

Finding Out What Holds the World Together

Bosch Director Volkmar Denner

Volkmar Denner, Ph.D. studied physics at the University of Stuttgart in the 1980s and wrote his doctoral dissertation on the theory of solid-state physics. Today he is Chairman of the Board and Technology Director of Robert Bosch GmbH and 'wants to give something back to society'.

? 'You're now part of the bedrock at Bosch; you worked in different management positions, and two years ago you became the 'G1'. What has changed for you?'

➤ 'The economic situation made things difficult at the beginning. Getting out of photovoltaics forced me right away to make a hard, but I believe unavoidable decision. Many persons feared at the time that we were going to sacrifice the traditional Bosch values, the often-mentioned 'Bosch Way'. It was important to me and the entire management board to carry out the sale of our solar business in line with the Bosch culture. We worked out very specific solutions for the different plants and succeeded in saving a majority of the jobs. It cost us a great deal of money. But it brought us a lot of respect – in spite of all hardships for the men and women affected. Over against this decision, we have set numerous future-oriented portfolio decisions in motion, and the process is still going on. Some of the most recent milestones were taking over parts of BSH Bosch Siemens Hausgeräte GmbH and ZF Lenksysteme GmbH. Both are a good match for our strategic orientation and will bring the company another step forward. But we're also building up brand-new business areas and are developing a start-up culture at Bosch. It's reflected in spin-offs like Bosch Sensortec or our entry into the E-bike business, very much one of my own pet projects. Another new undertaking is the Bosch

Startup Platform, where we give company founders from among our employees a foothold – in the form of work rooms and 'shared services' during the starting phase.'

? 'Does that mean that the automotive area will have less weight in future?'

➤ 'We want about 50% of our turnover to come in the automotive area. That has long been a Bosch target. But even Robert Bosch himself took care to diversify, in spite of the outstanding success of his ignition. As much as possible, we will use the opportunities for growth offered by the automotive branch, which is why our investment in ZF Steering Systems makes a lot of sense. After taking over and consolidating with BSH Bosch and Siemens Household Appliances, our Consumer Goods Division now constitutes 25% of our sales. That will be important for our company in the long run because it is a company area with fully different business cycles than machine engineering or automotive technology and therefore helps to stabilize our portfolio.'

? 'How does Bosch want to position itself in future regarding research and development?'

➤ 'The intermeshing of research and business in the form of high-performance clusters is a key for innovativeness and competitiveness, not only at Bosch but also for German and European industries as a whole. Our research area has been given the strategic task of working with each of the world's best institutes. That applies equally to our other partners and suppliers.'

'As Bosch's Technology Director, it is important to me to see to it that innovative breakthroughs really do make it to the market. That is why we are very proud of winning the Federal President's Future Prize for our ultra-short-pulse laser technology,



‘Technological networking is fundamentally changing the world, and that is why we must network human beings as well.’ Dr. Volkmar Denner, ‘G1’ at Bosch.

one of Germany’s most important innovations. The Prize also documents very nicely why such clusters can be so successful: the basic optical research came from the University of Jena and the Fraunhofer institute there; Trumpf, as a leading laser company, was able to produce the ultra-short-pulse laser, and Bosch used it as the basis for a production facility which can make injection valves with never-before-seen precision.

But internally, too, we are networking ourselves and looking for synergies. In Renningen we are currently building a research campus which will offer highly attractive working conditions for the best researchers from all over the globe. Its leitmotif, ‘Networking For Millions of Ideas’, was not chosen by chance: technological networking is fundamentally changing the world, and that is why we must network human beings as well. Renningen is to be an archetype of how institutions of higher learning, research institutes, the regional Bosch technology centers, and our business units and employees can be optimally brought together. In the process, we are applying the Bosch principles to create inspirational working conditions, such as a brand-new design for offices, communication islands, and WLAN spots even outdoors. We expect to see new kinds of solutions from this creative atmosphere, like the oil burner that our in-company Buderus brand has just put on the market. It is has unparalleled efficiency, because the entire volume

of oil is controlled by a single valve, which in turn comes from the automotive technology area. Another example: Bosch and Siemens Hausgeräte have just recently presented a kitchen oven with a Lambda probe. It gives us a unique position on the market. We intend to continue encouraging such ideas.’

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‘What other technologies will make life easier for human beings in future?’

➤ ‘Our guiding principle is ‘Technology for Life’; all of our strategies are always derived from this. What that means concretely is: we want to develop products that our customers love, that improve their quality of life, and that help to conserve the earth’s natural resources. Last year, for example, we introduced a drive-dynamics regulator for motorcycles, a worldwide innovation. In terms of financing it is still only a small project, but that’s not what interests us at the moment. The idea behind it was quite different: two-wheeled vehicles give many persons their first chance at mobility, especially in developing countries. But the vehicles can also have safety problems, which result in a high accident rate and many victims. With Bosch technology, we can help to make life safer for riders of two-wheeled vehicles. And other solutions from Bosch help reduce both fuel consumption and exhaust gas emissions in injection technology.’

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‘One glowing example of a creative juncture



'The Bosch values are not just on paper; they are part of our lives, and we make every effort to put them into practice.'

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between science and business is the University of Stuttgart's ARENA2036 Research Campus, where Bosch is a partner. What do you expect from this cooperation?

➤ 'That project is looking for the automobile design of the future, meaning that lightweight structures will play a major part. Granted, this is primarily a topic for automotive manufacturers, but future production technology – a key issue for Industry 4.0 – is also very important for Bosch. That's why Bosch is so interested in ARENA2036, and we're happy to contribute our competence to this joint interdisciplinary venture.'

? 'The Bosch culture deliberately puts the employee in the center of attention. What makes you different from other companies?'

➤ 'Bosch has a strong culture, stamped by its founder. Even today, Robert Bosch is very present in our company, not only in his statements and le-

gacy but also in his descendants. Before important decisions are made I contact the family's spokesperson, grandson Christof Bosch. The family supports this company, and we for our part heed the interests of the family. The Bosch values are not just on paper; they are part of our lives, and we make every effort to put them into practice.'

? 'What is the role of the Robert Bosch Foundation in this?'

➤ 'As a non-profit organization, the Foundation is an independent entity. But it is nevertheless very important to our company because it is living documentation of the values that Bosch stands for. Moreover, the company itself donates a great deal of money to projects which serve the public good. And our cooperation with the Foundation has recently grown closer: we're working for the first time on a joint project to battle unemployment among the young in Europe. Over and above projected needs, our company has made 100 additional trainee positions available for young people from Italy, Spain and Portugal. Parallel to that, the Foundation has commissioned a study on the reasons for unemployment – a fascinating project for all involved.'

? 'You studied physics at the University of Stuttgart. Why that subject, and why Stuttgart?'

➤ 'I've always wanted to understand how things truly work, and what holds the world together, so to speak. That's why I decided on theoretical physics, which studies the mathematical laws of structures and then applies them to other complex issues. The University of Stuttgart's physics department led the field world-wide at the time, with persons like Hermann Haken, the synergetics pioneer, Wolfgang Weidlich, who trail-blazed sociophysics, or my doctoral supervisor Max Wagner, a solids

theoretician. It was an environment that gave us great freedom to delve into related areas, and that's just what I did, studying for example the history of the natural sciences or issues of biophysics. Now I see a certain 'intellectualization' of study, with an immense amount of learning material and quickly tacked examinations at the sacrifice of much creativity. I see that as a critical issue.'

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'What would have to change?'

➤ 'If we in Germany want to maintain our reputation for top research, we have to measure ourselves against the best. That doesn't just mean answering examination questions and working hard, but also encouraging creativity. Networking and cross-disciplinary cooperation are also important. At Stanford, for example, professors from all the faculties and disciplines sit down together on their own to discuss joint research activities, and the university always encourages such initiatives. I'd like to see more of that kind of dynamics in Stuttgart.'

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'You have been Chairman of the Friends Association of the University of Stuttgart since 2010. Why do you take time for this in spite of your full appointment book?'

➤ 'As one who had a stipendium from the Stipendium Foundation of the German People, I have always seen it as a high duty that we use our talents for the good of society. I have taken this very much to heart, and I constantly ask the members of my team this question: What are we giving back, what lasting footprints will we leave behind? This means not just our business results, but rather our moral and ethical attitude. As Chairman of the Friends Association I want to give something back to the University. But I regret that the number of members has dropped over the years and that we

are limited in what we can do to help financially compared with the example of U.S. universities.'

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'What is your message to the University?'

➤ 'We of the Friends Association brought up the topic of fundraising years ago. People listened, but concrete action is still missing. Gigantic amounts are required just to renovate buildings – too much for the University to pay on its own. Still, it must do so somehow if it wants to remain an attractive competitor for the best minds. They look not only for high-quality departments but also for buildings, a University environment, and an image which are attractive. Students today are no longer limited to Stuttgart in their choice.'

'Many thanks for this interview!'

Dr. Hans-Herwig Geyer and Andrea Mayer-Grenu conducted the interview.