

Making car manufacturing sane: Business Model Innovation at Volkswagen

After a brief hiatus due to vacations and travel over summer, the Renaissance Innovator blog is back! While I was catching up on the stack of journals which accumulated over summer, a Fortune article about Volkswagen which describes transformation of the company from a local German producer to a global phenomenon with over €160B in sales caught my eye. Volkswagen has quietly passed General Motors and Toyota last year to become the largest automotive maker in the world. So what is its secret?

Competition in the automotive industry is fierce and global automotive manufacturers must tackle a number of mounting problems: unstable demand due to increasing gas prices, influx of competitors from emerging economies and growing pressures from governments to produce more efficient, greener vehicles. While Big Three US automotive companies have gone through some challenging times recently, Volkswagen seems to be doing remarkably well.

This cannot be easy given the fact that the company offers consumers 245 (!!!) different car models under 10 brand names, which also differ dramatically in prices and market niche: you will find cheap SEATs as well as extraordinarily expensive Bugatti in the mix. Nevertheless, Volkswagen has always been highly successful in Western Europe, and now it is also a best-selling car manufacturer in China and South America.

Moreover, its sales grew a whopping 30% even in the U.S. this year so far. There must be some innovation behind this remarkable performance. While, of course, there is no single reason that leads to such an astonishing performance, it appears that the major role was played by what I would characterize as a careful and centralized risk management approach in the Business Model, an engine behind all Renaissance Innovations.

Demand for existing cars is quite hard to predict, and demand for new cars is all but unpredictable. In such an environment it is easy to make a very costly mistake by betting money on something that does not sell. In the automotive industry such mistakes are extremely expensive: factories and tooling cost hundreds of millions of dollars and unionized labor is often paid no matter if there is demand or not. What Volkswagen did to mitigate this problem is

focus all engineering efforts on using the same basic parts in multiple cars, even cars of different brands. Under this strategy – which is known under the names of component commonality (the company calls it “toolkit strategy”) or platform sharing – demand for individual components is quite stable because risks associated with demand for any one car are mitigated by pooling them together. Certainly, predicting aggregate demand for a few components is easier.

Executing such strategy is, of course, a relatively easy task if all cars for which components are common also look and feel the same, but this would be a recipe for disaster: the key is to make sure that the customer is clueless! The now-famous cover of Fortune magazine in 1983 contained a picture of 4 different cars manufactured by General Motors (from cheap Chevrolet to expensive Cadillac) which looked exactly the same because of common parts. Volkswagen avoids this pitfall by putting very different bodies on very different car platforms. This is perhaps not a good news for someone paying more for, say, an Audi while many of its interiors are exactly the same as for the more mainstream (and much cheaper) Volkswagen.

The latest achievements of the platform sharing/component commonality are what Volkswagen calls “modular longitudinal matrix” for large cars, launched in 2007. It allows using the same key components in 16 cars. Better yet, the newest “modular transverse matrix” (or MQB in German) does the same for 40 small cars which add up to 7 million cars per year. These components include transmission, steering, front axle, steering, heating, air conditioning and ventilations, more than 60% of the cost of the car! Of course, it remains to be seen if Volkswagen will be successful in executing this strategy given new acquisitions of

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Ducati and Porsche with products which do not quite fit the component commonality paradigm. However, [this business model innovation through managing risks](#) is clearly a necessary part of the company's product innovation strategy and something which allows Volkswagen to dramatically increase profits.

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