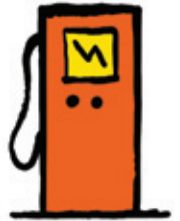


“THE CHARGING INFRASTRUCTURE IS THE ACHILLES HEEL OF ELECTROMOBILITY”

Interview with Christoph Stoppok, Managing Director Electronic Components and Systems and PCB & Electronic Systems at ZVEI



D

DIALOG: *Mr. Stoppok, at what points in the automotive life cycle do you see the biggest changes coming in electromobility?*

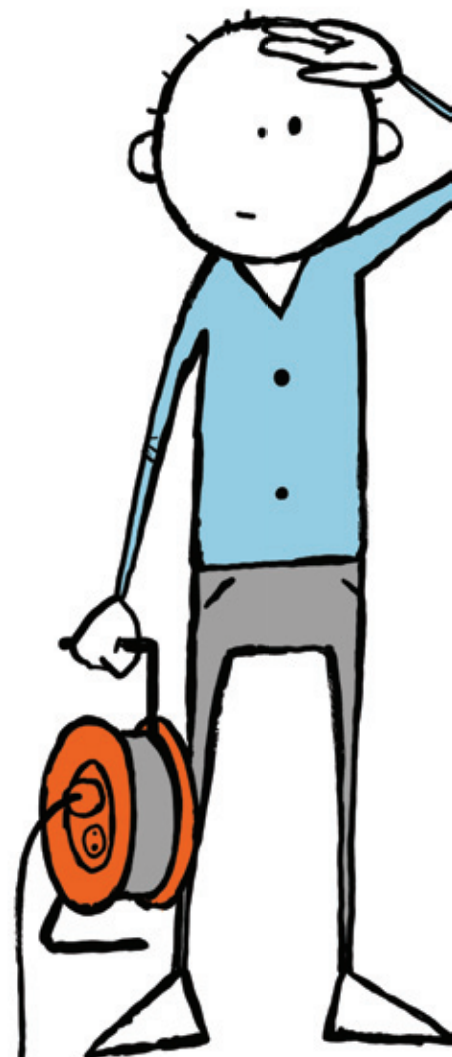
CS: Overall, I think we can expect the whole system to change, not just the car. With the car it is clear – certain components will simply become obsolete. The tank, gearbox and exhaust system for example. And though new components will, of course, be added, they will be less complex. This will considerably simplify the entire peripheral environment, whether for maintenance or diagnosis. However, the infrastructure is also set to change. The charging points won't come from traditional oil companies, but companies in electrical automation sectors instead – as already exemplified by factory equipment suppliers on a large scale. Similar developments are unfolding on a smaller scale, for example, among installation contractors who have to equip or retrofit residential buildings, as it is sometimes totally impossible to charge several cars in parallel with the current domestic set-up. Accordingly, these small firms will develop new business models.

DIALOG: *At the same time, the disappearance of components is putting the very existence of various suppliers at risk. What consequences will this have for electrical industry companies?*

CS: There will be winners and losers. Companies that only manufacture individual components are certain to experience difficulties if that part disappears. Companies that can hold their own in the market but



“New business models will emerge and persist in areas of market growth.”





**Christoph Stoppok, Managing Director
Electronic Components and Systems and
PCB & Electronic Systems at ZVEI**

will still struggle are the large tier-1 suppliers – currently system suppliers. From a certain scale onwards, however, they will simply be able to restructure their portfolio, given their very wide product range. Specialists offering individual products may be able to survive in their niche for a while – but not indefinitely. Of course, it goes without saying that the traditional car will not disappear overnight. It may take up to 20 or 30 years. Even so, maintaining a long-term business model in a shrinking market will prove increasingly difficult, because new business models will emerge and persist in areas of market growth.

DIALOG: *One way of responding to market changes is by forging collaborative partnerships, for example between mechanical engineering firms and car manufacturers. How do such partnerships prosper?*

About the ZVEI – German Electrical and Electronic Manufacturers’ Association

The ZVEI is committed to the common interests of the electrical industry in Germany and on an international level. This commitment is supported by the involvement of around 160 employees in the main office and about 5,000 employees of member companies in an honorary capacity. With its 22 specialist associations and four corporate members, the ZVEI represents a sector with sales of EUR 178.3 billion in 2015 and around 850,000 employees. With a further 704,000 employees outside Germany, the value chain of the electrical industry represents the largest global network of any sector.

www.zvei.org

CS: Establishing such partnerships is contingent on a win-win set-up. What you often find is one partner that knows the market and the other with a good product that is not yet established on the market. Both parties stand to gain on this basis. Good opportunities also exist for a number of electrical companies, as well as software businesses that have had no previous contact with the automotive market. There is great potential for software and electrical engineering companies in particular, if they partner with traditional automotive suppliers. Nevertheless, there is no guarantee of success and this does not apply across the board. Mechanical engineering businesses are set to lose out, for example, because the mechanics field will shrink. Although car bodies and brake pads will certainly still be needed in future, many mechanical components will disappear.

DIALOG: *What still hinders electromobility?*

CS: Electromobility is a new system technology. First and foremost, the cars need to become more innovative, i.e. more attractive. In other words, they have to be able to do everything a present-day car can do, plus a little bit more, perhaps. On top of that, a charging infrastructure is needed - and this is currently the biggest stumbling block. You cannot operate an electric vehicle on an everyday basis in Germany today because in 90-95 percent of cases, it is practically impossible to charge it. There is simply no plausible business model for a charging infrastructure today. So unfortunately, this is where politicians will have to step in with by continuing to provide funding until a viable business model emerges, because the charging infrastructure is currently the Achilles heel of electromobility in Germany. This is also something that industry cannot handle unaided – neither energy suppliers, who have to provide electricity at a profit, nor car manufacturers, who need to form a consortium to set up charging stations along the main highways to cover basic needs. There is currently no financially viable modus operandi.

“You cannot operate an electric vehicle on an everyday basis in Germany today.”

DIALOG: *How must electric cars change to match the appeal as of conventional vehicles?*

CS: The electric car of the future will be a world away from a mere replacement of the traditional combustion-engined car. That’s also the main reason why electric cars have seen no appreciable breakthrough. Current models lack the innovations that demanding users expect – offering even fewer than conventional vehicles: less range, higher costs, longer charge-times – all of which are constraints.