

# How Condition Monitoring paves the way for Industry 4.0

**A talk with Christian Bertels of wheel and castor specialist Blickle about the challenges of digitalisation in the manufacturing industry**

*When Christian Bertels, Head of IT Cross Applications at Blickle, looks out of the window, he is seeing a large construction site. The company is investing in its future, which in this case means investing in a new polyurethane production system based on Industry 4.0 principles. Irrespective of future capabilities, however, the wheel and castor manufacturer has already set up its existing production in a forward-looking way. Christian Bertels explains how Blickle is driving the digital transformation in manufacturing.*



Christian Bertels, Head of IT Cross Applications at Blickle

**compacer:** Mr Bertels, everybody seems to be using the buzzword "Industry 4.0" these days. What does this transformation actually look like in a manufacturing company such as Blickle?

**Christian Bertels:** Basically, it's about successively automating manual tasks in production and using the data generated by these new, digital processes in a forward-looking way. It is simply the next logical step in industrial development. In the past, for example, we created shift and production plans in Excel and based the work on the shopfloor and at the machines on these. Now, these sheets are being replaced by a central data

collection system that acts as a data hub between our machines and our ERP system.

**compacer:** What would you say are the advantages – I mean, for the process, but also for the staff?

**Christian Bertels:** Well, we have tackled this change with edbic, your platform for data and process integration tasks, which also enables condition monitoring. This has brought a number of advantages, such as greater transparency and faster access to data. Above all, however, we have been able to significantly cut back the huge number of Excel overviews that we used to rely on. This also means that we don't have to switch from one format or medium to another anymore, which automatically reduces the risk of errors. Before, we logged machine data to CSV files and then analysed and saved those as Excel files. We also used Excel to manage machine calibrations or line assignments. Now, edbic reads all these data directly from a given machine and stores it centrally. Filtered data then flow directly into the ERP system, in our case SAP. This also benefits our production staff, because they no longer have to criss-cross the hall with paper lists, but have everything on screen in a compact form directly at the machine they are working on.

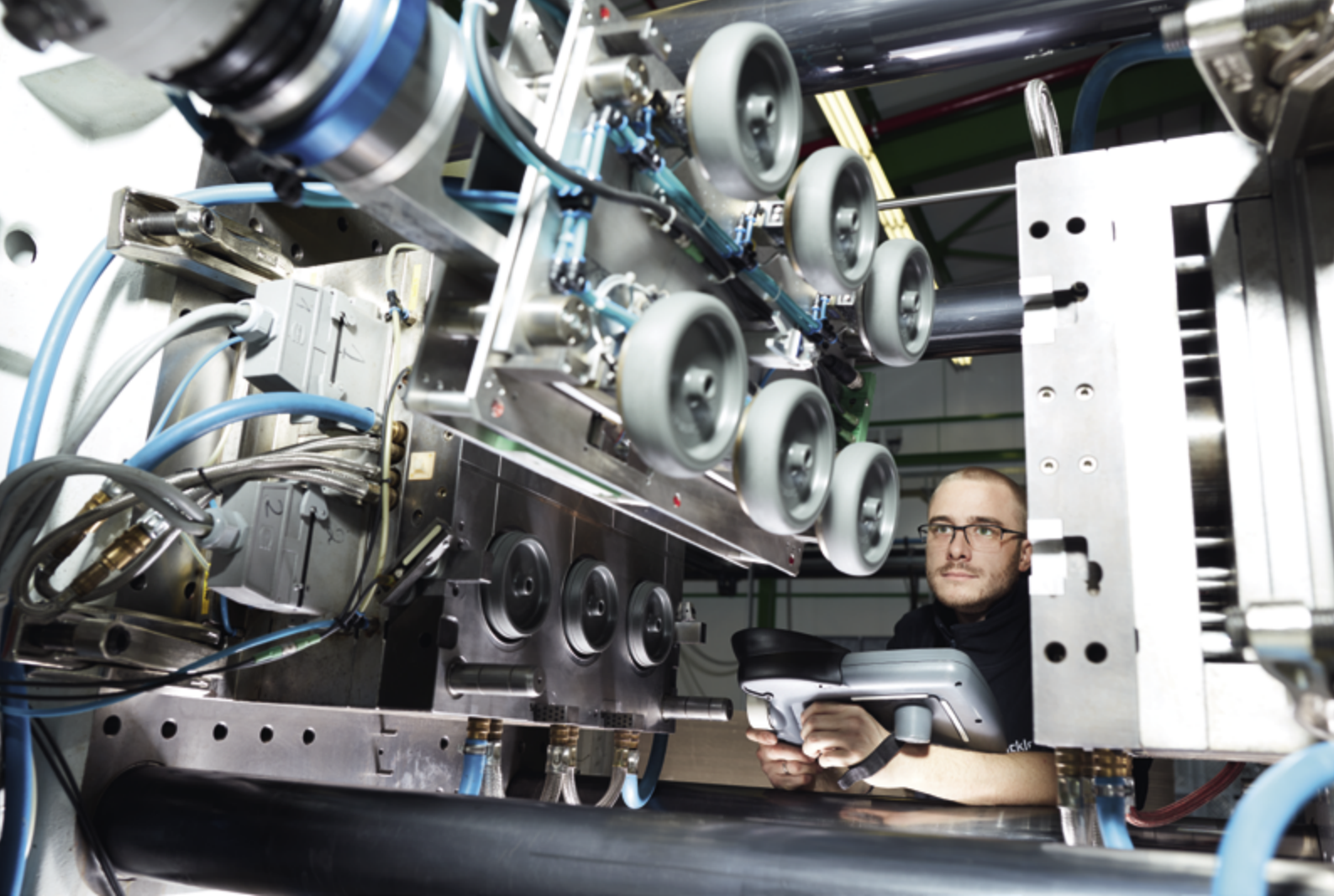
**compacer:** Was it easy to push this change through?

**Christian Bertels:** You can imagine that it wasn't as easy as that. Peo-

ple who have been used to a certain routine and fixed structures for years often find it difficult to adapt. Convincing the production staff of the necessity and the advantages of condition monitoring might not have been easy, but it was important. But first of all, we had to explain to the management and the board of directors why these data are so important and how they will help us produce even better, faster and more transparently in the future. I was therefore very pleased that the responsible decision-makers were open to the idea right from the start and ultimately agreed to introducing condition monitoring. Without edbic, it would have been difficult for us to take the next steps in digitalisation.

**compacer:** All the more reason for us to be pleased to support you in this change. How did you become aware of compacer in the first place?

**Christian Bertels:** We have become acquainted with Mr. Bitzer of compacer through a university class. Two of our students participated and listened to his lecture on Industry 4.0 and the role of condition monitoring. Afterwards, they were tasked with developing a concept of how Mr. Bitzer's approach and compacer's solution could be transferred to what we wanted to accomplish for Blickle's production. This concept was the point of departure for a very encom-



passing specification and our comprehensive schedule.

**compacer: So, which goals or requirements did you define?**

**Christian Bertels:** It was already clear to us in 2019 that we wouldn't be able to implement our ideas overnight. That is why we have split our transformation into different phases and individual projects. The goal was to introduce a monitoring system that would not only provide us with live data, but that would also enable us to gradually drive forward our digitalisation. An absolute must, however, was that our three-shift operation in production would not be interrupted by the introduction of such a solution. At this point, it quickly became obvious that we would use compacer, because with edbic, it was possible to prepare everything for a successful condition monitoring and to integrate it in a way that would allow us to switch over at the push of a button without affecting production. Another requirement was the possibility for Blickle's IT to program additional modules, for example for authentication, and

seamlessly integrate them into the condition monitoring system. Last but not least, we wanted live data. By that, I mean data that reflects the condition of the machines as close to real time as possible – unlike the information from our Manufacturing Execution System (MES), which only allows us to look back instead of doing any real-time analysis.

**compacer: With edbic, you now have such an "all-in-one" system?**

**Christian Bertels:** Definitely. For one thing, the system meets all our requirements; for another, we are in the process of implementing two important projects with edbic. The first is the monitoring of our punching presses. We will be gathering data such as their stroke rate, number of pieces, output, and defective parts. The second project is a polyurethane production for which we are constructing the new building. The aim here is to design the process in such a way that our staff can control everything directly at the machine terminal. What's more, we are now able to integrate new machines much more easily than before. As

soon as a machine has been integrated into edbic, all other systems are automatically accessible to it, because edbic is the central data hub through which everything runs.

**compacer: How did collaborating with compacer work for you so far? Are you satisfied?**

**Christian Bertels:** Yes, right from the start, the cooperation was very open and the exchange was intensive. We're on the same page and grateful for the support. This was the only way we could test the system at ease while making up our mind about which Industry 4.0 steps to implement and in which way. Another big plus is that the compacer solution is available as both an on-premise and a cloud solution. This allowed us to start with an on-premise system, but still be able to move to the cloud in the future. This is a great prospect and fits perfectly into our strategy.

**compacer: Which is?**

**Christian Bertels:** We want to further develop condition monitoring so that we can use it for predictive





maintenance. We will thus not only know the status of our machines in near-real-time, but become able to interpret the data in the form of a forecast that allows us to derive predictive activities from it. In other words, we will be able to intervene before a failure occurs and replace a given machine part shortly before it wears out. There are already a lot of interesting solutions available in the cloud and we don't want to rule any of them out.

**compacer: Are there any plans beyond that?**

**Christian Bertels:** In the future, we can also imagine using the compacer IoT Gateway. Since we are in close contact with your developers, we already know that you will soon release further features that are interesting to us and that will facilitate the connection of new machines and M2M communication. This is particularly exciting for us because we would be able to com-

bine even more data from different sources and the machines will be able to communicate directly with each other. This would elevate us to a completely different level than what we know from our old MES and I am sure that this evolution will be another building block to improve and secure our product quality.

**compacer: Mr. Bertels, thank you for the interview. I'm looking forward to our continued good cooperation.**