

Digital Leadership

An interview with
Grégoire Ferré
Chief Digital Officer at Faurecia



Digital Transformation
at Faurecia: cross-
organizational
transformation drives
Industry 4.0

The Faurecia Group is a major player in the global automotive industry, with a leading position in automotive seating, interior systems and clean mobility solutions. Founded in 1997, Faurecia has 100 000 people, sales of €€15.6 billion in 2016, and 300 sites in 35 countries around the world, including 30 R&D centers.



Grégoire Ferré is Chief Digital Officer at Faurecia and leads digital transformation for the group. Capgemini's Digital Transformation Institute talked to Grégoire to understand how this industrial giant is tackling its digital transformation.

An ambitious, cross-organization transformation

When did Faurecia's digital transformation begin?

The digital transformation of Faurecia started in 2015 when we launched an initiative to assess the potential of digital technologies at our business. We looked into the impact of digital technologies in four domains: operations, R&D, sales, and HR & communications. It generated a lot of enthusiasm on the shop floor, and we came up with 200 project proposals and 42 proof-of-concepts, which we reviewed with great care. We are now in the industrialization phase and implementing many of these projects to deliver the benefits.

Can you give us an insight into your smart factory initiatives?

We have five main initiatives.

The first one is digital management control, which is bringing the paper-less shop floor into action so that workers and leaders can focus on value-adding tasks.

The second is machine intelligence and predictive maintenance. It's one of the most important elements in our digital strategy. Machine intelligence and predictive maintenance extract value from the data by contextualizing and identifying any variation that might lead to breakdown of machines and production stoppages. We have avoided multi-hour production breakdowns several times.

The third is on smart automation, which is the implementation of collaborative robots or co-bots. These co-bots are very quick and swift to implement and very palpable in terms of benefit to the shop floor. The people on the shop floor love co-bots. We try to focus implementation where we have ergonomics issues, so that people can work in safer environments.

The fourth is traceability, which we do through RFID or other means of tracing products. This is a very crucial area - all companies in the world are trying to extend their supply chain, and striving to have a better management of it. So, it's critical to know what is happening to products at any given point in the value chain.

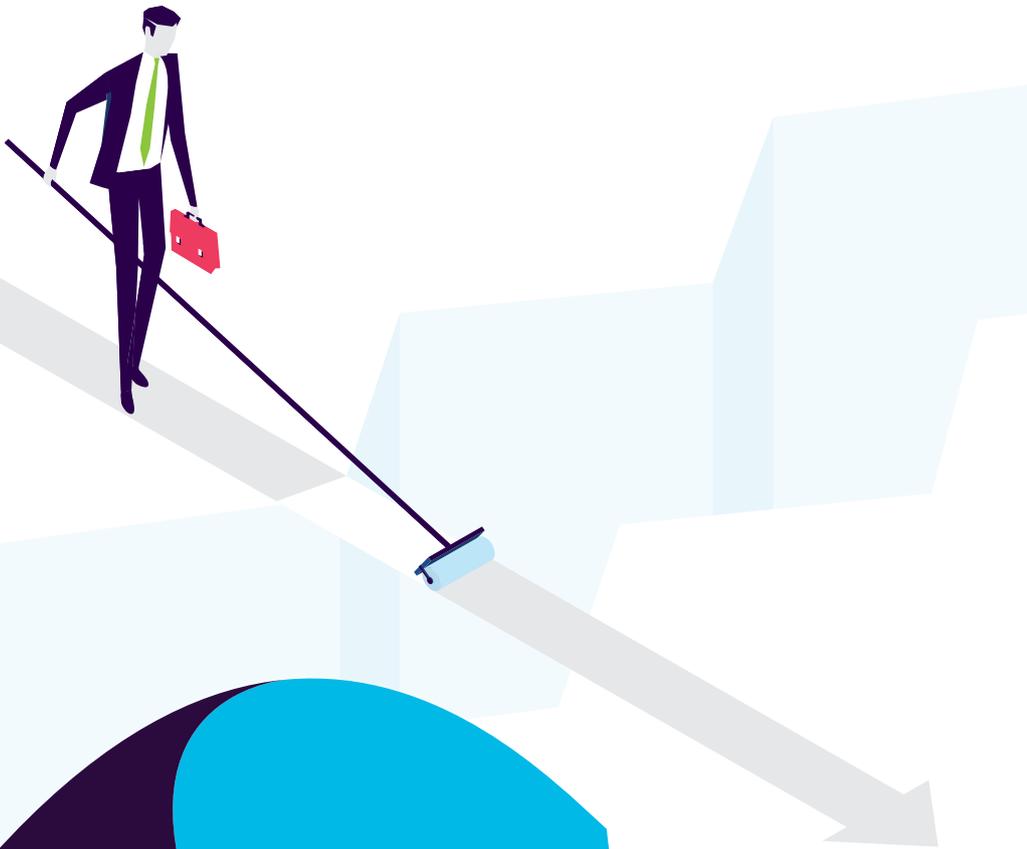
And the last initiative is about logistics optimization. I think sometimes we forget that we can use digital tools to re-optimize complex scheduling systems or complex resource allocations.

In the end, smart factories are all about serving customers better, faster, at a lower cost and for the same value.

You talked about taking costs out and serving customers better. What role does improving product quality play?

All these areas are linked. We really believe in lean manufacturing and digital is the new lean. It is not replacing lean. It is the new tool to do lean.

Lean management is essentially ensuring that you serve your customer to the best extent possible. You are going to require less operations to produce the same products. The production time for manufacturing is going to be quicker, and customers love that. Moreover, quicker is also less expensive for customers. Also, you reduce the quality issues of your products in the manufacturing processes, improving the quality. It means that your product ends up costing less and you serve your customers faster. Also, traceability guarantees that you can follow through, and implement any change request with the traceable items.



Transversal, non-hierarchical governance

Which departments are responsible for the smart factory initiatives? Is there a governance model that oversees the decisions?

I am leading the digital transformation initiative, and coordinating the five streams I mentioned previously. All of these five streams are led by VPs or SVPs with small teams under them. Then you have the business groups, which are the product lines that mimic the same organization to a certain extent and deploy the initiatives across their organization.

It is a very transversal and non-hierarchical governance structure.

Can you tell us more about Faurecia's smart factory in Columbus South? How did you arrive at the decision to create a brand new factory?

We wanted to demonstrate the feasibility and the value of the new technologies to all our plants across the world, and their impact on the P&L of that plant. We needed success and we wanted people to see the value of the initiative. So, in Columbus South, we tailored our production to match the schedule of our clients' production. We used smart automated guided vehicles to carry tools and parts across manufacturing zones within the plant to reduce cost and enhance the speed of production. We also implemented digital management control, and a range of different IT / digital tools.

What is a good breakeven horizon for a smart plant?

There is no secret here. We have the same method and the same metrics as any other company in the automotive sector. We are looking for ROI within one year. If the project is of key strategic interest, then we stretch it a little bit further than that. But, we are clearly not looking for breakeven periods that are too lengthy. You have to understand that our business is related to a product. That product has a cycle time of roughly three years. So, if your ROI is three years, it is not worth it. You need one year.

Start with central funding and then require the users to pay

What are the divisions that come together to fund digital initiatives at Faurecia?

Initially we had funding from the group to build the core elements and standards as well as to launch pilot programs to demonstrate the values of the initiatives. Once the value is demonstrated by pilot projects, then the plants, the business units and the users pay for what they would like to implement. I think this is very important. If you spend someone else's money on something, then you are going to be less interested in extracting value from it. So, we really strive to make sure that the entire system is aimed at deriving value from the digital technologies and tools we invest in.

Lower organizational boundaries

You mentioned that you are working across organizational boundaries, such as R&D and purchasing. How important is it with digital initiatives to work across boundaries?

Digital actually allows us to lower the organizational boundaries. At Faurecia, we see digital transformation with a holistic view. Of course, we need to look at one specific smart plant, but we also need to establish communications among plants so that one plant can learn from the deployment experience of other plants.

We need to make sure that boundaries between plants are lowered so that the deployment of digital technologies brings more value to all. To break down boundaries, we very much rely on training and education. Our Faurecia University plays a key role. We are setting up MOOCs in areas such as operations so that people get to know what transformation is. We are in an industry where a few random good guys won't be sufficient for success. We have to have everybody at the same standard. So education is extremely important.

Are you trying to reduce boundaries in all core areas of the organization?

Product life-cycle management is another example where the boundaries between different divisions need to go away. It spans crucial areas such as engineering, production and manufacturing. It's all about tracing effectively what happens when a product is defined, such as what things need to be ordered, what needs be produced, and how they need to be produced. The ability to incorporate any change request effectively is heavily dependent on effective tracing. Connecting central engineering offices and plants spread across the world is key. This is because you want to reduce the cycle time to implement change requests, while at the same time making sure that the people on the shop floor are making the right products according to the right specs and referring to the right change requests. In order to enforce such a system, we have recently implemented a system that links to our HR database and authorizes who can perform what activities based on their job profile.

There are many examples like that. The key point here is that transformation can't be done by just looking at one specific point. If we roll out one specific smart manufacturing plant, it's nothing until we are able to repeat it in a very industrialized way. If you want to do industry 4.0, then you have to have all the back-end and all the support to work synchronously to make it happen.



How do you measure the success of your digital initiatives?

We monitor the execution of our deployment plans. For example, the number of co-bots deployed, the number of digitally-managed shop floors and, of course, the P&L impacts of these initiatives.

What is the biggest challenge in your transformation?

It might sound obvious to a lot of people, but the biggest challenge that we face in reality is that we are not dealing with 300 Greenfields. The reality is that we have legacy systems, where we have production processes with injection machines that are 20 to 25 years old. Twenty years ago, nobody thought that those machines would need to be connected one day. So, I think that connecting or digitizing Brownfields and legacy systems is the biggest challenge, because it requires much more effort than digitizing the things that are manufactured today.

What are you doing to bridge the digital skills gap in manufacturing?

The way of working with the parts on production lines is changing drastically. The people we need to employ these days are less for picking up parts and assembling things, and more for managing systems that actually assemble things. The new competencies that manufacturing is looking for these days could include connecting a PLC (programmable logic controller) and being able to reprogram it, or looking at how to contextualize data and conducting data analysis. So, for now, we are still in a period where there is a lot of demand, but not a lot of people available in the market. As we go forward, it is important that educational systems train more people to give them required skills in areas such as systems engineering and systems management.



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