

**"PEOPLE ARE
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FOSSIL FUELS
LIKE IN
THE PAST"**



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hen **Volkmar Denner**, the Global CEO of Bosch – world's largest automobile component manufacturer, visited India in June 2018, it was his first visit in four years. When he came again last month, it was his third visit in just over a year. This time, he was accompanied by all the board members of the company. This reflects the growing importance of India's market, but more importantly he wanted to understand India's nascent but fast-emerging electric vehicle market. Denner talks to *BT's* **Sumant Banerji** about the impending disruption due to electric vehicles, the future of the combustion engine and impact of the global trade war on the industry. Edited excerpts follow.

There is a lot of talk on EVs in India. The government has set ambitious targets. What do you make of it?

It is very important for a country and its politicians to set the right targets. It has become clearer than ever that we (the automobile industry) have to contribute to fighting climate change. Cleanliness of air is a major contributor to improvement of health of people in cities. Last September, during the MOVE summit, we made a few recommendations of our own. We said that, in terms of emissions, two- and three-wheelers can be converted into electric with today's technology. It is feasible. There is still the question of affordability as they are clearly more expensive than an internal combustion engine, but in terms of technical feasibility it can be done. We did not give any timing, though. With respect to passenger cars, the recommendation was to do this in a cautious manner. The electrical grid infrastructure is not stable enough to allow a larger population of electric vehicles. For fleet vehicles like buses, we said they could be converted into electric. The Indian government basically picked up these recommendations, but I do not want to comment on the timing of the implementation as it is not the task of a technology company to comment on this.

The Indian government wants an accelerated timeline and this has caused a lot of heartburn with the industry here. Do you believe it is doable?

If the industry is resisting what the government wants to do, why not try out the ideas in pilot projects? Maybe pilot cities. People can study the problems, see where we have to adjust, and what is feasible. Build the infrastructure locally, which is much less costly. Provide the vehicles and then see if there is acceptance in the market.

India aspires to take a lead in taking low-cost electric mobility solutions to the world. Given that the country is lagging behind China and Europe, what are the chances of that?

It is possible. We know that cost competitiveness is key in India. Look at two-wheelers in China, which are completely electric. Why should it not be possible in India? Ten years ago, when we decided to step into the electric bicycle market, we also decided to venture into the electrical scooter market in China. We set up a team for electric powertrain for e-scooters in China. Since we know this

technology, we can help India develop this segment.

What happens to existing powertrains that have been developed and improved over decades? Are we looking at a fast decline of the internal combustion engine, and have you started to pare down your investments to that end?

Our prediction is that by 2030, 75 per cent of all vehicles sold worldwide will still have an internal combustion engine. Many of them as a hybrid. Only 25 per cent will run on battery electricity or fuel cells. The numbers in India may be a bit different but the plan to have a quarter of cars running on battery technology worldwide is already very ambitious. Many people are over-exaggerating this battery part. Our proposition is that it is our obligation to make the internal combustion engine as clean and environment-friendly as possible. That is why we are still driving investments in internal combustion engine. If we take the Paris climate agreement seriously, we have to stop burning fossil fuels latest by 2050. Therefore, we have to get rid of them on this long time scale. 2040 or 2050 is enough time. It is important to set the target. If the target for a city is zero emissions, electrical mobility is the technology of choice. But with the improvements we have made in the internal combustion engine, though there will still be something coming out of the exhaust pipe, it will be at a low level so that it does not contribute in a sizeable manner to air pollution.

Is there evidence to suggest the consumer also prefers EVs, or is it still largely being led by policymakers worldwide?

It is driven by policymakers and not end-consumers. The main points for electric mobility are still high cost, limited driving range, limited infrastructure, and they have not been solved completely anywhere.

How disruptive will this be for the entire automobile sector value chain that includes thousands of component manufacturers at various levels?

“CONSUMER SENTIMENT IS GOING DOWN. WE ARE VERY CONCERNED ABOUT TRADE CONFLICTS”

It is a process of fundamental change and needs to be managed properly. It is a danger for the industry. There is a lot of uncertainty on the engine roadmap. So, there has been a reduction in the number of variants. The number of engine variants will definitely go down. This does not necessarily mean that the volumes will also go down. But we cannot keep burning fossil fuels as we did in the past. It is also a very important question for India. The model (on future climate) I have seen predicts a substantial increase in temperature in India, which is already a very hot country.

Does that mean large-scale loss of jobs, and does that need to be taken into account by policymakers when they make a push for e-mobility?

This is a very difficult process. There are so many conditions. So far, we have been discussing technology and environment, but these are only a part of the story. I cannot optimise Bosch based on environmental issues only. I have to take into account the economic viability of the company as also the social responsibility....employment and jobs. Unfortunately, in many parts of the world, we have a one-sided discussion. In Europe, the discussion is primarily on ecological aspects. What is needed is a balanced discussion publicly. It is clearly not easy but necessary. In the end, mobility has to be accessible. Sometimes I get the impression that authorities do not want to tell people the truth. That, for example, mobility will become expensive for people because they do not want them to drive into cities in own cars. Instead, we have a discussion on banning certain technologies. I would vote for a more open discussion.

There is a belief that the era of EVs, whenever it begins in the right earnest, will not be very long and some other technology will replace it much sooner than the time EVs have taken to replace the internal combustion engine. How do you future-proof your company in such a dynamic situation?

Internally, I always say, being a scientist by education, that for me the current world is a dream as we have endless opportunities. But running the company as a CEO is very different. It is challenging. We are still investing in internal combustion engine. But we also

have to invest in electric mobility as we know that is the future. In addition, we are investing in fuel cell technology, especially for commercial vehicles. Do we exactly know which technology will come? No. It is better to be prepared.

The Indian automobile industry has been facing a severe slowdown over last 12 months. Has that shaken your belief in this market?

Not entirely. We believe in India and will keep investing. Our facility in Adugodi (Bangalore) will grow very fast. We have transformed it from a manufacturing site to a high technology engineering site. If our plans come true, it might become the biggest Bosch location in a few years, in terms of workforce outside Germany. Of course, we are disappointed about the current year. I had big hopes in India for this year which did not come true. Not only in automotive but generally. I really hope this changes soon but again the Indian market, with such a large population and a growing middle-class going for more fuel-efficiency, electric drive systems, more safety, offers a huge opportunity for a company like Bosch, but the current state is disappointing.

In your annual report, you have painted a very bleak scenario for mechanical engineers. Would you elaborate?

Industrial business is showing very high growth this year. But in this business we look at order intake. That has been substantially reduced compared to a few months ago. It is an early indicator that business in the machinery industry will decline.

What is contributing towards this? Is the ongoing global trade war to be blamed?

Sometimes there are local problems. On top of this, there is too much trade conflict on a worldwide level, negatively influencing consumer sentiment. Industry is also psychological to a large extent. If you are uncertain as a consumer about what is happening in the world economy, you will be careful about investing, especially in luxury goods like cars. That is what I see worldwide. Consumer sentiment is really going down. We are very concerned about trade conflicts. The worldwide optimised supply chain is endangered. In many parts that Bosch produces, electronic chips, for example, there is a globally optimised supply chain. The fusion of the wafer takes place in the US, packaging and testing in Asia, and then the part is shipped to a Bosch plant anywhere in the world. The parts are travelling across the globe several times. Disruption of this supply chain by trade conflicts will cause a huge impact. **BT**

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