S&P Global Mobility: What were the most significant challenges your business encountered this year?

Huibert Verhoeven: 2023 was the year of recovery after COVID-19 for the automotive industry. In 2022, COVID-19 was still having a severe impact on programs, but this year customers expected the industry to return quickly to a level of normality. For the automotive sector, certainly, the supply chain has been finding its footing again.

From a Harman Automotive perspective, I think we have done a good job with our long-term and new OEM, supplier and ecosystem partners to get back to normalcy rather than needing to be reactive and fight fires. As the year progressed, we were able to transition to a focus of delivering strong in-cabin innovation and were full force ahead on enabling consumer experiences automotive grade for our customers and the industry.

## Are there any notable achievements or positive developments you'd like to highlight?

Harman's Automotive business has transitioned over recent years to deliver innovative products that provide best-in-class in-cabin experiences at consumer development speed. 2023 was the year that we really communicated to customers that

these cohesive product families are ready to go, so in as quickly as six months, they could be in their vehicles. Then began the hard work of convincing them to map these products and timescales into their future vehicle programs. Now we are starting to see those wins come to fruition with product sales instead of just traditional development projects. We are starting to see that the industry mindset is changing, resulting in quicker adoption of products. We have gone public with a number of those wins from significant OEMs, demonstrating real success.

**Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

For Harman Automotive, 2024 is shaping up very well from a commercial perspective. We have good visibility of the year ahead with new programs in production and set to launch. We are focused on securing new wins – both in regions where we are traditionally very strong, but also new wins globally with customers whom we haven't worked with extensively before. A lot of that change is certainly driven by electrification. When you travel to China today, you find car showrooms in the malls next to consumer stores. In them are perhaps 50 different brands of cars all differentiated by the in-cabin experience. 2024 is the year when we will be delivering our commitments to existing customers, but we also anticipate growing worldwide with new customers.

**Is there any specific concern or emerging issue you'd like to highlight?**

There are several trends ahead, not just for 2024. If you look at the content of electronics in vehicles and the architecture, it's changing very rapidly. We are talking about central compute with liquid cooling, delivering massive compute power, so upcoming is the task of rolling out the new architecture and working with our partners to ensure that it's done correctly and optimally. Another consideration is the semiconductor business. In the past, semiconductors were a somewhat tactical business, but now the automotive industry has become a large consumer of cutting-edge silicon.

How the industry works together – whether that's on the silicon side or whether it's on the hyperscale cloud side – has become incredibly important. Suddenly we have transitioned from businesses working in silos to operating in partnership models. For me, 2024 is the year of the ecosystem, where many partners need to work together to bring exceptionally good solutions to market, quicker.

*Ineos Styrolution, one of the 36 businesses, is a global producer of styrenics products.*

We spoke to Knut Seibel, business development manager – automotive, Ineos Styrolution



## **Key takeaways:**

- **Challenges:** The major challenge in 2023 was the overall economic situation with increased cost structures. However, the automotive industry saw relatively stable demand, possibly due to the backlog created during the COVID-19 years.
- **Achievements:** The dominance of sustainability in the automotive industry was a prominent development in 2023. Ineos Styrolution capitalized on this trend with their mechanically recycled ABS "ECO," which offers the same performance as virgin material without the need for additional investments.
- **Outlook for 2024:** The demand for sustainable solutions is expected to grow in 2024 and beyond, driven by directives like the 2030/31 ELV Directive.
- **Emerging issues:** Current recycling solutions are mainly based on feedstock from other industries. The next step for companies like Ineos Styrolution is to establish a closed loop within the automotive industry, using waste from the industry itself.

*The following is an edited transcript of the conversation.*

## **S&P Global Mobility: What were the most significant challenges your business encountered this year?**

Knut Seibel: The overall economic situation with increased cost structures is probably the challenge that everybody has seen in the past year. On the other hand, we have also seen that in the automotive industry, the impact on purchasing behavior was not as strong as in other industries. This relatively stable demand is probably caused to some degree by the backlog created during the COVID-19 years.

## **Are there any notable achievements or positive developments you'd like to highlight?**

There is one clear trend that will dominate in 2023 in the automotive industry. In 2023, the sustainability topic has begun to overpower all other topics in the industry. For us at Ineos Styrolution this is music in our ears, since our mechanically recycled ABS "ECO" is available today – with the same performance as virgin material and as a plug-in solution. Thus, no further investments are required for processing the material.

## **Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

The trend of higher demand for sustainable solutions will only continue to grow in 2024 – and beyond. With the upcoming 2030/31 ELV Directive, for example, no manufacturer can avoid that topic anymore.

## **Is there any specific concern or emerging issue you would like to highlight?**

Recycling solutions today are mainly based on feedstock from other industries. At Ineos Styrolution, for example, we manufacture our sustainable ECO ABS by upcycling waste from the household industry. The next step must be to establish a closed loop within the automotive industry.

# McLaren Applied

UK-based McLaren Applied specializes in the technology and products sector. It has expertise in the design, development, production, and testing of electronic, mechanical, electrical, and software products. The company operates primarily in four sectors: motorsport, automotive, transportation, and mining. Previously a part of the McLaren Group, McLaren Applied has been an entirely independent entity since 2021, under the ownership of the private investment firm, Greybull Capital.

We spoke to Samir Maha, Chief Operating Officer, McLaren Applied.



## Key takeaways:

- **Challenges:** The most significant challenge encountered was taking EVs from the 'early majority' to 'mainstream'. This involves overcoming hurdles from battery development to charging infrastructure.
- **Achievements:** A notable achievement in 2023 is the development and launch of the IPG5-x inverter, which can be integrated into Electric Drive Units (EDUs) and works with various motors and transmissions.
- **Outlook for 2024:** The business prospects are promising as the industry moves into the third and fourth waves of automotive electrification, characterized by greater drivetrain efficiency and a 'definable experience'.
- **Emerging issues:** An emerging concern is the lack of an end-to-end supply chain for silicon carbide (SiC)-based power semiconductors in the UK. This absence poses a serious obstacle to the UK's ambition to be a leader in electrification. Efforts are being made to address this issue, but more is needed to compete globally.

*The following is an edited transcript of the conversation.*

## S&P Global Mobility: What were the most significant challenges your business encountered this year?

Samir Maha: I think our biggest challenge is a common theme for everyone in the industry: how to take electric vehicles from the 'early majority' to 'mainstream'. EVs have truly broken through into the public consciousness, as legislation has demanded reduced emissions and consumer interest has increased.

Now, all parts of automotive are looking at how we take adoption to the next level, and as with any maturing technology, there are hurdles to overcome - from battery development through to available charging infrastructure.

We see our role as helping OEMs develop products that truly appeal to buyers on the same level as ICE vehicles. We do this through technology that enables longer-distance, quicker charging EVs while delivering a definable driving and passenger experience.

## Are there any notable achievements or positive developments you would like to highlight?

We're pleased with how our inverter technology has developed this year, especially with the launch of IPG5-x in September. It's an inverter that can be integrated into Electric Drive Units (EDUs) and works with a variety of motors and transmissions — especially in performance applications.

In our discussions with customers and partners, it's become increasingly clear that OEMs are looking for the option to source integrated EDUs that save space, cost and accelerate development time. We developed the IPG5-x to be highly flexible, so it's ready to be integrated within any combination of motor and transmission. It carries over all our standalone IPG5's qualities — peak efficiencies over 99 percent, continuously variable switching frequency and fine motor control - building on the maturity of that product.

We're in advanced discussions with several OEMs and Tier 1 suppliers about IPG5-x and working with transmission provider TREMEC to jointly develop an integrated EDU for first application with an established OEM.

### **Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

As an industry, we're facing what we call the third and fourth waves of automotive electrification, which will take us into an era of mobility in which EVs dominate. This is where carmakers will prioritize developing super-efficient EVs that align with the driver experience they want to deliver and their brand ethos.

The immediate focus is on achieving greater drivetrain efficiency, and this is what we define as the third wave. The competitive landscape is ramping up significantly now that all manufacturers have established their product entry points. Models based on dedicated 800V architectures are leading the way, driving what we call the virtuous cycle. An efficient drivetrain inherently has a smaller battery, which makes the vehicle cheaper, lighter, and easier to control, and offers a smaller carbon footprint in terms of raw materials. It also increases the range and speeds up charge times, building trust in the technology.

The fourth wave will be characterized by a 'definable experience'. More electric models on the market means a greater need for differentiation, especially with mass-market brands already stealing a march on sports marques. Today, you can buy a compact EV that accelerates faster than a Lamborghini, which may be great fun initially but doesn't build that all-important 'character' and driver engagement.

We believe that differentiating the driver experience through the application of drivetrain hardware and software will be crucial. Through advanced inverter technology and software for fine motor control, engineers can start programming different characteristics into vehicles, delivering the most appropriate driver experience for their brand and type of car.

Our next-generation inverter platform can play a key role in this transition, so we're excited by the prospect of greater uptake of our technology in the coming years.

### **Is there any specific concern or emerging issue you'd like to highlight?**

We believe that silicon carbide (SiC) will be the dominant inverter technology for automotive by the end of this decade. Most, if not all, OEMs are building long-term relationships with SiC technology and system manufacturers. The reason for this is that when SiC is used, and the EV drivetrain optimized around efficiency, you develop a better car.

However, the UK currently has no end-to-end supply chain for SiC-based power semiconductors. The lack of a vertically integrated supply chain for these semiconductors poses a serious roadblock to the UK's ambition to be a leader in electrification. We are actively working on addressing this as part of a government-funded consortium (ESCAPE), however, more is required to compete globally against initiatives such as the Inflation Reduction Act in the US.

We can stay at the forefront of EV technology, but we need to build the manufacturing capability and capture the opportunities as firmly as we can.

# Mobileye

Mobileye specializes in developing autonomous driving and driver-assist technologies, leveraging expertise in areas like computer vision, machine learning, mapping, and data analysis. Its innovations facilitate self-driving vehicles and mobility solutions, support top-tier advanced driver-assistance systems, and provide insights to enhance mobility infrastructure.

We spoke to Dan Galves, chief communications officer, Mobileye.



## Key takeaways:

**Challenges:** The major challenge for Mobileye in 2023 was changing its perception from a 'black box' to a provider of valuable solutions for OEM, Tier 1, and PTO/TNC customers. This was achieved through an expanded product offering and scaling autonomy.

**Achievements:** Since the IPO in October 2022, Mobileye has seen progress, with a valuation increase of about 100 percent. The company has observed a shift from volume to content in vehicles, leading to growth in the ADAS market. They have seen success in the Chinese market and are in advanced-stage negotiations with 10 OEMs for their SuperVision and Chauffeur products.

**Outlook for 2024:** Mobileye is closely observing the NEV players, especially in China, and expects some trends to carry over to the European and US markets. The focus for 2024 will be on solutions requiring advanced capabilities in mapping, computer vision, and driving policy.

*The following is an edited transcript of the conversation.*

**S&P Global Mobility:** What were the most significant challenges your business encountered this year?

Dan Galves: Really, getting the message out about who Mobileye is now in 2023 and all the value we can provide to our OEM, Tier 1, and PTO/TNC customers. We had been in a stealth state developing many of the production technologies we now tout during our tenure with Intel. Of course, base ADAS programs were executed, and we had developed a reputation for excellent performance and low cost, but we were seen as a 'black box'. Changing that via a significantly expanded product offering and scaling autonomy in a collaborative approach has made this year successful thus far.

**Are there any notable achievements or positive developments you'd like to highlight?**

Looking back since our October 2022 IPO, we have made significant progress on several fronts, our company capitalization being one of them: As of the market close on November 27, 2023, we have a valuation that is roughly 100 percent greater than our initial \$21 share price. It's been an incredible story to tell of how our co-founder, Amnon Shashua, has built this company over the last 20+ years into a global leader in automotive safety technology.

On a business front, we're seeing a shift from volume to content as vehicles become more advanced – what that means is the ADAS market continues to grow, and we are well positioned to offer top solutions across a spectrum of products. The inflection point we are seeing now is a hands-off revolution, playing out chiefly in the Chinese market where we are winning with brands like Geely's Zeekr, Volvo, Polestar, and Smart as well as with Porsche and FAW; in 2024 and beyond we will see, what we call SuperVision, proliferate.

We're most excited to share that our advanced-stage negotiations for SuperVision and Chauffeur (a consumer eyes-off / hands-off ADAS platform that offers a variety of solutions for various operational design domains) products now account

for 10 OEMs which make up nearly 35 percent of global automotive production. 2022 was a record year for us in building out our future revenue pipeline, and we are on track to exceed again this year.

**Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

We're watching how the NEV players are shaping up intently and are very involved with many market leaders in China. We believe some of the trends manifesting there will carry over into the European and US markets – consumers demanding more advanced vehicle technologies. 2024 will be a year where we see more progress on the solutions requiring cutting-edge capability in mapping, computer vision, driving policy, and a few more things we are excited to talk about during next year's CES (Consumer Electronics Show).

PPG Industries, Inc. manufactures and distributes paints, coatings, and specialty materials worldwide. The company operates through Performance Coatings and Industrial Coatings. The Performance Coatings segment offers coatings, solvents, adhesives, sealants, sundries, and software for automotive and commercial transport/fleet repair and refurbishing, light industrial coatings, and specialty coatings for signs; and coatings, sealants, transparencies, transparent armor, adhesives, engineered materials, and packaging and chemical management services for commercial, military, regional jet, and general aviation aircraft. The company was incorporated in 1883 and is headquartered in Pittsburgh, Pennsylvania.

We spoke to Alisha Bellezza, PPG Vice President, Global automotive OEM coatings.



### **Key takeaways:**

- **Challenges:** Unpredictable demand conditions, including COVID-19 impacts and the UAW strike, posed significant challenges to the supply chains. However, the team's close relationship with customers helped mitigate major disruptions. The focus is now on continuous improvement and productivity to enhance team resiliency.
- **Achievements:** Significant development efforts were made in support of electric vehicle production, including a dielectric powder offering and progress on battery fire protection coatings. The company also made strides in adopting science-based sustainability goals, recognizing the importance of scope 3 emission reductions for customers.
- **Outlook for 2024:** PPG is excited about the industry transformation through electrification and decarbonization. The aim is to be the coatings partner of choice during this transformation, with a focus on innovation and customer intimacy.
- **Emerging issues:** The rapid pace of change in the industry is seen as an opportunity rather than a concern. PPG is preparing to match this pace, aiming to deliver new solutions and better service quickly.

*The following is an edited transcript of the conversation.*

### **S&P Global Mobility: What were the most significant challenges your business encountered this year?**

Alisha Bellezza: The last few years of unpredictable demand conditions, from COVID-19 impacts to the UAW strike, challenged our supply chains. Our team members around the world, however, remained close to our customers to help insulate against any big disruptions. While we're proud of these close relationships, we know we need to work on continuous improvement and productivity. We are focusing on improving the resiliency of our teams to ensure we can consistently be the most reliable partner in the coatings space.

### **Are there any notable achievements or positive developments you'd like to highlight?**

We are very pleased with our development efforts in support of electric vehicle production, including our dielectric powder offering. We're making progress on battery fire protection coatings that we believe will be crucial as regulatory standards increase. Additionally, we are excited about our progress in adopting science-based sustainability goals as we know that scope 3 emission reductions are a big area of focus for our customers.

### **Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

We are in very exciting times witnessing the industry transformation via electrification and decarbonization. We are focused on being the coatings partner of choice through this transformation, with a renewed focus on innovation and customer intimacy supported by the strongest team of experts in the industry.

**Is there any specific concern or emerging issue you'd like to highlight?**

The pace of change happening in the industry is not a concern, but an exciting opportunity that will require all of us to adapt quickly. We are preparing to match the pace we know our customers will be at, delivering new solutions and better service with the utmost speed.

The use of Syensqo's composite materials and specialty polymers in automotive components plays a pivotal role in the creation of lighter, safer, and more efficient electric and hybrid vehicles. Its solutions include catalytic converters and a range of UV stabilizers that contribute to improved durability in sustainable automotive systems. Its silica products designed for tires also play a role in reducing rolling resistance and enhancing safety.

We spoke to Brian Baleno, Head of automotive marketing, Syensqo.



### **Key takeaways:**

- **Challenges:** The transformation from ICE to BEVs has increased demand for specific products. The main drivers are improved efficiency and light-weighting in battery and eMotor design.
- **Achievements:** The company's solutions are gaining traction in the electric powertrain, especially in eMotors, power electronics, and battery systems.
- **Outlook for 2024:** The company is optimistic about its prospects, particularly in the eMotor and power electronics segments.
- **Emerging issues:** The build-out of the electric power grid is an emerging issue. The company is focusing on providing more sustainable insulation solutions for transformers, charging stations, and generators.

*The following is an edited transcript of the conversation.*

### **S&P Global Mobility: What were the most significant challenges your business encountered this year?**

Brian Baleno: We are continuing to experience the transformation from ICE to BEVs which is increasing demand for specific products including Solef® PVDF, Amodel® PPA, Ryton® PPS, and KetaSpire® PEEK. What is really driving the demand for these materials is battery and eMotor design targeted both improved efficiency as well as light-weighting.

Overall, there is more opportunity for our solutions in BEVs particularly with 800-volt technologies, which are coming to market at a broader scale in 2025, and SiC inverters.

### **Are there any notable achievements or positive developments you would like to highlight?**

Our solutions are gaining traction in the electric powertrain specifically in eMotors, power electronics, and battery systems. We are seeing a growing interest in KetaSpire® PEEK for magnet wire insulation and Ajedium™ PEEK for slot liner films. Higher temperatures, oil cooling, and miniaturization are driving the demand for our newest Amodel® Supreme PPA in components such as eMotor busbars.

### **Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

We are excited about our prospects in the coming year, several of our innovations in the eMotor and power electronics segments. We have developed new solutions which will be commercial next year including a new Ryton® PPS Supreme grade for power electronics (power modules) and several new AvaSpire® PAEK grades for magnet wire insulation and slot liners.

**Is there any specific concern or emerging issue you would like to highlight?**

One of the emerging issues we are working to address is the build-out of the electric power grid. Here we are focused on providing more sustainable insulation solutions for transformers, charging stations and generators.

# Vitesco Technologies

Vitesco Technologies is an international developer and manufacturer of drive systems for sustainable mobility. Its product portfolio includes electric drives, electronic controls, sensors and actuators, and exhaust gas treatment solutions. In 2022, Vitesco Technologies generated sales of around €9.07 billion, employing 38,000 people at 50 locations. Vitesco Technologies is headquartered in Regensburg, Germany.

We spoke to Thomas Stierle, a member of the executive board of Vitesco Technologies and head of the electrification solution division.



## Key takeaways:

- **Challenges:** Disrupted global supply chains and the need to drive transformation while ensuring operational excellence and project execution were the main challenges in 2023. Over 75 product launches are expected in 2023 and 2024.
- **Achievements:** The company's share price performance stands out compared to main markets and other automotive companies. The order backlog in the field of electromobility now exceeds 30 billion euros, and the transformation process to become an electrification leader is nearing completion.
- **Outlook for 2024:** The market confirms the company's strategy, and despite regional weaknesses in some markets, the global market for electromobility is growing at around 30 percent per year. Improvements in the supply chain and easing inflationary pressure are expected.
- **Emerging issues:** Potential integration and merger activities with Schaeffler AG could occur, while the focus remains on launches, projects, and manufacturing. A continuous focus on platforms and their scalability to reduce cost and time to market is key to further success.

*The following is an edited transcript of the conversation.*

## S&P Global Mobility: What were the most significant challenges your business encountered this year?

Thomas Stierle: Besides disrupted global supply chains, driving the transformation and at the same time ensuring operational excellence and project execution were the main challenges this year. At Vitesco Technologies, we will have more than 75 product launches in 2023 and 2024.

## Are there any notable achievements or positive developments you would like to highlight?

Yes, to mention only three examples:

1. Our successful share price development. The share's performance stands out in comparison to main markets and other automotive companies.
2. Our successful order intake and backlog: Our order backlog in the field of electromobility now amounts to over 30 billion euros.

3. And we are close to the end of our successful transformation process to an electrification leader.

**Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

The mood is good: The market confirms our strategy. Irrespective of the regional phases of weakness in some markets, the global market for electromobility continues to grow at around 30 percent per year. This can no longer be stopped. And we expect improvements in the supply chain and easing inflationary pressure.

**Is there any specific concern or emerging issue you would like to highlight?**

After transformation efforts over the last few years, we might have integration and merger activities with Schaeffler AG while maintaining our focus on launches, projects, and manufacturing.

In parallel a continuous focus on platforms and their scalability to reduce cost and time to market will be key to further success.

# Yanfeng Automotive Interiors

Yanfeng is a global automotive supplier, focusing on interior, exterior, seating, cockpit electronics and passive safety. Yanfeng employs 57,000 people at 240 locations worldwide. The company is headquartered in Shanghai, China – the European headquarters is in Neuss, Germany.

We spoke to Francois Stouvenot, CEO at Yanfeng Automotive Interiors for Europe, Middle East and Africa & North America.



## Key takeaways:

- **Challenges:** Yanfeng faced several challenges, including ongoing inflation, semiconductor shortages, supply chain issues, supplier insolvencies, vehicle volumes, labor availability, and the impact of the UAW strike.
- **Achievements:** The company made significant strides in sustainability, earning an A- rating from the Carbon Disclosure Project and having their short-term targets for greenhouse gas emission reduction confirmed by the Science Based Targets initiative. They also made progress in the globalization of their Seating and Safety Systems businesses.
- **Outlook for 2024:** Yanfeng is hopeful about 2024, planning to work closely with customers, focus on digital technology integration, and drive forward their transformation and globalization. They also plan to showcase innovations at the CES for the first time.
- **Emerging issues:** The company emphasizes the importance of resilience, continuous improvement, flexibility, and teamwork in the face of challenging market conditions.

*The following is an edited transcript of the conversation.*

## S&P Global Mobility: What were the most significant challenges your business encountered this year?

Francois Stouvenot: Like every market player in the industry, we were impacted by several factors including the ongoing inflation in Europe and North America, the semiconductor shortage, supply chain issues and supplier insolvencies. Vehicle volumes and labor availability also continued to be a challenge.

The UAW strike this Fall also was a contributing factor.

## Are there any notable achievements or positive developments you'd like to highlight?

Sustainability is something that is becoming increasingly important and has an impact on our business. We work together with traditional and luxury brands, as well as new market players and concentrate our resources on sustainable development. We look to integrate sustainability in all that we do – including our products, processes and facilities.

The Carbon Disclosure Project evaluated Yanfeng's performance for second consecutive year with an A minus rating. This rating confirms that we are on the right track. Recently, the short-term targets of our global Interiors division for the reduction of greenhouse gas emissions have been confirmed by the Science Based Targets initiative. With this, our company commits to make a scientifically based contribution to the reduction of greenhouse gases by 2030 in line with

the Paris Climate Agreement. I'm proud of what the team has accomplished and that we continue to show progress year after year.

I would like to mention that we have also made good progress with the globalization of our Seating and Safety Systems businesses in Europe and North America.

**Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

We are hopeful about 2024. We will continue to work closely with our customers by developing business innovations and leveraging synergies with our Safety and Seating divisions to provide added value to them. We will focus on digital technology integration in core interior products and new businesses and support our customers on this. Early customer engagement and co-development are essential for our business success and I'm confident that we are in a good position as we collaborate efficiently with our key customers in all regions.

I am optimistic that we will consistently drive forward our transformation and our globalization as well as accelerate our global business and footprint expansion.

In January 2024, we will present our innovative technical solutions at CES for the first time. We will showcase innovations in seating, safety systems and interiors.

**Is there any specific concern or emerging issue you'd like to highlight?**

Never, ever give up and do not lose confidence – no matter how difficult the current situation or market environment. We need to improve continuously, be flexible and agile. We only win as a team – together with our customers.

ZF Friedrichshafen AG manufactures parts for passenger cars, commercial vehicles, and industrial technology. Its mobility and connectivity products include autonomous transport systems, mobility solutions, and micro-mobility; and products for automotive applications, such as passenger cars, commercial vehicles, truck trailers, buses, LCVs, fleets, motorsport, and motorbike. The company was founded in 1915 and is headquartered in Friedrichshafen, Germany.

We spoke to Charbel Chamoun, ZF's head of investor relations & rating.



### Key takeaways:

- **Challenges:** ZF faced significant challenges due to the recessionary climate in Europe, rising capital costs, the need to invest in new technologies, falling demand for passenger cars, geopolitical instability, and supply chain disruptions.
- **Achievements:** The company made significant strides in its transformation towards electric mobility, with the launch of a new magnet-free electric motor that doesn't require rare earths. This innovation enhances resilience and decarbonization, providing a blueprint for the future of business in Germany and Europe.
- **Outlook for 2024:** The company has made good progress in its transformation and now needs to establish financial foundations for the next steps. This includes focusing on profitable business areas and products, and prioritizing which new ideas to pursue and promote.
- **Emerging issues:** ZF shares concerns common to all industrial companies, including geopolitical disputes, inflation, supply chain issues, and energy costs. The economic development in Germany and parts of Europe is negatively affecting vehicle production, which is also impacting the company.

*The following is an edited transcript of the conversation.*

### **S&P Global Mobility: What were the most significant challenges your business encountered this year?**

Charbel Chamoun: The recessionary climate in Europe, the rising cost of capital while at the same time increasing the need to invest in new technologies due to overall industry transformation. This is in the backdrop of falling demand for passenger cars in some key markets, sensitive geopolitical situations, and wars in Ukraine and the Middle East, affecting the stability of supply chains.

### **Are there any notable achievements or positive developments you'd like to highlight?**

We successfully continue the transformation of the company towards Electric Mobility with the launch and world premiere of ZF's new magnet-free electric motor. By eliminating magnets, this motor no longer requires rare earths. Customers who use this technology will become more independent. This project exemplifies how ZF innovations drive resilience and decarbonization. Such developments must be the blueprint for the future of Germany and Europe as a business location.

### **Looking ahead to 2024, how do you perceive your business prospects and the overall outlook?**

We have made good progress in transforming the company in recent years. It is now important to create the financial foundations for the next steps by properly focusing on profitable business areas and products. We have so many new ideas that we can't pursue them all at the same time. That's why we must distinguish, evaluate and focus on which ideas we actively pursue and promote.

### **Is there any specific concern or emerging issue you'd like to highlight?**

We are concerned with the same issues as all other industrial companies: geopolitical disputes, inflation, supply chains and energy costs. In addition, the economic development in Germany and parts of Europe is hurting vehicle production – we are also feeling that.

## CONTACTS

**Europe, Middle East, Africa:** +44 (0) 203 367 0682

**Americas:** +1 800 516 2021

**Asia-Pacific:** +60 4 296 1126

[www.spqglobal.com/mobility/en/index.html](http://www.spqglobal.com/mobility/en/index.html)

[www.spqglobal.com/en/enterprise/about/contact-us.html](http://www.spqglobal.com/en/enterprise/about/contact-us.html)

Copyright © 2023 S&P Global Inc. All rights reserved.

These materials, including any software, data, processing technology, index data, ratings, credit-related analysis, research, model, software or other application or output described herein, or any part thereof (collectively the "**Property**") constitute the proprietary and confidential information of S&P Global Inc its affiliates (each and together "**S&P Global**") and/or its third party provider licensors. S&P Global on behalf of itself and its third-party licensors reserves all rights in and to the Property. These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable.

Any copying, reproduction, reverse-engineering, modification, distribution, transmission or disclosure of the Property, in any form or by any means, is strictly prohibited without the prior written consent of S&P Global. The Property shall not be used for any unauthorized or unlawful purposes. S&P Global's opinions, statements, estimates, projections, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security, and there is no obligation on S&P Global to update the foregoing or any other element of the Property. S&P Global may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. The Property and its composition and content are subject to change without notice.

THE PROPERTY IS PROVIDED ON AN "AS IS" BASIS. NEITHER S&P GLOBAL NOR ANY THIRD PARTY PROVIDERS (TOGETHER, "**S&P GLOBAL PARTIES**") MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE PROPERTY'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE PROPERTY WILL OPERATE IN ANY SOFTWARE OR HARDWARE CONFIGURATION, NOR ANY WARRANTIES, EXPRESS OR IMPLIED, AS TO ITS ACCURACY, AVAILABILITY, COMPLETENESS OR TIMELINESS, OR TO THE RESULTS TO BE OBTAINED FROM THE USE OF THE PROPERTY. S&P GLOBAL PARTIES SHALL NOT IN ANY WAY BE LIABLE TO ANY RECIPIENT FOR ANY INACCURACIES, ERRORS OR OMISSIONS REGARDLESS OF THE CAUSE. Without limiting the foregoing, S&P Global Parties shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with the Property, or any course of action determined, by it or any third party, whether or not based on or relating to the Property. In no event shall S&P Global be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees or losses (including without limitation lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Property even if advised of the possibility of such damages. The Property should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions.

The S&P Global logo is a registered trademark of S&P Global, and the trademarks of S&P Global used within this document or materials are protected by international laws. Any other names may be trademarks of their respective owners.

The inclusion of a link to an external website by S&P Global should not be understood to be an endorsement of that website or the website's owners (or their products/services). S&P Global is not responsible for either the content or output of external websites. S&P Global keeps certain activities of its divisions separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process. S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global Ratings' public ratings and analyses are made available on its sites, [www.spqglobal.com/ratings](http://www.spqglobal.com/ratings) (free of charge) and [www.capitaliq.com](http://www.capitaliq.com) (subscription), and may be distributed through other means, including via S&P Global publications and third party redistributors.