



## PROFILE

## Interview with Joerg Mimmel on “Digitalization of Purchasing at Bosch”

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Joerg Mimmel serves as Executive Vice President, Global Business Services Purchasing at Bosch. Global Business Services consists of four strong pillars: Finance, Human Resources, Logistics, and Purchasing services. More than 8000 associates work in this service area worldwide to support the business divisions.

**BISE:** Mr. Mimmel, you are heading the Global Business Services Purchasing area at Bosch. Can you provide some key figures of your unit?

**Mimmel:** In 2018 the Bosch Group had an annual purchasing volume of more than 40 billion euros which corresponds to a high portion of our Bosch sales revenue. The company generated sales from operations of 78.5 billion euros last year.

Within the purchasing area of Global Business Services we are responsible for approximately 12 billion euros.

Besides raw materials we buy all kinds of parts, assemblies, resale goods, and indirect materials as well as services. To this end, we cooperate with the best suppliers in the respective market to meet our quality, cost, and delivery targets. These three targets are our base for any strategic and operational decision.

**BISE:** Bosch products should spark people’s enthusiasm, improve their quality of life, and contribute to conserve natural resources. How does your unit contribute to the strategy of Bosch?

**Mimmel:** In my field of field of responsibility, we have developed a couple of specific solutions by using Process Automation, Data Analytics, and Machine Learning. This was not just another efficiency program, but we saw that machines are better in doing repetitive, administrative tasks. On the other hand, affected associates are happier and enjoy such enthusiasm as mentioned in your question because they are increasingly released from repetitive work to deal with more creative and complex tasks.

Furthermore, we make a significant contribution to the product development process by procuring innovations. Using intelligent scouting methods to tap the full potential of supplier markets, we can stand out from our competitors. This is an impact additional to the innovation power of Bosch.

We also work actively with our suppliers to preserve and save resources. Besides requesting from them an environmental management system, we cooperate to increase efficiency. For instance, by joint efforts to reduce cycle times in the supplier’s manufacturing line, more products can be produced in the same period of time with an identical level of energy consumption. Alternatively you might say, for the same quantity of products which Bosch requests, less energy and thus natural resources are consumed.

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**BISE:** Your organization received an innovation award from the Association Supply Chain Management, Procurement and Logistics (BME). Can you provide some background on this and explain the role of information technology?

**Mimmel:** The innovation award from BME was a great honor and recognition to the entire organization for the achievements that were performed. On the other hand, this award was a motivating snapshot as constant change is part of our Bosch DNA and an integrated part of our transformation process towards excellence.

By establishing a global purchasing organization with integrated IT solutions, we enable a high degree of automation in operational processes. Just imagine you can meanwhile order products and services within Bosch as simply and fast as on big commercial online shopping channels. The value for our internal business partners has increased a lot, as has the satisfaction level. In parallel the level of market cultivation has risen, and by applying state of the art negotiation methods, innovative awarding procedures based on game theory, the bundling level of purchasing volumes could be doubled.

At the same time, the number of suppliers was significantly reduced with a simultaneous implementation of open market places. And this journey goes on. In order to set up fully automated procurement processes, we closely collaborate with our finance department. The target is to have a true seamless end-to-end process from a purchase request to the final payment of the invoice. Such a process would be impossible without proper IT.

**BISE:** You are driving several big digitalization initiatives in Bosch’s purchasing unit. What are the most important activities currently?

**Mimmel:** As mentioned beforehand, we look deeply into end-to-end processes. Just take the procure-to-pay process where the level of automation needs to be increased. That means the speed of processing an order, including its payment, becomes much faster and more reliable in terms of error-prone. In the light of millions of orders annually, this creates a huge benefit for our internal business partners. It is important to highlight that an increase of automation is an initiative to reallocate human resources from repetitive, administrative tasks to disruptive initiatives for creative problem solving.

Secondly, the automated analysis of documents with methods of machine learning is part of our digitalization roadmap. Take quotations in indirect purchasing which can contain in many cases valuable data about the competencies of a supplier and the project. By building up knowledge over time with the help of computers, we are able to

use historic data for future projects in order to make predictions which supplier is competent for certain requirements.

Thirdly, let me mention the transition from our existing to an updated version of a holistic ERP system for a company as big as Bosch. That is a huge challenge and a great opportunity for improved digitalization.

**BISE:** Industry 4.0 is an important topic at Bosch. How does purchasing and Industry 4.0 relate to each other and what are key opportunities for your organization?

**Mimmel:** Industry 4.0 offers the purchasing department a huge opportunity to improve significantly end-to-end processes. Let me give one example. Recently, we have been preparing one pilot together with a Bosch manufacturing plant. Grinding Machines have been fully equipped with required sensors and connected to the Manufacturing Execution System (MES). Additionally, such MES will be connected to our internal buying channel. That means in near future the grinding machine by means of its sensors triggers an order for replacing spare and wear parts as well as consumable materials including services.

Once such processes run smoothly and reliably, we evaluate offering them on the market because Bosch is not only a leading user of Industry 4.0 applications. At the same time, we are amongst the leading providers of smart solutions. Our recent Internet of Things (IoT) campaign in this area is summarized under Manufacture #LikeABosch.

**BISE:** You emphasize the need to become an agile purchasing organization. What exactly does that mean for you?

**Mimmel:** When the organization took over taking over the responsibility for the indirect area of purchasing at Bosch in 2010, it had a very decentralized setup with strong local focus. However, it was more focused on transactional procurement rather than strategic purchasing. That means it was effective.

A couple of years ago, we centralized purchasing activities and thus bundled demands. It is important to point out that we deliberately maintained our local presence. However, our strategy became global. By doing so, many synergies could be generated. Our focus moved strongly to an efficiency increase.

Everyone is aware that markets are changing more frequently, product life cycles are becoming shorter and forecasts are more and more unpredictable. Obviously, this has a huge influence on our daily business. The requirements concerning speed and service orientation have changed a lot. Moreover, digitalization has its own inherent challenges. To my understanding, organizations have to adapt, too. Another “let’s move on” will no longer work.

All of a sudden, flexibility and adaptation are becoming important in addition to the aforementioned efficiency and effectiveness. What was once just complicated, is becoming more complex and any kind of business surprise can arise out of the blue. Hence, we would like to transform into an agile organization where needed. However, let me point out that first of all agility is a mindset topic and not just another process or methodical issue.

Please allow me to share an example within my area. Two years ago, an agile team was created in order to deal with the process for “tail-end demands” in indirect purchasing, these are small volume orders. At Bosch, we have millions of such orders annually. The agile team was initially formed by 15 inspired associates who define their work in a self-determined manner. They work in a cross-functional community. And the results proved them totally right. Many automation and digitalization initiatives were successfully taken. Analytics, Robotics and Machine Learning in several projects have been realized and are now the base for further innovations.

With such an experience, we decided to roll out further agile teams complementary to the still existing hierarchical line organization which is also doing a great job in their business environment of category management. So one has to admit that in such a large area as indirect purchasing at Bosch, several organizational setups are justified and can run successfully in parallel.

**BISE:** What are the biggest challenges in digital transformation of your unit from your point of view?

**Mimmel:** There are several, but let me just focus on three main challenges in the digital transformation.

The low level of standardization is a central topic for me. Being a global company like Bosch with nearly 410,000 associates, you can imagine that every area has had its own IT related optimization conducted within the last couple of years. That means that besides the low level of standardization, in many cases the willingness to standardize and harmonize the process landscape across business areas is an additional tough challenge.

Secondly, the overall complexity of our IT landscape and process variants is crucial. Within Bosch, we run a significant double digit number of SAP systems globally. Can you imagine how complex it is to maintain master data properly?

And as a third aspect, the time to market for IT tool implementations is in many cases totally unacceptable. It takes years to master the complexity that we have created ourselves.

**BISE:** Which skills should graduates in the field of Business & Information Systems Engineering (Wirtschaftsinformatik) have in order to make a career in your unit?

**Mimmel:** First of all we are always looking for associates with the right mind-set. Moreover, we welcome candidates with positive skills concerning *autonomy*, *mastery* and *purpose*. Those people can start working with nearly any topic within my unit.

As purchasing is a typical interface area of commercial and engineering topics, we will always be looking for excellent Industrial Engineering graduates. But as handling of huge amounts of data is crucial, Business & Information Systems Engineering is becoming a steadily increasing focus in our recruiting strategy.

So when you ask me about competencies linked to such a field of studies, we are looking for inspiring people with a solid know-how in processes & IT systems, artificial intelligence as well as data analytics. If they have in addition international experience, that is a plus.

**BISE:** What types of digital jobs are you currently offering at purchasing? What are the most important roles and which tasks are associated with these roles?

**Mimmel:** Concerning opportunities linked to digital challenges, we are offering jobs for talents with a high IT affinity and good process understanding to become members in the agile IT development and adjacent rollout teams. We are searching for enthusiasts who love to explore data as Data Analysts and Data Architects.

Moreover, for innovators with a sound expertise in procure-to-pay processes within indirect or strategic purchasing. And last but not least for creators with a conceptual talent strength to define the future IT strategy based on S/4 HANA.

But in order to process high numbers of procure-to-pay data, we will always need purchasing category management experts who can read, agree and enforce commercial contracts, have good communication skills and negotiate in the best interest of Bosch.

**BISE:** What is your long-term perspective on the future direction of purchasing? How much can or should be automated and how will humans work with (intelligent) machines in purchasing in the future?

**Mimmel:** Personally, I am convinced that repetitive tasks in the procure-to-pay process will be almost 100% automatized, as will master data maintenance and purchase order management. Furthermore, my team needs to work on services that do not yet exist at this moment of time, for instance user guidance for our internal business partners or system generated proposals for the supplier selection based on data analytics.

When you look into the source-to-contract environment, we are currently doing things mostly by hand. However,

automated solutions are on the way. Take the example of tenders. We have already today a fully digital tool for auctioning, but it has to be set up manually with data of the buyers. In future, we are going to implement an IT suite which will set up tenders automatically.

In other areas, humans will be absolutely essential in order to deal with strategic demands and stakeholder management, in tough situations of material allocation as well as complex sourcing projects. But a strong and seamless IT environment is unconditionally required. No doubts.

Moreover, it will be the task of humans to oversee the results of automated negotiations of our chat bots. These bots are similar to Siri or Alexa. By the way, our Alexa at Bosch is called Nelson.

**BISE:** Mr. Mimmel, thank you very much for your time and for this interview.

**Mimmel:** Thank you as well. It was a pleasure for me.