

Automotive Suppliers: Driving Performance in the Digital World



Tier 1 automotive suppliers (Tier 1s) are generally doing well in today's buoyant economy, but need to strengthen their position in advance of potential future disruptions. As a Tier 1 you know you have to tackle the need for global standardization, while at the same time continuing to innovate, and deriving more business value from data.

Capgemini recommends a focus on three areas: Industrialization & Agility, Innovation & Change, and Insight & Action. These three focus areas will be the battleground for the next few years, and the companies that succeed in these will be tomorrow's winners in our highly competitive industry.

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We believe in growth through innovation ... and in those innovations that bring value to our company and our customers.”

Jacques Aschenbroich, CEO, Valeo

CNBC video

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The winners will be those companies that understand how to build intelligent hardware.”

Norbert Reithofer, Chairman of the Supervisory Board, BMW

cited in KGFO

Tier 1 suppliers have to prepare for an uncertain future

Although almost all Tier 1s are making money at present, everyone is aware that the picture can change at any time. Growth markets such as China, India and Brazil are now central to the industry, and while they flourished during the downturn in mature markets, the position there is now less encouraging, while the US and Europe are doing better. The global economic outlook still looks positive, but when the picture changes, OEMs' plans will become a lot more conservative. Another element of uncertainty is that consumer tastes may lead us to invest strongly in certain technologies today, only for those same consumers to shift their focus to other technologies tomorrow.

As an automotive supplier, your organization needs to position itself as strongly as possible to cope with future market fluctuations. This means getting to grips with three major challenges:

- **The need for global standardization.** Companies that have historically focused on the needs of individual OEMs now need to standardize to gain supply chain flexibility and agility in adopting innovation, as well as economies of scale. This means introducing common processes and technologies to an environment that is typically highly heterogeneous, partly as a result of the ongoing trend for mergers and acquisitions. Introducing global standards across the board has often been shown not to work: Many companies have spent several years implementing new processes and systems and yet never managed to roll them out beyond the first few sites. The challenge is to find a way to gain the efficiencies of standardization without sacrificing today's speed, which is necessary to meet the needs of OEMs and their demanding consumers.
- **The need for innovation and new business models.** The lifeblood of Tier 1s is differentiation. It's necessary always to be thinking ahead on how to sustain competitive advantage, and develop processes that will take a new idea from concept to sale as fast as possible. Completely new business models are now needed to leverage some of today's technological concepts such as Industry 4.0 and the Internet of Things (IoT). For instance, a supplier may want to sell services as well as products, and sometimes to sell directly to the consumer (e.g. when providing products and services for used cars) – a change that would require a close understanding of the consumer.
- **The need to get business advantage from data.** As you standardize globally and adopt new business models, you need to be able to use data collected worldwide to maintain your competitive advantage. The volumes of data will be huge. Not only will internal manufacturing operations be generating data, but potentially every car part will be intelligent and emit data regularly. There are

great opportunities here, provided data can be managed and analyzed quickly, flexibly and economically, and the discoveries then used to improve the business.

These challenges need to be tackled in a fast-changing world. What is more, they often all have to be tackled simultaneously, which presents difficult dilemmas. For example, there needs to be a way to industrialize and innovate simultaneously – not always easy since the two modes of operation do not always support one another. Industrialization is about zero downtime and 100% quality, whereas innovation is about experimentation, rapid deployment, and being able to get things wrong sometimes. There are often conflicts, too, between the needs of local plants and the objectives of the company as a whole, as we'll discuss below.

How suppliers need to respond

To respond to current challenges, several areas need to be tackled.

Standardizing globally while meeting local requirements

Automotive suppliers' centers and plants are typically each dedicated to a specific manufacturer. Historically, these were left alone to make their own decisions about products, operational processes, and IT systems, provided they satisfied the OEMs' needs. Each tends to have its own ERP and other systems – a diversity that has been increased by mergers and acquisitions.



Most Tier 1s are now keen to standardize systems and processes across the entire operation, but face obstacles. For example:

- Standardization may be at odds with what OEMs want.
- Often local plants are not motivated to replace what they have, especially if they have to pay for it – they can't see any worthwhile benefits at local level and are likely to play political games, suggesting that other plants go first and so on.

- A centralized and standardized model can make plants slower to react to changes requested by OEMs.

This last point is perhaps the most important, because suppliers need to maximize their speed and agility. Post-standardization, plants must still be able to respond rapidly to OEMs' needs.

Achieving differentiation and new business models

Innovation is becoming Tier 1 suppliers' lifeblood: a way to differentiate in order to avoid playing a price game that can never be won. The quest is on for new, feature-rich products that you can bring to market faster than your competitors, more cheaply and with better quality.

Although it's hard, and probably counterproductive, to design a standardized innovation process, organizations need to answer questions like:

- Should we just collect ideas internally, or should we look outside?
- How do we rate ideas?
- How do we funnel them to become products faster and better?
- How do we avoid keeping doing the easiest thing?
- Should we invest in non-standard technologies that might become relevant later, or use standard ones?



The answers to these questions are far from obvious. What is certain is that revolutionary change is needed in the form of new business models. For example, to take advantage of the possibilities of the IoT, Tier 1s may need to be able to listen and talk directly to consumers about what they want, so that they can propose innovations that will confer competitive advantage. Suppliers may also shift their focus to include services as well as products, and to do business directly with consumers, particularly in the case of used cars.

Getting business value from data

Today's processes and systems generate huge volumes of data, which will grow exponentially with new concepts such as the IoT and Industry 4.0. For example, a supplier might

be processing information sent back by half a million parts worldwide, and responding in real time. If it can churn and evaluate this vast amount of data and turn it into insights, new levels of performance can be achieved.



Insights from data can drive a wide range of improvements: not just better planning and forecasting, but also improved predictive maintenance reducing downtime and costs, better HR to improve recruitment and retention of managers and engineers, and better customer management.

Of course, it is not enough to have insights – they also need to be acted on. If you put a sensor on to a tire or a gear shaft, you have to be ready to use the data that comes back to improve customer experience.

How can this response be implemented in practical terms?

Based on analysis of the challenges our Tier 1 clients face, Capgemini has established three focus areas under the heading AutomotiveConnect: Supplier. We believe that suppliers can best achieve their aims by focusing on these three areas, and on the intersections between them.



Innovations are the essential foundations for increasing the value of our company."

cited in Continental AG, Annual Report 2014

Industrialization & Agility

It is important to overcome individual plants' resistance to standardization, otherwise standardization processes will stall. Collaborative methodologies such as our own Accelerated Solutions Environment (ASE) can give local decision-makers an understanding of the rationale for process standardization, helping to secure their commitment. Clients tell us that it's very worthwhile to invite decision-makers to help to define the most efficient way to deploy the standardized solutions.

There are ways to accelerate and de-risk the industrialization process, particularly through the use of templates. A well-defined approach to application portfolio rationalization is also necessary. Techniques like these make it possible to industrialize while safeguarding the organization's agility.

Even more important than these techniques, however, is the deployment approach. We find it's better to get something "out there" fast, and demonstrate benefits that motivate the rest of the organization to follow. The business case has to work at local level, as well as at organization level, in order to convince plant managers to invest.

Realizing the business case depends on constant monitoring and improvement – approaches like Kaizen are worth considering.

Innovation & Change

Suppliers continually need both to find better ways to do the same things, and also to start doing completely new things. Individual innovations and changes are in some ways relatively easy – what is hard is to keep a process of continuous innovation going and make it pay off. Strategies include developing an innovation plan using an intensive workshop such as our ASE, and then creating approaches to managing transformation (addressing practicalities such as the difference between amending an existing product and producing something completely new).

The scope of innovation can also be broadened by working with partners who can demonstrate technologies and techniques used in other sectors and areas – for example, the IoT is highly relevant to connected vehicles.

In addition, suppliers can usefully turn some of their attention to innovating around the business model, as opposed to products. Innovations here could include:

- Selling services rather than products. Other industries have shown the way here. Rolls-Royce's model of selling uptime rather than engines – "power by the hour" – is worth studying.
- Selling directly to consumers. Suppose an intelligent part in a car needs reprogramming in five years' time: Maybe cruise control software has been updated to slow the vehicle down if one in front slows down. Could you contact

Maintenance is a vast area with multiple opportunities for improvement across all maintenance types: preventive, corrective and predictive. The opportunities for Tier 1s relate to both in-house operations (e.g. plant maintenance) and outside ones (e.g. field maintenance). With advancements in digital technology, remote maintenance has become feasible, and engineers can manage maintenance activities through technology enablers such as phones, tablets, smart glass, and augmented reality. In addition, the growing cost-effectiveness of sensors, data analytics, and computing power has opened up significant opportunities to reduce costs, improve quality, and even introduce new business models.

the car owner directly and offer an upgrade? This could be a valuable market given that there are 10 times as many used cars as new on the road, and it's one not so far targeted by OEMs.

- Becoming an information broker using IoT concepts. For example, collect information from sensors on wheels and use it to predict breakdowns – in this scenario the car becomes an IoT ecosystem on wheels, with hundreds of sensors. Bosch is a leader in this area, and has said that all its products in future will be intelligent, i.e. will have sensors. Michelin is applying similar thinking for tires and Saint-Gobain for glass.

Insight & Action

In addition to tackling the separate challenges of industrialization and innovation, these two modes of operation need to be balanced against one another and made to work together. Insights can act as a bridge, connecting the two modes, so that innovation informs industrialized processes and in turn responds to requirements to improve those processes. Industrialization and innovation need completely different mindsets, but with the right insights the two can coexist harmoniously and profitably.

When it comes to deciding where to look for insights, possible focus areas include planning and forecasting, red issue resolution (e.g. plant uptime and parts failure prevention) and recall reduction.

One major area for focus is direct consumer experience – consumers are hungry for personalization, and bottom-up personalization will be driven by Tier 1s. In addition, by investigating consumer trends, a company can anticipate what OEMs are going to be needing further down the line, and innovate accordingly – making a Tier 1 a partner rather than just a supplier, and giving a strong advantage when the next downturn comes. This will require sophisticated insights into consumer preferences.

Collecting this type of data is relatively easy, but collating it properly, analyzing it, and transforming it into action is a challenge that requires a rethink of many business operations. Rather than spend a long time defining analytics architecture upfront, our recommendation would be to dive in and start experimenting straight away. With today's big data technology and techniques, this type of experimentation has become inexpensive.



Data makes your briefcase heavy – insight makes you rich.”

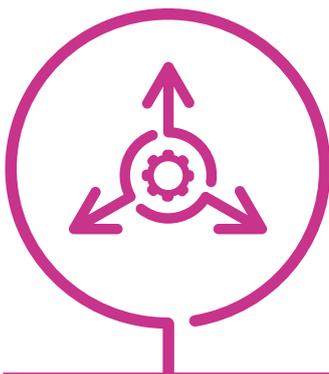
Niall FitzGerald, former CEO, Unilever

cited in automotiveIT.international

Next steps

Automotive suppliers have such diverse histories and strategies, and are so dynamic, that it is unrealistic to make generalized recommendations. Whatever your specific situation, though, you will need to understand and plan for industry trends such as globalization, changing consumer behavior, and digital, and take the initiative in responding to them.

Our Tier 1 clients are finding that adopting the focus we've described makes it easier to prepare for the next market disruption. By following this approach – and taking advantage of accelerators specially designed for your industry – you can position your company as a partner rather than just a supplier to OEMs, while resolving tensions such as those between global and local needs, and between industrialization and innovation.



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About Capgemini

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About Capgemini's Automotive practice

Capgemini's Automotive practice serves 14 of the world's 15 largest vehicle manufacturers and 12 of the 15 largest suppliers. More than 5,000 specialists generate value for automotive companies every day through global delivery capabilities and industry-specific service offerings across the value chain, with a particular focus on our AutomotiveConnect propositions for OEMs and suppliers.

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