

# Visit to BMW factory in Leipzig

## Summary

I visited the BMW's factory in Leipzig on the 29th of November 2010 in order to learn how to build a car from zero. In fact, we will soon be graduated as engineers in cars technologies so we have to know that! The factory did provide a variety of new ideas we can't see in school. The main one is that our new cars need wheels to be driven on roads.

The visit was divided in three steps alongside the main production line: the car skeleton, paint job and option implementation.

## The car skeleton: stop building cars with wood

The first step of the visit was the vestibule area where we had to leave all our camera and other recording tools outside the factory. After that, we began the visit by the first step of BMW building process: new cars skeleton. It's very interesting to note that BMW went from wood to metal to build cars. In fact wood is a green technology but is heavier than metal. The guide says that there are more than one hundred robots all along the production line, and that the production is nearly eighty percent automatic. Here, the guide explains us that each employee changes its working place each day or week, depending on their job. This increases the workers' experience and avoids routine. All along the visit, the guide highlighted the importance of working experience compared to the theoretical one.

## The oil painting is much more difficult than water painting.

The second step of the visit was the painting area. Here we were able to see some robots with white dresses (to protect themselves from paint) painting cars three times. The first coat is for protecting the metal, the second one for giving the color (the most popular is black) and the last one is a secret powder to make the car shiny. The paint used by BMW is water based one because it is easier to use than other kind of paint (it can be stocked easily and for example). Between each paint step, the car is brushed by ostrich feathers. These feathers are very smooth and sweep out all dust, avoiding blisters.

## The last step: adding the steering wheel

After the paint job, and before leaving the factory to the dealer, cars need some options. Here is some example we saw at BMW: engine, steering wheel and (sometimes) blinkers. This job is divided in 5 steps (as the five hand fingers). Each position is served by trains, trucks, and inside the factory, electric robots. All is organized so supply never needs to cross the line. At the end, one robot adds petrol in each car fuel tank and an employee starts the car for the first time. Quality is very important for BMW. There are quality engineers who check all points along the car building line. BMW needs three days to build a car from zero. It's interesting to notice that there is no stock. All the pressure is on transporter's drivers and this is not a "green way of life" because trucks are stocks!

## Conclusion

The conclusion of this visit is that we have to stay in touch with technology evolution. We also need a background to begin working, but with time, experience is much more important as we can see in BMW factory. There is a last main idea from this visit: to manage a project, each step is important and has to be planned very carefully at the beginning.