



## It's Not Just German Engineering

**The German luxury car market has not lost speed through the recession, despite high production costs and slack demand in Europe. The secret of success lies not just under the hood but in the boardroom and the research labs.**

The stretch of autobahn between Nuremberg and Munich is an adult playground for speed-hungry motorists bent on traveling 240 kilometres an hour (150mph). BMW, Porsche and Mercedes race up and down this stretch of German highway reinforcing the national competitive spirit. It's so popular that one politician was scorned in a TV debate after suggesting speed limits and remarking, "Only an organ donor would drive at these velocities."

The German autobahns are a convenient test track for engineers studying the performance of new cars and components. It is here where ideas are born.

In Munich on this autobahn is the world's biggest luxury car maker, BMW, which is celebrating record earnings for the first 9-months of 2012. Pre-tax profit jumped 24 percent to 1.08 billion euros compared with last year. Sales in China surged 33 percent and in Japan 21.5 percent, despite the high cost of BMW models. "Premium is and remains our business model and the basis for the BMW Group's future success," CEO **Norbert Reithofer** told journalists and analysts in December, predicting 2012 will be the most successful year in the company's history.

How can this be, when manufacturing cars in Germany is an extremely expensive business?

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German auto workers earn some of the highest wages in the industry - 18.61 euros (US\$24.19) an hour with full benefits, plus 30 days paid vacation and a Christmas bonus, according to the German Confederation of Trade Unions (DGB). On top of that are the high costs of energy, raw materials, components and domestic transportation. So management is forced to become more efficient and to think longer term, rather than just the next quarter. They are also forced to think globally: according to the industry association (VDA), German automakers control an 80 percent share of the global luxury car market.

### Cozying up with the Worker

One advantage German automakers enjoy over their competitors is the close cooperation between management and labour that is pretty much written in law. Automakers here have supervisory boards that operate in tandem with management boards. Half of the seats on the supervisory board are chosen by shareholders, the other half by workers. Together with the shop-floor works council, the supervisory board is able to enact mutually beneficial production strategies.

**Johannas Haider** is Head of the Exterior Plastics Purchasing, Production & Technology division at

BMW and has been instrumental in bringing managers, workers and suppliers even closer together. Haider has introduced a programme entitled “Transparent Factory” in which all parties become familiar with the entire supply chain and are able to follow a “dashboard” of key production values, such as error logging, and a tracking list of tools. “There is transparency for the worker, transparency in performance figures, in development, in problems, and in quality themes,” Haider told INSEAD Knowledge near Munich in October after winning an Industrial Excellence Award. The awards are presented by INSEAD, WHU (Germany), IESE (Spain), and the University of Cambridge (UK).

The intensity of competition and the predictability of labour relations reinforced by the Works Councils are designed to build trust. At Continental Foix, the French subsidiary of the German tyre group, trust and respect are also crucial to the production process. “It’s about trust and fairness,” Plant Manager **Jean Cazaubieilh** told INSEAD. “Trust is very important – showing people how to be autonomous to give them all the skills to understand the problem and even to solve the problem.” Continental Foix manufactures brakes, powertrains and electronic control units.

Cazaubieilh’s management style earned him the top European Industrial Excellence Award at the October Munich event. INSEAD Professor Stephen Chick, one of the award advisors, described Continental Foix as an extremely efficient plant: “Lean production was visible at all levels of the Continental Foix plant. Management teams worked together humbly and with discipline.”

### Accelerating Development of Green Technology

German automakers put a great emphasis on sustainable production, which includes the widespread use of renewable energy and recycling – any green strategy that reduces costs over the long run. They invest heavily in research and development. The 2012 EU Industrial R&D Investment Scoreboard reports the Continental group, which is best-known for its tyres and brake systems, spent 5.5 percent of net sales on research and development in 2011 – or roughly 1.7 billion euros. That’s among the highest R&D share in the industry. Daimler is not far behind with 5.3 percent and BMW with 5 percent.

The drive to make vehicles more fuel efficient and reduce CO<sup>2</sup> emissions is leading to a new breed of hybrid, or mixed gas/electric, car – and is creating new markets. “Electric vehicles are a good opportunity to enlarge our portfolio of products and really grow in this market,” says Cazaubieilh. “We are at the start of this type of vehicle but it can be

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really promising for the future, anyhow you must have it because the customer will be asking for it.”

European Union laws require new cars to burn 40 percent less CO<sup>2</sup> per kilometre by 2020. As expected, the requirement is accelerating innovation. The head of the VDA, **Matthias Wissmann**, says: “Over the next three years we will invest 12 billion euros in alternative drive trains alone. And by 2014, German automakers will have 15 electric vehicle models on the market.”

### Cruising the Boulevards in an Electric Car

Daimler has a running start with its electric *smart* model. The German automaker has its main assembly plant in France where it is surrounded by some eight suppliers. The *smart* is a stylish city car, but also suitable for the autobahns. *Smart* President **Joachim Betker**, told INSEAD at the Industrial Excellence Awards conference, “You have the torque right from the beginning so at the red traffic light, you’re one of the fastest to start.” The *smart fortwo ed* model has a range of 110 kilometres (68 miles) and a top speed of 120 km/h (75 mph). It recharges in 4-5 hours.

Betker has been busy launching the electric car and the charging station infrastructure in 40 markets worldwide. In Germany where the government is promoting a scheme to put 1 million electric cars on the road by 2020, municipalities have installed thousands of small charging stations next to parking meters. “There is big public support because the overall objective is to reduce the CO<sup>2</sup> emissions. And this is a political objective - a public objective,” Betker explains. “So there is strong support and it is needed to get the car on the road.”

So the overriding question now is whether the Germans can continue to increase profits in the luxury car market into 2013 if consumer spending slumps. Sales in the Eurozone are lower – especially in Southern Europe – but German automakers so far have made up for it in other regions.

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