



CASE

## Smartlink ensures **actual availability** of data and **reliability** in production processes

From a single database to an IoT implementation with a datalake for storage

Everywhere across the world compressors are used by factories, power plants and hospitals. Gas, compressed or ultraclean medical grade air from sea container-sized compressors are crucial to the (business) processes of these organisations. IoT and the latest cloud solutions are used to ensure actual and reliable data. Wherever and whenever you need it.

Atlas Copco is a producer and supplier of compressed air and gas solutions. Their compressors use a widely varying range of applications, but their clients have one thing in common: the need for absolute reliability. They often depend on their compressor system for their core activities. Which means that the solutions must work effectively and safely at all times. What's more, the compressors

are notoriously large power consumers, so it is important that customers can optimise the energy economy. Louis de Jaegher, Global Process Manager at Atlas Copco: "To meet these needs, we developed Smartlink 1 a number of years ago. Smartlink 1 is a platform which ensures that compressors are serviced on time, provide accurate insight into their functioning and are deployed efficiently."



### Strong team

As the number of connected compressors increased, Smartlink 1 was being confronted with technical constraints more and more often. This was an intolerable situation, and it was the perfect moment for Atlas Copco to develop an entirely new IoT platform. In April 2018 they called in help from Microsoft, the Transport, Logistics and Outsourced Services divisions of ICT Netherlands, and OrangeNXT, a subsidiary of ICT Group, with the aim of working together to build Smartlink 2.. De Jaegher: “This combination turned out to provide the best Platform as a Service (PaaS) solution.” Stan Verdiesen, Software Architect at ICT Transport and Logistics: “Microsoft delivered the cloud solution Azure. In addition to the complete architecture, the design and realisation of the platform, ICT deployed an Agile development team, including a complete, managed and hosted service once everything was up and running. The collaboration resulted in a complete solution that allowed Atlas Copco to utilise all the latest IoT innovations.”

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**Stan Verdiesen**

Software architect at ICT

### Extremely complex

“Smartlink 1 used a single database. However, there was a huge number of ad hoc solutions, so nobody really knew how it worked exactly”, says De Jaegher. “When the volume increased, the platform was no longer able to process the data. As a result, users were not receiving actual data or disruptions, and distorted signalling.” More than 26.000 types of compressors, integration with a variety of systems such as CRM, ERP, BI and Simulator applications, 24/7 support, scalability... These and other factors caused the transition from Smartlink 1 to Smartlink 2 to be the most complex project he has worked on for the past 20 years.

### Microsoft Azure: the latest cloud solutions

Azure is a Microsoft cloud solution. In addition to more than 100 services that support application development, Azure includes twenty types of services for data storage. Verdiesen: “Each one of them is the newest of the newest. How do these new techniques fit in with what we want? We constantly asked ourselves: if you want to display certain information, then what is the most efficient way to retrieve the required data? And what is the best way to store the necessary information? The automatic result is that data is often stored in multiple locations and in different ways.” To resolve these issues, they deployed and combined old and



new services such as IoT hub, Stream Analytics, Cosmos database, Tyvold and Azure functions. It was a constant process of investigating, trying and pioneering. ‘The fun part is that we came up with solutions that were new even to Microsoft. And for complex problems we could liaise with the Microsoft experts in Redmond. It was an excellent collaboration and we learned a lot from each other.’

*“Smartlink 2 provides Atlas Copco’s users with an affordable and financially viable IoT-solution.”*

**Jaco Oskam**

IoT-architect at OrangeNXT

### Not an end-point but a means to greater ends

OrangeNXT’s IoT architect Jaco Oskam explains why Azure is the best solution for Atlas Copco. “Horizontal scalability was one of the main requirements. The volume of expected IoT activity was a major factor: the platform already services some 150,00 connected devices worldwide that generate some 130 million messages on a daily basis, and we expect that this volume will experience a substantial growth in the future.” The modernised Smartlink 2 gives clients unprecedented insight into the status of their compressed air solutions. It increases the reliability

because it enables proactive maintenance, and it helps companies to reduce operational costs thanks to energy efficiency. In addition to issuing alerts, the new platform also proposes suggestions and suitable actions –simple actions that customers can undertake themselves. The integration between the new monitoring platform and the company’s ERP and CRM systems ensures that internal staff has a more complete view of the customer accounts, enabling the customer support teams to provide a better, customised experience. Smartlink 2 has ensured that Atlas Copco and its clients are ready for the future.

### Smartlink IoT solution

The new platform provides Atlas Copco with improved instruments to strengthen its customer relationships. Oskam: “The new IoT solution Smartlink 2 resolves all issues in terms of scalability and stability, allowing Atlas Copco to connect more machines than ever before. And by providing transparent and detailed information on the status of the machines, the platform supports the development of new data-driven services. Moreover, it improves product development and increases customer satisfaction.” Verdiesen adds that Atlas Copco is one of the few companies in which IoT contributes to the profitability of the end-product. “The information from Smartlink 2 is of crucial importance for users because it allows them to add value to their product. Smartlink 2 provides Atlas Copco’s users with an affordable and financially viable IoT-solution.”

For more information about ICT Group’s possibilities and solutions for your specific situation, please contact:



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