



The need for new focus on quality, risk, and compliance

McKinsey & Company recently predicted that revenue for the **auto industry could grow 30% by 2030 to become a \$1.5 trillion industry**. The report “Automotive revolution—perspectives towards 2030,” projects that vehicle unit sales will increase steadily at an average rate of 2% annually during this period. McKinsey also predicts that the major driver of industry growth will be shared mobility, connectivity services, feature upgrades, and new business models.¹

With disruptive changes like these, C-level executives at automotive suppliers must prepare to lead transformative changes in their organizations.

In this brief, we discuss how automotive suppliers can manage quality, compliance, and risk in a time of change. We also offer tips to help automotive supply chain executives, chief information officers (CIOs), and chief financial officers (CFOs) manage these critical processes so they can be prepared for the automotive industry of the near future.

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What to know

Several macro trends in the automotive industry will directly impact how suppliers manage quality, risk, and compliance in the future. These trends include:

The connected car—New companies are entering the automotive industry to take advantage of the growth in vehicle connectivity and related onboard data services. It's not just high-profile companies like Apple®, Google™, and Verizon. There are also numerous small innovative startups entering the field. Collaboration with these new entrants is critical to your success, as illustrated by a recent PwC study, which found that **48% of car buyers said they would walk away from a vehicle they liked if the technology was hard to use.**²

Companies outside the traditional automotive industry usually have a different approach to how they manage quality, compliance, and risk, adding a new challenge to your collaborative efforts.

The disconnected driver—Fully autonomous vehicles are expected to be commercially available sometime after 2020 and could represent 15% of car sales by 2030, **reports McKinsey & Company.**³ The technology is advancing rapidly with incremental capabilities like parking assist and lane-change notifications already available from leading original equipment manufacturers. Companies like Uber, Tesla, and Google are taking the next step, developing and experimenting with fully autonomous vehicles, though under controlled conditions.

At the same time, the regulatory framework for autonomous vehicles is coming into focus. In September 2016, the National Highway Traffic Safety Administration (NHTSA) issued voluntary guidelines for safe design, development, testing, and deployment of automated vehicles. The next month, California issued proposed mandatory guidelines for self-driving cars that drew immediate objection from automakers and technology companies. These companies objected, in particular, to the proposed requirement that autonomous car developers collect a year of driverless testing data before applying for an operating permit, **notes Automotive News.**⁴

Fully and partially autonomous vehicles will dramatically change specific requirements for compliance and risk management. This, in turn, will make product quality a more critical attribute. As with increased vehicle connectivity, auto suppliers will have to collaborate successfully with many new entrants from other industries to protect both companies and the people who purchase autonomous vehicles.

The customized car—Increasingly, manufacturers are expected to offer more variants of their product line and produce them in smaller volumes. In this scenario, consistently maintaining high quality becomes more complicated as the number of product variations increases.

The shared car—In the future, a smaller percentage of people will personally own their vehicles. People will meet their transportation needs, in part, by using shared vehicle services. Research by the Boston Consulting Group projects that by 2021 there will be 50 million urban dwellers in North America and 31 million will be licensed drivers. Of those, 6 million will be registered users of a car-sharing service and about 600,000 will be heavy users. That contrasts with approximately 1.5 million people in North America who used car-sharing services in 2015, **observes the Boston Consulting Group.**⁵

As personal ownership declines, there will be growth in special-use vehicles deployed in auto-sharing fleets. As with the customized car, this will create new demands on quality management processes to address changing product offerings and usage patterns.

The more fuel-efficient vehicle—By 2025, the target corporate average fuel economy for automakers operating in the US will be 54.5 miles per gallon (mpg). In mid-2016, four years after the fuel economy targets were set, a draft report by the Environmental Protection Agency, NHTSA, and California Air Resources Board lauded technical progress being made by the industry but conceded that the target will be difficult to reach because of buyer preferences for sport utility vehicles (SUVs) and trucks, [reports Autoweek](#).⁶ If the industry is held to the 54.5 mpg target, compliance will be a major challenge.

The emboldened regulator—Automotive regulators have more power today than they've ever had. In the Europe and the US, regulators have been emboldened, in part, by the scope of recent emission scandals at Volkswagen, Mercedes-Benz®, and Fiat Chrysler. Regulators like the NHTSA now have the power and budget to demand compliance and exact a financial cost on automakers where product quality and attempts to skirt their compliance requirements are issues. Automakers can no longer snub demands by regulators and, as a result, must have the quality and compliance processes in place to meet requirements to avoid incurring unnecessary financial costs.

The consolidating supply chain—Changes in the automotive supply chain have a direct impact on what's required for effective risk management. With recent consolidation of suppliers, a single problem at a single supplier can disrupt large parts of the global industry. The Takata air bag problems, for example, have forced the recall of more than 42 million vehicles manufactured by 19 companies in just the US, [according to Consumer Reports](#).⁷

A similar problem with a different root cause occurred early in 2016 when a furnace exploded at a steel plant that supplied all of Toyota's Japanese plants with specialty steels for engine, chassis, and transmission parts. Because of the explosion at the Aichi Steel plant in Nagoya, Toyota was forced to suspend production of 16 vehicle assembly lines for 6 days, [reports the Telegraph](#).⁸

“Players must adapt their organizations to facilitate greater collaboration. Internal processes need to reflect that software is the key enabler for innovation and new business models.”

—McKinsey & Company

What your company can do

Suppliers have several strategies they can deploy to successfully manage quality, compliance, and risk in the evolving automotive industry.

Play to your strengths—Every successful automotive supplier has well-established processes for quality, compliance, and risk. For many, it's a competitive advantage. Although trends driving industry change will necessitate change in some approaches to quality, compliance, and risk management, the core requirements are apt to stay the same. And there's reason to be optimistic, given the auto industry's leadership in total quality management methodologies and Kaizen continuous improvement practices. In collaborating with new partners and meeting evolving requirements, build on your proven processes.

Get visibility across your supply chain—You can also build on the proven quality, compliance, and risk management processes used by companies across your supply chain. Take advantage of advances in end-to-end supply chain visibility solutions that provide insight into companies across your entire supply chain, not just to businesses that are immediately upstream or downstream. By establishing transparency across your supply chain network and implementing traceability between your organizations, you'll be able to identify and correct product quality issues more quickly, and you'll have the communications processes in place to share your respective best practices.

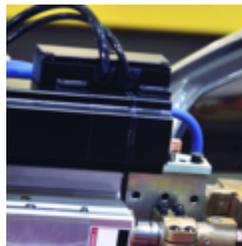
Understand how new technologies can help your business—Advanced enterprise software will play a major role in your ability to manage new demands on quality, compliance, and risk management—a point reinforced in McKinsey & Company's "Automotive revolution—perspective towards 2030" report. McKinsey researchers' recommendations for the industry **include the following**: "Players must adapt their organizations to facilitate greater collaboration. Internal processes need to reflect that software is the key enabler for innovation and new business models."⁹

Deploy advanced capabilities like end-to-end supply chain visibility solutions, social collaboration tools, business intelligence and analytics to improve your ability to partner with other companies. Given the important role of technology, it's critical for automotive suppliers to keep their software current. Consider a cloud deployment to lower capital costs and ensure your managing your business with the most up to date capabilities.

Understand the new security challenges—

Proliferation of the connected car and the impending introduction of the autonomous car make security a big issue in the auto industry. To demonstrate this risk, automotive cyber security researchers Charlie Miller and Chris Valasek hijacked the digital systems of a Jeep® Cherokee in 2015, forcing Fiat Chrysler to recall 1.4 million vehicles to fix the flaw. By the summer of 2016, Miller and Valasek had refined their techniques to circumvent some of the implemented fixes, forcing Chrysler engineers to scramble a second time to eliminate the security exposure, **according to Wired**.¹⁰

In addition, there are growing risks to the security of internal business data that must be addressed. Deploy best practice protocols for data security and robust backup and disaster recovery solutions to keep internal business information safe from malicious individuals and companies, as well as protect your company from disruptive natural disasters.



What your key executives can do

Changing requirements for managing quality, compliance, and risk will have some impact on the processes and strategies throughout an automotive supplier's organization. However, the implications may be greatest for supply chain executives, CIOs, and CFOs. Below are some suggested actions these executives can take.

Supply chain executives

- Proactively expand your organization's supplier base to protect against disruptions to your production caused when only one supplier provides a critical part, component, or material.
- Make a concerted effort to understand each prospective partner's internal processes for managing quality, compliance, and risk to identify how their processes fit or don't fit with your organization.
- Insist on establishing documented processes for transparency between new partners and your organization.

Chief information officers (CIOs)

- Use your leadership role in your company's overall digital transformation initiatives to develop and implement specific improvements for quality, compliance, and risk management processes, and underlying processes such as data security.
- Lend your IT expertise to help your product development team enhance the data security protections in the products and systems you deliver to original equipment manufacturers and other customers.
- Keep your IT infrastructure lean, agile, and up-to-date with the latest capabilities.

Macro trends in the automotive industry

- Connected cars
- Disconnected drivers
- Customized cars
- Shared cars
- Stricter energy efficiency requirements
- More powerful regulators
- Consolidated supply chain

How automotive suppliers can respond

- Play to your strengths.
- Get visibility across your supply chain.
- Deploy advanced IT capabilities.
- Increase focus on data security.

- Take some time to research the cloud. A cloud implementation might help you reduce your IT costs and improve how you manage quality, compliance, and risk.

Chief financial officers (CFOs)

- Analyze industry trends with a focus on understanding the financial implications that changing vehicle capabilities, as well as purchase and usage patterns, will have on your company.
- Drive efforts to understand how your company can get its share of the increased revenue being derived from automotive data services.
- Collaborate with your CIO to preserve capital by minimizing IT infrastructure costs.

What is the payoff

Rapid and significant change is not a new phenomenon in the automotive supply chain. By taking a proactive approach to quality, compliance, and risk management, automotive executives can ensure that their organizations are ready for future.

To learn more, visit [Infor Automotive](#)



1. McKinsey & Company, "Automotive revolution—perspective towards 2030," Jan 2016, pages 4, 6.
2. PwC, "2016 auto industry trends: Automakers can no longer sit out the industry's transformation," 2016, page 10.
3. McKinsey & Company, "Automotive revolution—perspective towards 2030," Jan 2016, page 5.
4. David Shepardson, "Google, automakers object to California rules for self-driving cars," Automotive News, Oct 19, 2016.
5. Julien Bert, Brian Collie, Marco Gerrits, and Gang Xu, "What's ahead for car sharing?" Boston Consulting Group, Feb 23, 2016, chapters 3 and 7.
6. "Americans have spoken: Now 54.5 mpg CAFE target is off the table," Autoweek, July 19, 2016.
7. "Takata Airbag Recall: Everything You Need to Know," Consumer Reports, Dec 9, 2016.
8. Alan Tovey, "Toyota to halt production after explosion at steel factory," The Telegraph, Feb 3, 2016.
9. McKinsey & Company, "Automotive revolution—perspective towards 2030," 2016, page 15.
10. Andy Greenberg, "The Jeep Hackers are Back to Prove Car Hacking Can Get Much Worse," Wired, Aug 1, 2016

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