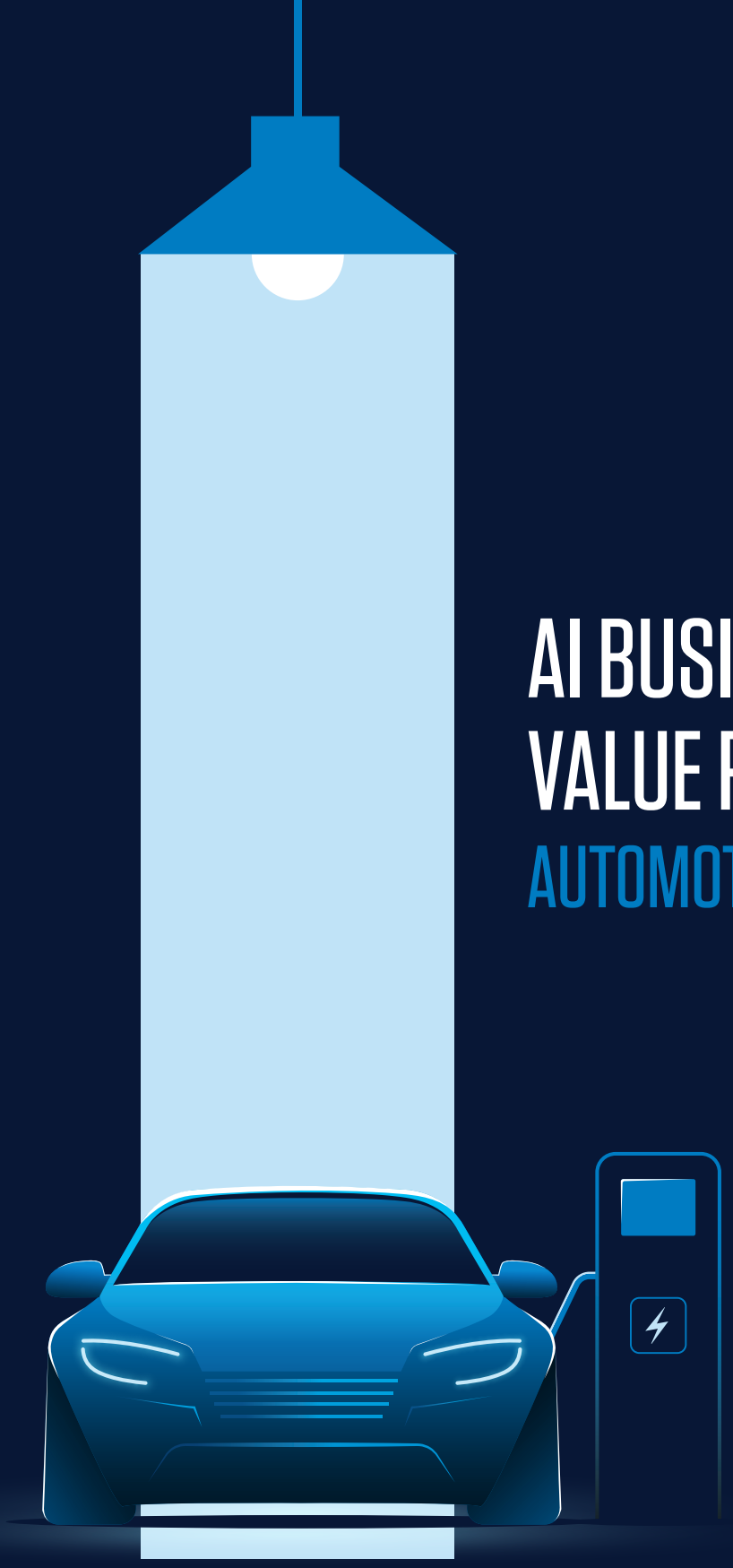
Infosys topaz

AI BUSINESS VALUE RADAR:
AUTOMOTIVE EDITION



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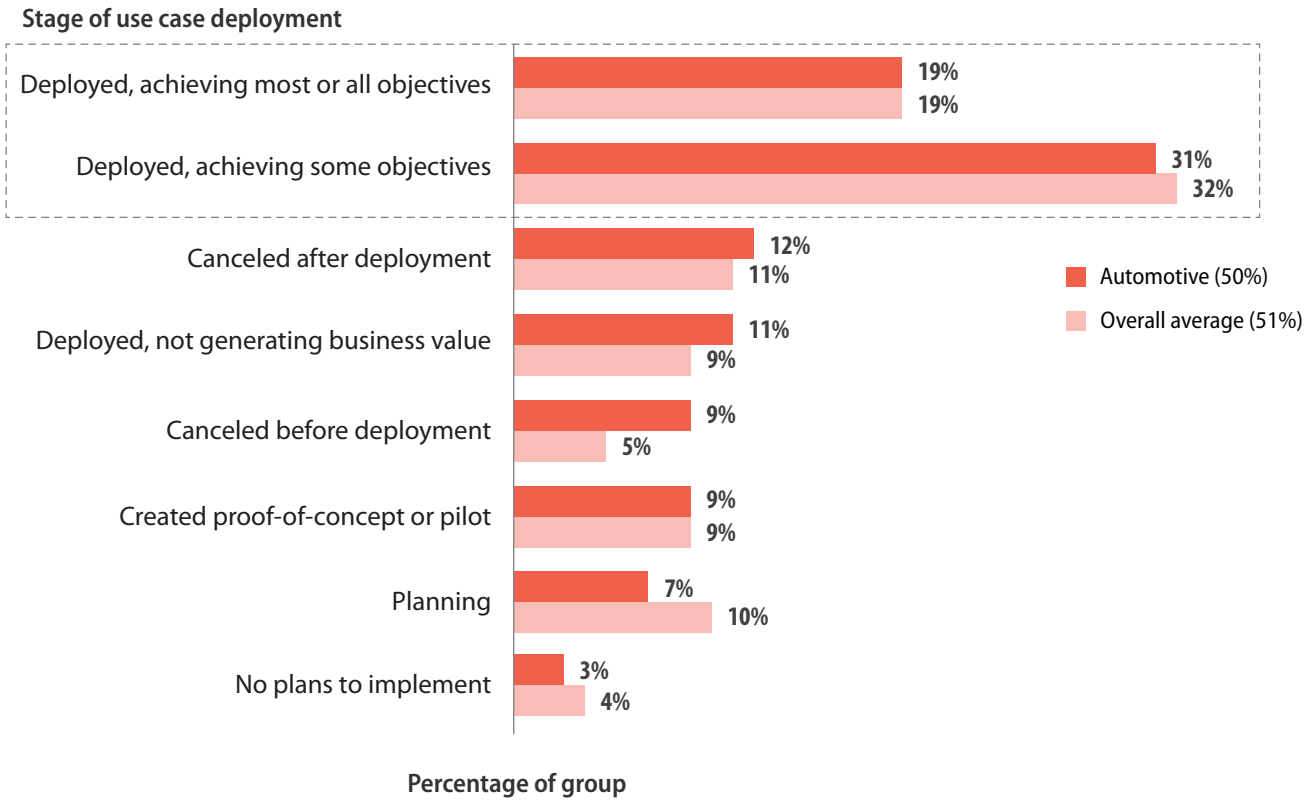
EXECUTIVE SUMMARY

The automotive industry is grappling with cost pressures and the demands of the shift to electric vehicles (EVs). This transition requires better charging infrastructure, more resilient supply chains for critical battery materials, deeper software engineering capabilities, and a workforce prepared for increasingly AI-driven systems.

AI could deliver some of the needed improvements. However, our research finds that though makers of passenger and commercial vehicles, including EVs and hybrids, are implementing AI, it isn't yet delivering on its full promise. Only half of AI programs show any measure of success in the automotive industry, with just under a third either canceled or not generating any value at present (Figure 1).

Functional use cases such as software development and supply chain are doing well. Our data shows that automotive companies have instituted significant change management and employee upskilling initiatives. Automotive operations, especially on the manufacturing front, are moving to higher automation levels . Agentic AI is also driving success in IT operations, enhancing customer experience, and streamlining support.

Figure 1. Half of AI initiatives deliver some impact



This was a self-selecting sample, in that respondents only provided details for the top five use case categories in which their business is already interested. This is why 70% of the AI initiatives were reported as past the deployment phase. Typically, we would expect far more projects that had failed, been canceled, or are still in pilots, for what is such an early stage and experimental technology.

Source: Infosys

Automakers and high-tech companies are collaborating on AI technologies, which could turn out to be a source of competitive advantage. General Motors and Nvidia are working together on AI-driven simulation for next-generation vehicles, factories and robots, while Toyota and Waymo announced a partnership in April 2025 to codevelop AI-powered in-vehicle navigation systems for global automakers. Results will validate if these partnerships allow for a more productive workforce and faster innovation cycles, though automakers will enjoy access to specialized talent and scalable platforms for shared services, vehicle data, and in-car commerce.

This report considers the promise and the challenges of AI in the automotive industry, using Infosys Knowledge Institute data analysis of 250 respondents from automotive companies in the US, UK, Europe, and Australia and New Zealand. Recommendations are drawn from the UK industry, a market using AI to increase competitive advantage as we move into 2026.

FROM DISILLUSIONMENT TO HOPE

Some of the challenges automakers face in 2026 relate to rising cost pressures, as well as to pessimism about autonomous vehicles, despite two-thirds of respondents in a recent survey by S&P Global expressing interest in using autonomous features for highway driving. Issues with technology integration, semiconductor complexity, and distressed energy markets must also be resolved, while new skills needed for work on EVs must be onboarded quickly.

Getting ahead also means navigating a fragmented regulatory environment, negotiating geoeconomic forces by reconfiguring global trade and supply chains, and making a strategic bet on greener transmission, where EVs are expected to account for between 40% and 65% of global car sales by 2030. Automakers must do all this while demonstrating the ability to provide a better driving experience via software.

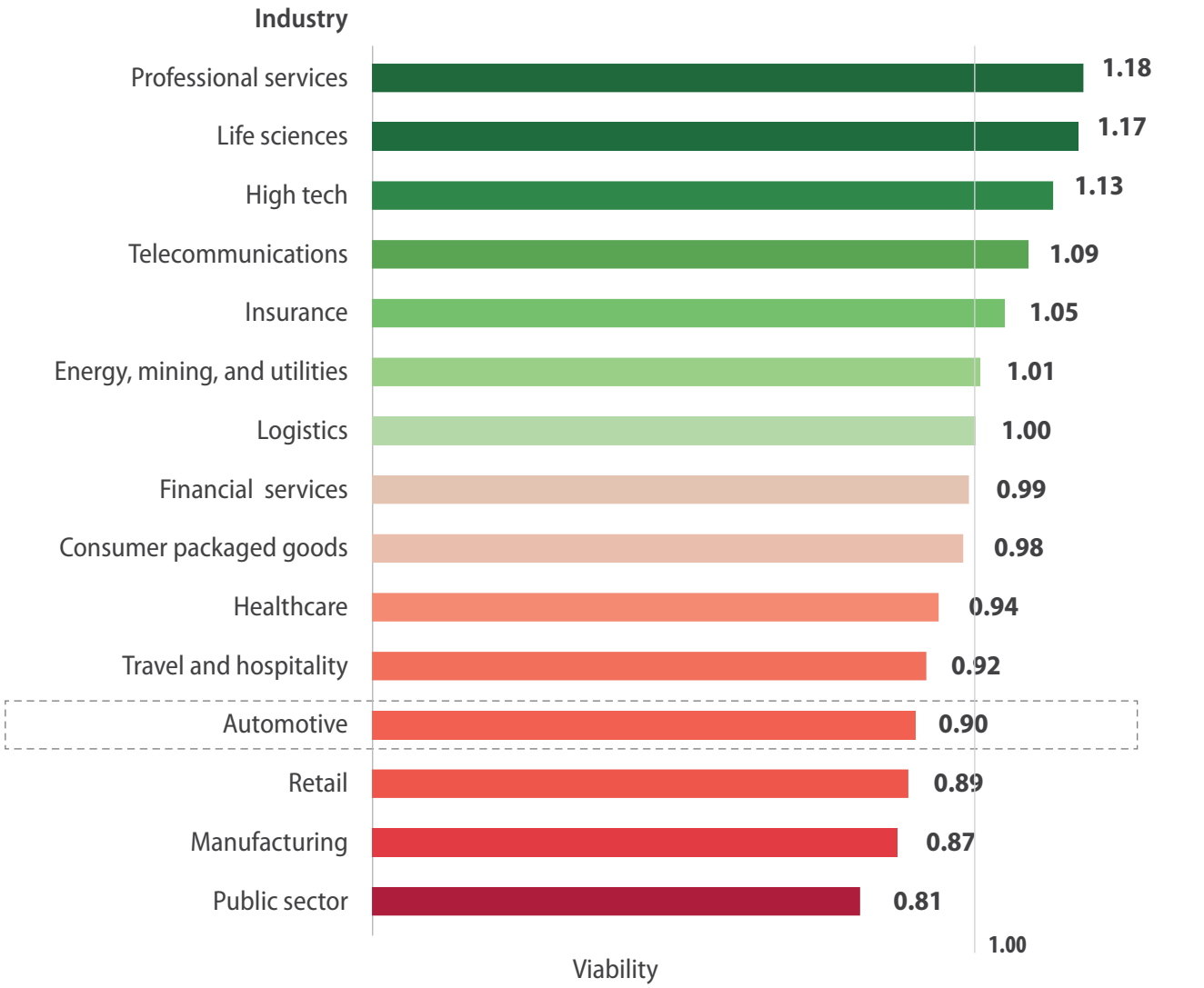
This will do a lot to reignite growth, especially in Europe, where new car registrations increased by just 0.9% year-on-year in 2025.

The need for AI

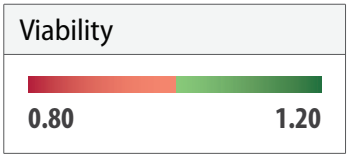
As AI develops — along with strategies, talent, and data for deploying it effectively — it could play a major role in improving the future outlook of the industry. One of the reasons it is such a powerful technology is that it can reimagine and automate key business processes, reducing costs, while helping executives make better and faster decisions based on proprietary data.

However, as of 2025, the automotive industry ranks below average on our list of industries doing well with AI technologies, as determined by the success of AI projects (Figure 2).

Figure 2. Automotive lags in AI business value



A viability score above 1 indicates a use case type is more likely to deliver business objectives, with a score less than 1 being less likely. The viability score is the weighted average of deployments achieving some or all business objectives compared to the total deployments of the use case type.



Source: Infosys

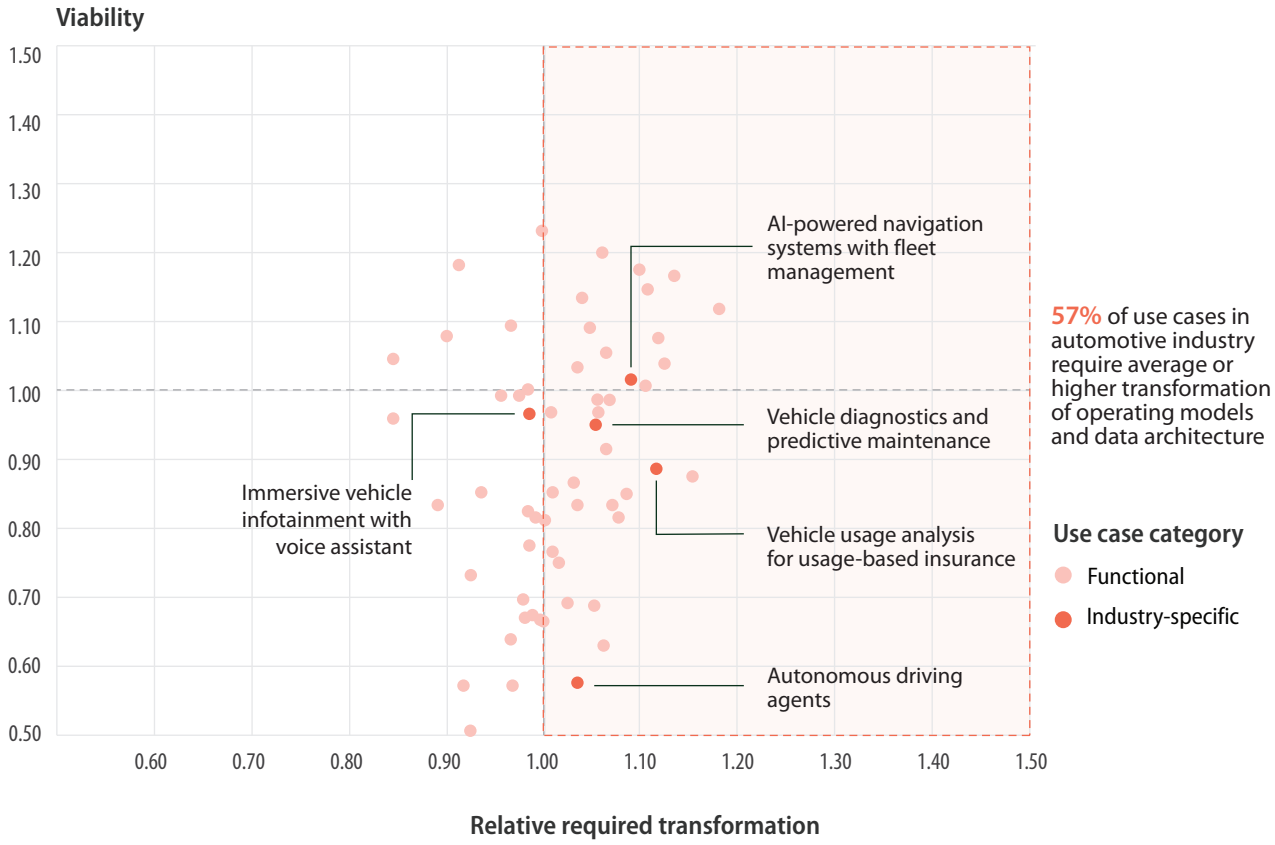
In the AI Business Value Radar 2025, we looked at 55 functional use case types across 14 business categories, and a further five industry-specific use cases relevant only to the automotive industry. We found that the more successful use cases were functional in nature, such as software engineering and supply chain, while automotive-specific use cases such as autonomous driving and usage-based insurance were falling behind on our success metric. For instance, software development scored 1.09 and supply chain scored 1.08, whereas autonomous driving scored just 0.58, where 1 is average and anything below 0.9 is less likely to produce business value. See the appendix for a full breakdown of how this score was determined, along with a full list of the 55 functional and five automotive industry-specific use cases that were used in the analysis.

For instance, software engineers are using Microsoft Copilot and other AI technology to augment the software development lifecycle (SDLC), or the V-Model, as it's known in automotive software development. This has led to gains in powertrain management, advanced driver assistance systems, and connected car ecosystems such as Hyundai's Bluelink technology, or BMW's ConnectedDrive app. In supply chain, Infosys is working on using AI to automate the supply chain negotiation process,

especially as it applies to semiconductors, though many of these implementations are still in the pilot phase. Though agentic AI's impact wasn't measured in the research, some companies are starting to use agentic AI tools that read supplier contracts, spot risks, and suggest better payment terms based on how many semiconductor wafers are being produced. This has helped companies save time, follow rules better, and reduce financial risks, according to Infosys experts.

To move beyond functional use cases and get value from core industry use cases like predictive maintenance and vehicle usage analysis requires transformation of the data architecture and operating model. While 57% of use cases in the automotive industry need significant transformation, Figure 3 shows that almost all industry-specific use cases require this level of effort, mainly because they touch core parts of the business.

Figure 3. Higher transformation required



Both measures are relative, with 1 being the average for an AI use case.

Source: Infosys

To deliver value from AI in vehicle diagnostics, for instance, data must be prepared adequately. This is a growing concern for many clients we work with who are looking to modernize their applications with AI where data is scattered across numerous vendor-supplied systems and is in the wrong format for machine learning (ML). Further, many workflows are manual and siloed; AI only works effectively when AI insights automatically trigger actions such as parts ordering, technician guidance, and customer notifications.

The importance of partnerships

AI transformation also requires good partnerships with government agencies, universities, and the tech industry.

Joining with the likes of OpenAI, Microsoft, Nvidia, and supply chain leaders allows for faster innovation, agile development practices, fresh thinking, and agentic platforms to operationalize automotive use cases at scale. These partnerships can then develop into collaborative strategies, where both automotive companies and tech organizations work together to create software-defined, co-development models, sharing architecture, validation tools, and agile development practices.

For example, Jaguar Land Rover (JLR) has partnered with CesiumAstro, a space technology organization, to accelerate the development of in-vehicle connectivity and high-performance communication systems. The British automaker is also working with ChipFlow, which helps product companies make their own silicon chips, and with ev.energy to develop AI-driven, smarter, grid-responsive EV charging solutions, reinforcing its commitment to sustainability and intelligent energy management.

Together, original equipment manufacturers and innovation partners can balance short-term pressures with long-term goals, maintaining competitiveness in an increasingly dynamic and regulatory-charged environment.

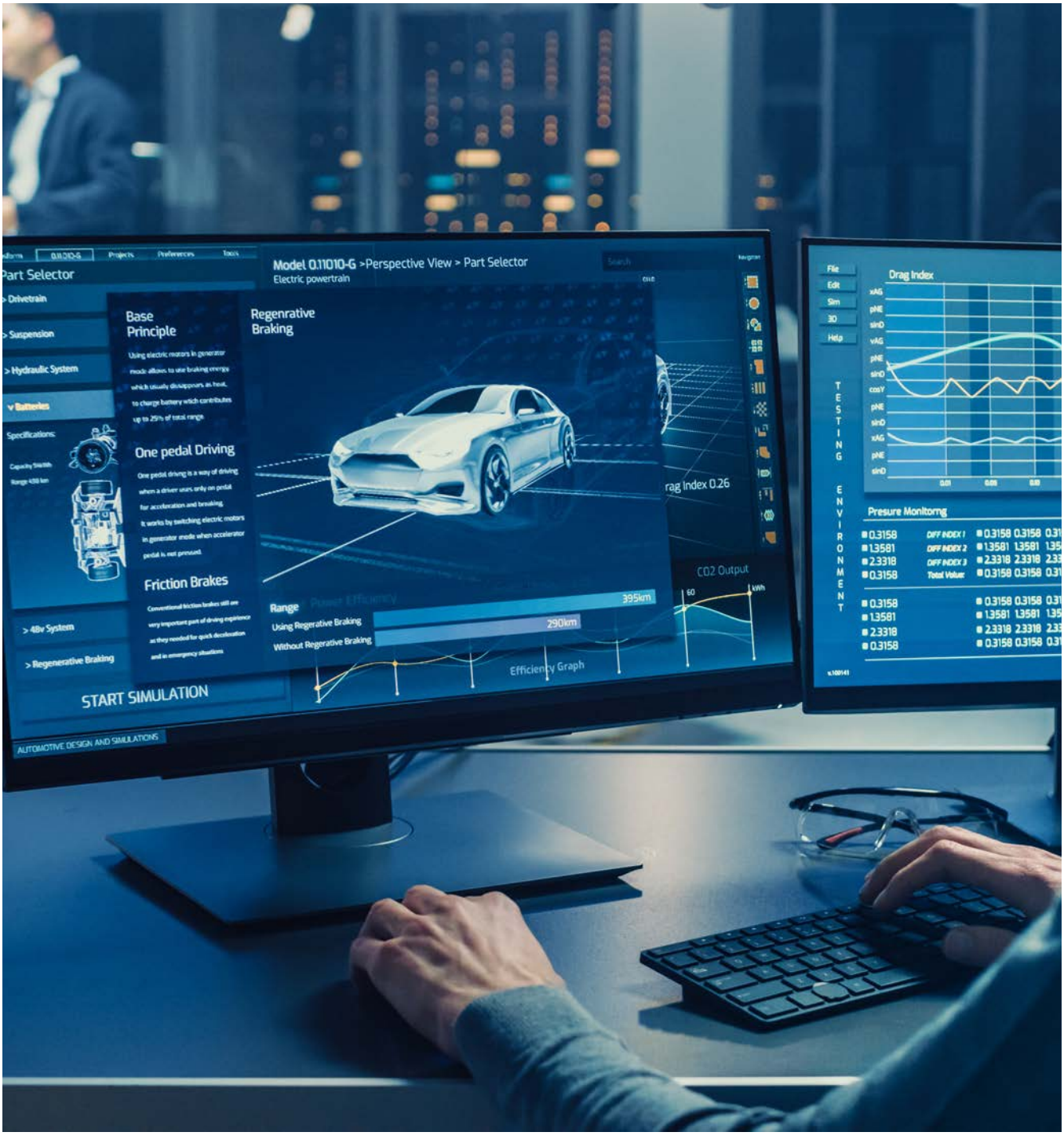
Process redesign to unlock value

Real customer value goes beyond embedding AI in discrete use cases to rearchitecting entire customer journeys with AI at the center. Research shows that startups, which often don't have such entrenched business processes to begin with, are better able to generate value than legacy organizations. Incumbent carmakers should pick one or two domains that, once reimagined, would increase business outcomes substantially. McKinsey estimates such transformations to increase EBITDA by at least 30%.

Audi revealed in June 2025 that more than 100 AI projects are now in operation across its global production network. The company is not just rolling out scattered AI use cases but is using AI as a core part of its manufacturing infrastructure. Whereas many automakers have tested AI in narrow domains, Audi has created a full-stack approach to AI in the production environment that can adapt dynamically. For instance, the core process for making vehicle bodies utilizes computer vision to inspect surface finishes and structural welds with high consistency and accuracy; another application uses AI to detect possible weld splatter on vehicle underbodies; and computer vision is used again to verify whether labels with the correct technical data are correctly attached to

the vehicle. This reimagination of the production process produces data that is then used to train ML models that further optimize how the factory is run.

The Renault Group similarly reimagined its supply chain, using a dedicated team to design, deploy, and maintain digital processes and solutions. The company is also exploring new applications, such as the use of AI agents to automate decision-making and to make supply chains increasingly efficient, agile, and sustainable.



SUPERCHARGE THE WORKFORCE

Achieving value from AI also means instituting good change management. Phil Benton, a partner at Infosys Consulting, says: "Without good change management and upskilling initiatives, even the most brilliant product won't garner traction with employees and customers."

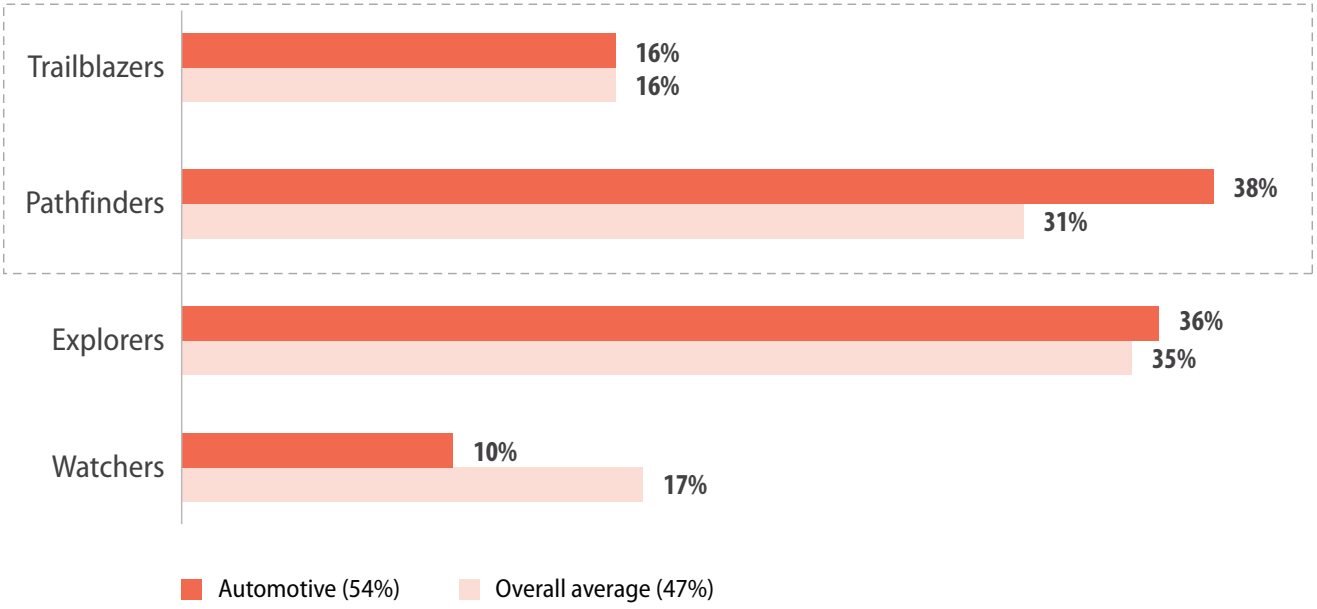
To gauge just how ready automakers are on this dimension, we asked executives to rate their workforces as one of four options:

- **Trailblazers:** Full workforce preparation strategies in place, where employees are actively engaged in AI training, change management, and are supported to understand and adapt to AI systems. A majority of the workforce also participates in product development.
- **Pathfinders:** Similar to Trailblazers, but have not made change management a core pillar of their enterprise AI strategy.

- **Explorers:** Have taken some initial steps to prepare their workforce, but are just at the beginning of their preparation journey.
- **Watchers:** Very little, if any, effort has been made to prepare the workforce for the AI era.

Figure 4 shows that the automotive industry is further ahead than other industries, with more Pathfinders and fewer Watchers.

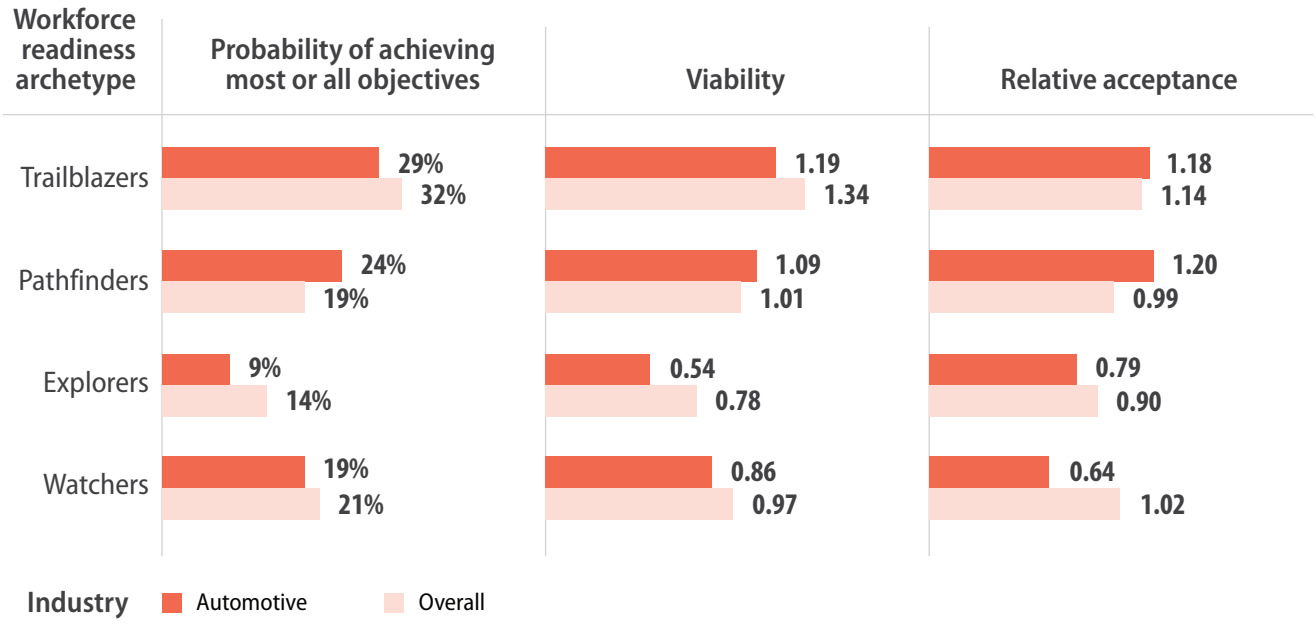
Figure 4. Auto is further along in workforce preparation than other industries



Source: Infosys

Our analysis also shows that automotive Trailblazers can expect a 20 percentage point uplift in the chance of use cases achieving all business objectives, compared with Explorers, and a 5 percentage point higher likelihood than Pathfinders. Trailblazers also have far higher acceptance of their products (Figure 5).

Figure 5. Go all in on workforce preparation

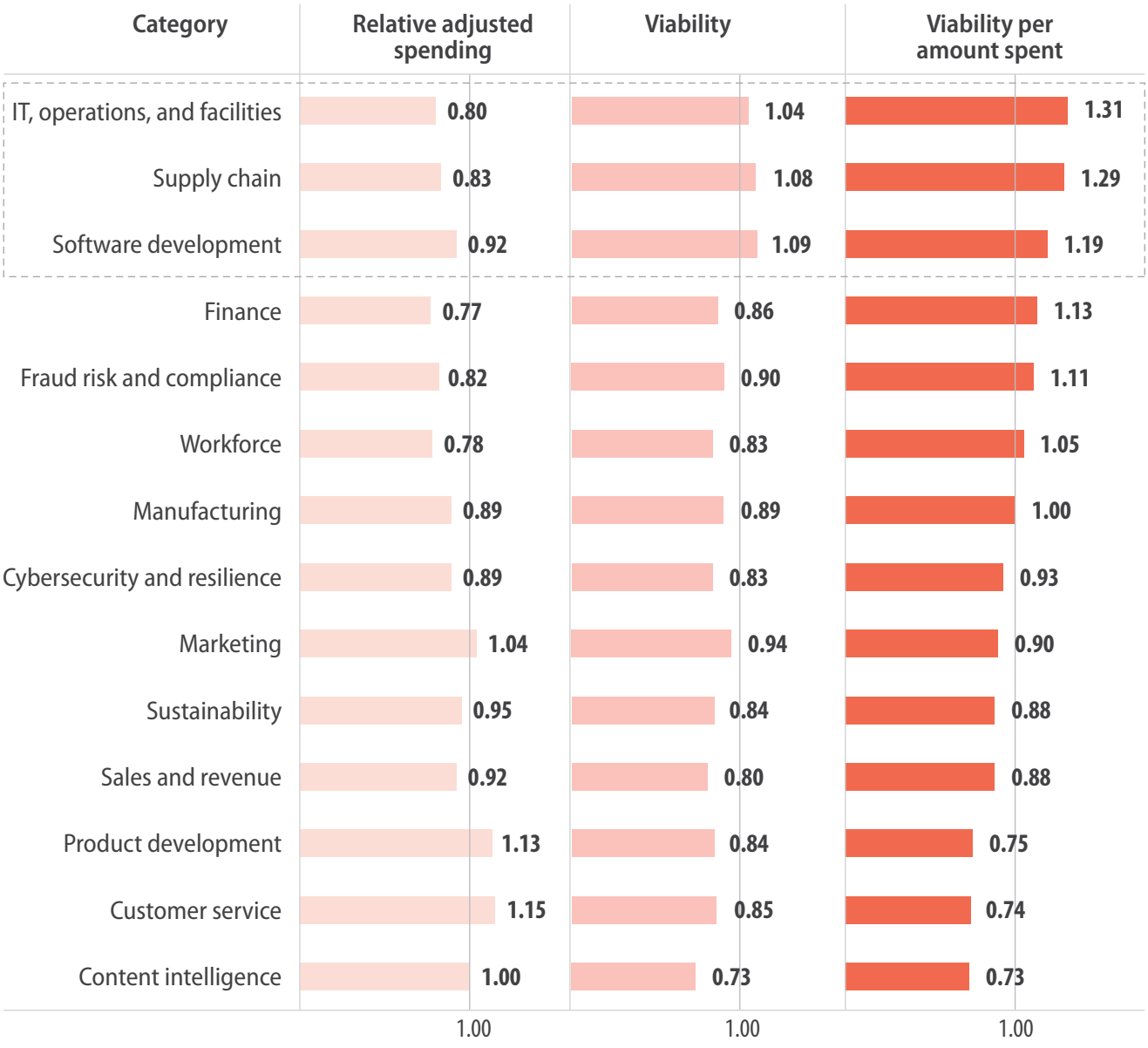


Source: Infosys

The message is clear: upskilling and change management lead to significant business benefits.

Some roles require more AI upskilling than others. While AI in IT operations, supply chain, and software development is delivering business outcomes, areas like product development and customer service are lagging (Figure 6). In product development, designers should learn to work with generative design, simulation, and material-optimization tools, including Autodesk Fusion 360 (used by Toyota), Dassault Systèmes (Mercedes-Benz), and Altair (Mitsubishi).

Figure 6. Functional uses generate most value

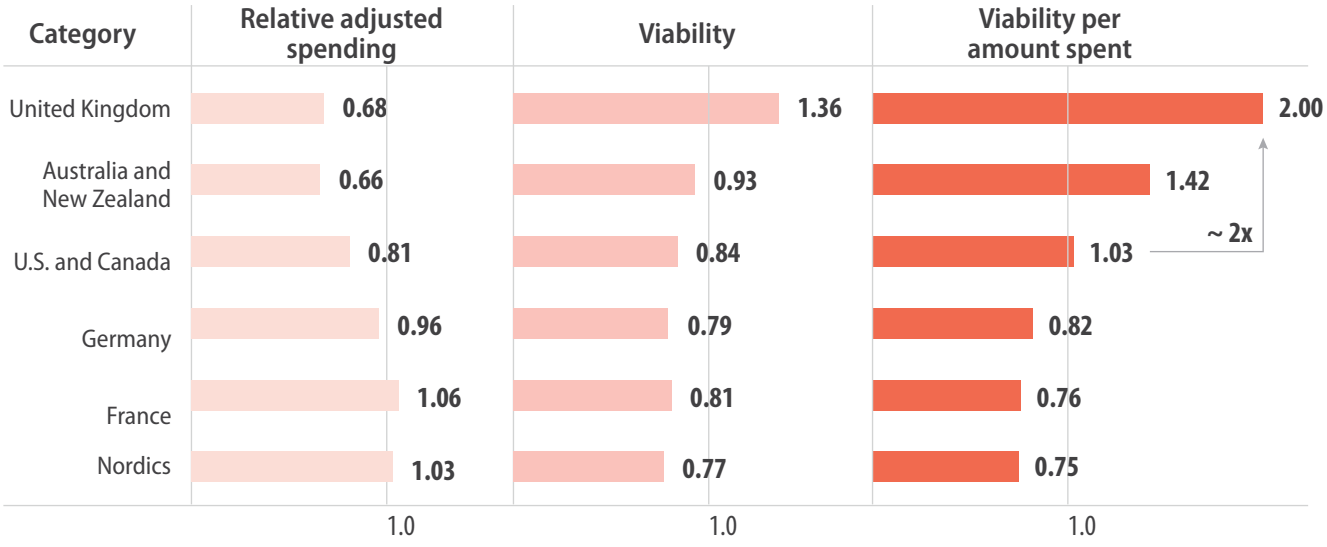


Source: Infosys Knowledge Institute

A CASE STUDY: THE BRITISH AUTOMOTIVE INDUSTRY

Britain's automotive industry is doing well in AI as compared with other regions (Figure 7).

Figure 7. UK leads in getting AI to work



All measures are relative, with 1 being the average for an AI use case.

Source: Infosys Knowledge Institute

In fact, the UK is twice as good as the US in getting AI to work per dollar spent, and almost three times better than in the Nordics — good news for a market that is seen to produce cars at a slower rate than competitors, and which is under significant margin pressure.

How UK automotive companies have successfully integrated AI into operations provides clear recommendations for others:

1. **Start with the basics, not the boardroom:** Automotive companies should fix their supply chains first, as JLR did in 2023 by partnering with supply chain mapping experts. Supply chain is a great use case for AI, with a viability-to-spend score of 1.29, only behind ITOps at 1.31 (Figure 6).

2. **Use an iterative approach to process reengineering:** Much of the UK's success in AI could be attributed to a long-horizon, phased approach to operational excellence, according to a new study by IDS-INDATA on the UK manufacturing industry. Layering AI slowly by picking key domains and generating value before moving on is essential to process engineering excellence.

3. **Build ecosystems, not siloes:** UK automakers partner with universities, startups, and government-backed testbeds to fill a skills gap in AI and materials engineering and to help spur innovation.

4. **Regulate with a light and steady hand:** Britain has been good at permitting AI trials and embedding responsible AI tenets into software development, along with providing ethical guidelines on data use. "You need responsible and ethical AI. Setting guardrails up front ensures that AI systems operate within ethical and regulatory boundaries specific to your industry," says Dave Malik, a Cisco executive we spoke to for this report.

5. **Let scarcity sharpen focus:** Facing pressure on its margins, in November 2021, Aston Martin, a British maker of high-end luxury vehicles at low volume, articulated a vision for improving margin per vehicle and increasing manufacturing efficiency. Executives emphasized cost and investment control to support cash flow generation and deleveraging, leading to a profit margin of 27.9% in 2025, 20 percentage points greater than the global average.

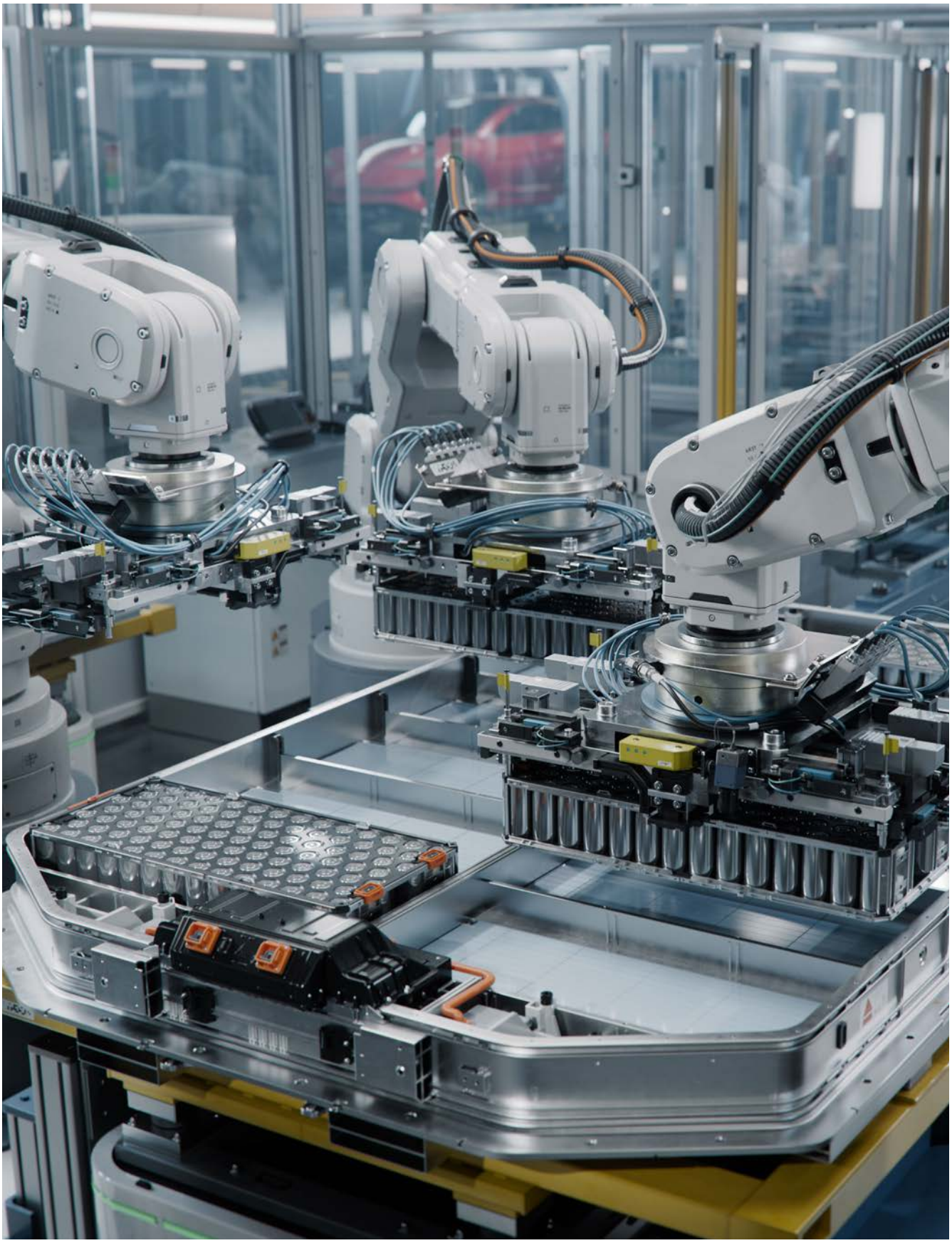
6. **Focus on cybersecurity:** The recent cyberattack on the JLR production facility in the UK reinforces the need for secure software. Though not yet delivering business value, with a success score of 0.83, according to our analysis, automakers should consider whether using AI in cyberdefense could improve their overall security.

THE AI IMPLEMENTATION IMPERATIVE

Automotive companies are battling headwinds, as we have set out in this report. AI could help, but to get it to work requires investment in people, processes, technology, and responsible development. Technology partnerships and value-driven process reengineering are not just important; they will be key strategic levers of successful automakers.

In the end, implementation excellence, including good change management processes, will be needed to turn Explorers into Trailblazers.

Getting this part right will rewire for competitive advantage and turn AI from optimizer to transformative force as the automotive industry moves forward.



APPENDIX A: USE CASES

We collated 55 functional use case types across 14 categories (Figure A1). Similarly, we collated 77 industry-specific use cases across 15 industry sectors (Figure A2).

The survey asked the respondents to select up to five functional categories out of 14 (Figure A1). As such, this is a self-selecting sample, and in Figure 1, for example, we would typically expect far more projects that had failed, been canceled, or been in pilots.

Each functional category had between two and six use case types. For each use case type within a category, respondents were asked about the stage of implementation of their initiative(s).

Options for this question were: no plans to implement; planning; created proof of concept or pilot; canceled before deployment; deployed, not generating business value; canceled after deployment; deployed, generating some business value; deployed, achieving most or all objectives. Respondents were then asked about spending for that use case type, amount of operational or business model change needed, as well as the amount of change in data structures and technical architecture required for that use case.

Figure A1. Functional categories and their use case types

Category	Use case type
1. Content intelligence	• Generate content • Manage content • Analyze content • Content performance
2. Customer service	• Improve/support customer service agents • Automated self-service/AI assistants • Customer service performance and analysis • Personalized customer service
3. Cybersecurity and resilience	• Threat and anomaly detection • Enterprise resilience monitoring
4. Marketing	• Customer segmentation • Optimizing marketing strategy • Marketing asset creation • Personalized marketing
5. Sales and revenue	• Find cross-sell/up-sell opportunities • Churn prevention • Optimizing sales strategy • Supporting sales executives • E-commerce product recommendations
6. IT, operations, and facilities	• Asset management • AI-orchestrated processes • Smart buildings/smart warehouse automation • Incident management and ticketing
7. Product development	• Product design and innovation • Product testing • Personalized product development
8. Fraud, risk, and compliance	• Fraud detection and prevention • Risk modelling and analytics • Compliance
9. Software development	• Legacy code migration and modernization • Developer code assistant • Automating code development • Testing code/QA
10. Sustainability	• Supply chain transparency • Energy optimization • Material reuse, circular economy/products
11. Workforce	• Performance management • Talent acquisition and management • Assist employee workflow • Personalized onboarding and employee experience • Workforce management and scheduling
12. Procurement and supply chain	• Supplier risk assessment • Supply chain optimization • Supply chain forecasting • Procurement and contract management • Protecting the bid process
13. Manufacturing	• Smart, connected factory • Preventive maintenance for assets • Quality assurance with autonomous decision making (defect detection) • Safety, security, and risk assessment • Demand forecasting and inventory
14. Finance	• Invoice and payment processing • Expense management • Cashflow forecasting/optimization • Automated financial reporting

Figure A2. Industry-specific use case types

Industry	Industry-specific use case
1. Automotive	• Autonomous driving agents • Immersive vehicle infotainment with voice assistant • AI-powered navigation systems with fleet management • Vehicle diagnostics and predictive maintenance • Vehicle usage analysis for usage-based insurance
2. Consumer packaged goods	• Price pack architecture • Recipe creation • Loyalty programs • Visual merchandising • Smart and sustainable packaging • AI-driven new product launch execution
3. Energy, mining, and utilities	• Environmental impact modeling • Carbon capture, utilization, and storage (CCUS) • Energy trading • Building electrification • Predictive maintenance • Exploration
4. Financial services	• Reconciliations • Dispute prediction • KYC • Pretrade analytics • Trade finance
5. Healthcare	• Radiology • Patient triage • Personalized treatment and care • AI-enhanced telemedicine
6. High tech	• Silicon design • Process optimization for better yield • Self-optimizing data centers • Digital twins of complex systems
7. Insurance	• Application approval, policy management, and renewals • Claims processing • Risk assessment and underwriting • Telemetry
8. Life sciences	• Drug discovery • Clinical trials • Image and voice processing and diagnosis • Regulatory and submissions • Personalized and digital medicine
9. Logistics	• Delivery route optimization • Returns management • Automated warehousing • Capacity management • Autonomous delivery vehicles • Predictive maintenance
10. Manufacturing	• Streamlined product development and design • Parts procurement and contract management • Smart, automated factory with preventive maintenance • Digital supply chain and logistics • Quality assurance with autonomous decision making
11. Retail	• Physical retail experience • E-commerce retail experience • Staff scheduling • Virtual try-on • Consumer research • Returns management
12. Travel and hospitality	• Disruption management of flights • Offer bundling • Staff planning • Security management • RFP management for large hotel events
13. Telecommunications	• Network life cycle management (planning/design/optimization/slicing) • Smart network operations (includes predictive maintenance, self-healing, an digital twins) • Network security • Wireless channel modeling • Customer onboarding or registration
14. Professional services	• Staff utilization • Market/client research and strategic planning • Project/case management • Client advisory services • Ethics, compliance, and reporting
15. Public sector	• Decision management • Personalized benefits counseling • Eligibility determination • Case management • Regulatory compliance • Accessibility

Finally, respondents were asked about the proportion of their user base that accepted and used the AI tool deployed, if any, for each use case type. The same series of questions was asked for industry-specific use case types relevant to respondents (Figure A2).

APPENDIX B: RESEARCH APPROACH

Survey

Surveyed **3,798 senior executives** (250 in automotive), representing more than 3,200 companies (197 in automotive), between December 2024 and January 2025 about AI use cases being pursued at their companies. Respondents represent businesses with more than $1 billion in annual revenue across 14 industries in the US, Canada, UK, France, Germany, Nordics, Australia, and New Zealand. We also included public sector organizations with budgets of $1 billion or more from the US and Canada.

See Appendix A for specific survey methodology for use case types.

Expert analysis and interviews

Interviewed AI experts to formulate and validate which AI use cases and use case types are most salient to each category or industry, and to gain additional insights into the findings.

Model

Created scores for viability (based on probability of success), required transformation, and acceptance of AI tools for each use case type. Viability scores were weighted to favor use cases that had achieved most or all business objectives. Each of the three scores is normalized relative to a mean of 1 for more meaningful visualization. Adjusted average spending is the spending adjusted for company size (those with larger revenues tend to spend more on use cases and those with smaller revenues tend to spend less), where 1 represents the average spending per implementation ($1.96 million).

Source: Infosys Knowledge Institute

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