CUMULOCITY IoT

BY SOFTWARE AG

We don't need to tell you why IoT is so important now.

We just need to tell you why it is so simple and fast to add our packaged IoT platform to your solutions.

You work on differentiating your offerings and we worry about the IoT "plumbing".

Let's talk.

sales@cumulocity.com www.cumulocity.com

SIEMENS BOSCH Gardner Denver ZEISS trackerando Lyreco DÜRR

Cumulocity
A SOFTWARE AG COMPANY

software AG

Pre-packaged solutions accelerate IoT adoption

Cumulocity IoT is an innovative software platform that addresses the market demand for easy, fast, and scalable IoT solutions. It combines the power of Software AG's Digital Business Platform with Cumulocity's product portfolio. Functionality includes the ability to monitor and analyse streaming IoT data; cloud, on premise, edge and hybrid deployment; and a range of pre-packaged IoT solutions such as condition monitoring, predictive maintenance and track and trace. Andrew Brown, the executive director of Enterprise and IoT Research at Strategy Analytics, discusses this open, application-centric approach to Industrial IoT with chief executive, Bernd Gross

When Cumulocity entered the IIoT arena in 2010 we identified the need for historic machine data to be analysed over relatively long time periods in order to realise increased productivity

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Andrew Brown: Cumulocity has an impressive track record and the company has been a leading vendor of device and application management platforms since 2010. Why did you do the deal with Software AG?

Bernd Gross: We had been and continue to be very successful with our platforms, but we operate in a very dynamic market and by 2017 it was clear that we needed to scale our offer and become a global solution provider. Moreover we needed to do it quickly so that was one of the reasons why we did the deal. Software AG currently has offices in 70 countries around the world.

The second reason is their rich portfolio of software products that complement our offer, one of which is WebMethods, an advanced integration engine that enables seamless interoperability between the operational technology and information technology domains. The former is the domain where data are generated and the latter is the domain where data are consumed. Another key complementary product is Apama, a platform that allows organisations to analyse and act on high-volume event stream data in real-time.

The third reason comes from the emerging need for IoT platform providers to be more open about the performance of their IoT specific business offer. Software AG is leading this approach and has created a separate business unit that has enabled developments such as pre-packaged solutions. These solutions reflect the way that the IoT market is maturing and they are facilitating the growing trend away from expensive, time-consuming in-house or bespoke IoT solutions.

AB: How successful have you been with this approach and can you also indicate its relevance to the Industrial IoT sectors that you target?

BG: We have been very successful. For example, Siemens has selected our technology in order to complement MindSphere, which is a powerful IoT operating system that has data analytics, connectivity capabilities, plus tools for developers, applications and services. In addition ADAMOS, that stands for ADAptive Manufacturing Open Solutions, a strategic alliance for machine and plant engineering, chose our IoT technology after an extensive evaluation process. Alliance partners include DMG MORI, Dürr, Homag, ZEISS as well as ASM PT.

The objective is to bundle knowledge in mechanical engineering, manufacturing and information technology. ADAMOS is set to become a global standard for the industry. It combines up-to-date IT technology and industry knowledge, thereby enabling engineering companies to offer tried and tested solutions for digitally networked production to their customers. These and other wins from leading companies such as Bosch indicate that Cumulocity is setting the de facto standard for IoT software platforms and is addressing the upcoming needs of the industry.

AB: How do you connect operational technology (OT) with information technology ▶

Bernd Gross, Cumulocity

and combine the IoT insights that come from data analytics with business processes?

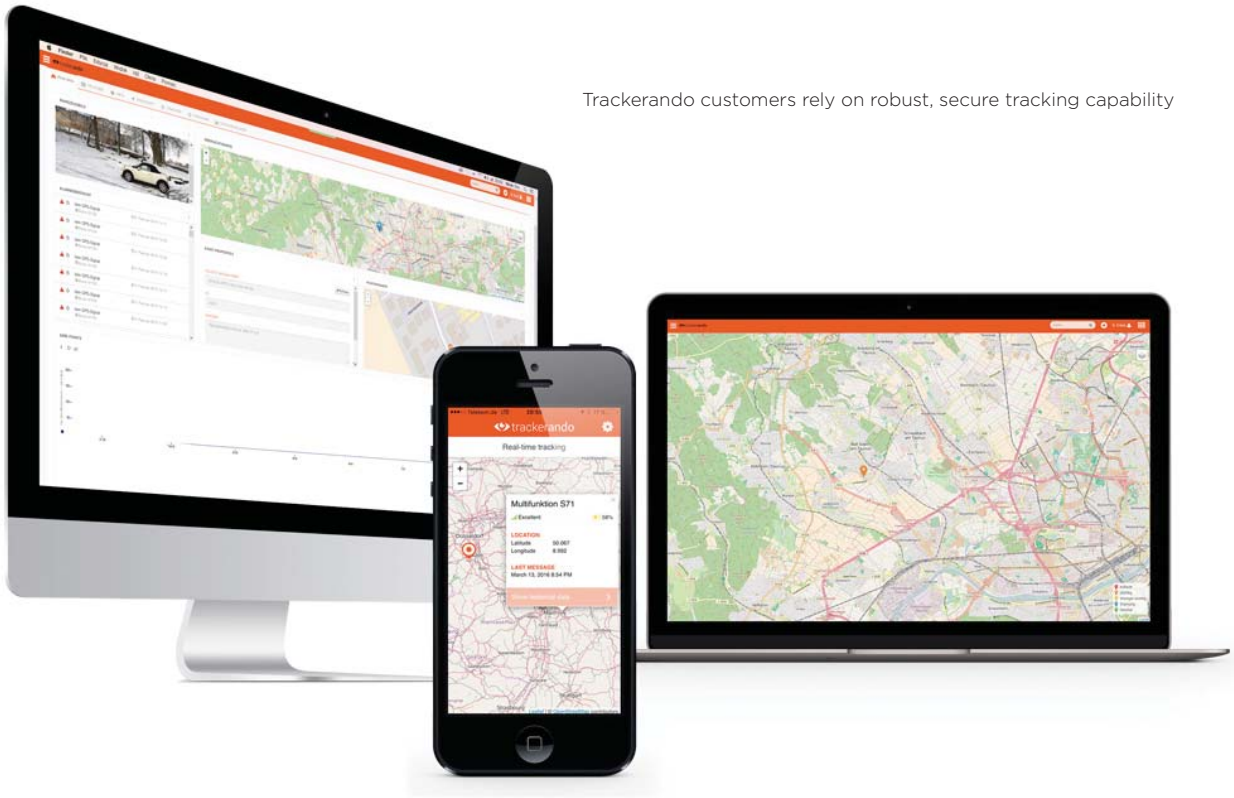
BG: This is the key topic for the OT and IT communities. They have different mindsets: the OT focus tends to be on quick wins, it is short term; IT's focus is strategic, it is long term. These conflicting requirements are resolved by decoupling the two domains while enabling seamless interoperability. Enabling seamless connectivity between IT and OT domains is a mandatory IoT requirement. Seamless fusion is realized by middleware and an integration platform, normally located in the cloud or data centre.

The OT benefits that come from seamless integration with IT derive from the use of a more efficient, better scalable, well managed and secured infrastructure onto which numerous OT applications are layered. They include predictive maintenance as well as remote asset monitoring and management. The IT benefits include secure real-time communication with the enterprise's assets while retaining the requisite efficiency for creating, scaling, maintaining and securing the infrastructure.

AB: How do you see the market evolving in the near- to medium-term?

BG: When Cumulocity entered the IIoT arena in 2010 we identified the need for historic machine data to be analysed over relatively long time periods in order to realise increased productivity, for example, by creating preventative maintenance programmes. This was followed by the need to analyse real-time data at the edge, thereby generating real-time, insightful business intelligence that allowed decisions to be made in the moment. In the near-term we are witnessing the need for predictive maintenance programmes that detect and pinpoint potential issues before they occur. Early identification helps companies deploy limited resources more cost effectively, maximise equipment uptime and enhance quality and supply chain processes, thereby ultimately improving customer satisfaction.

Looking further down the road there is a clear and compelling need to address the challenge of machine learning and artificial intelligence. This is not an easy task, but because the company has lived through the development cycles that have taken place in the last eight years we are able to continue to extend and expand the functionality of our platform. In a nutshell, the platform is intrinsically flexible and future-proof due to its open architecture: this will allow Cumulocity's offer to evolve in line with the market.



Trackerando customers rely on robust, secure tracking capability

Innovation accelerated with Cumulocity IoT platform

Trackerando allows its enterprise and consumer customers to accurately track and monitor vehicles, assets and people. The company upgraded to Cumulocity to provide an IoT platform which delivers carrier grade reliability and accelerates innovation

Trackerando, is a forward-thinking GPS tracking solution provider which combines high-quality products with individualised service

Rising consumerisation, increased globalisation and a relentless focus on operational excellence are driving businesses that sell consumer products to innovate at tremendous speeds. Often consumers expect purchased products to have an online component or a set of applications that allow enhanced, digital experiences with products. At the same time global markets are causing tremendous product proliferation and competition for consumer purchases. Businesses creating consumer products must focus on innovation while relying on automated tools to enhance their operational excellence. As these businesses face market challenges, business risks and the need to simplify operations, they are choosing to layer technology-based services on their consumer products.

Companies like Trackerando have innovated their businesses to take advantage of the connected, digital future. By embedding technology in their solutions, they are able to redefine the relationship between themselves, their partners and their customers. No longer are they strictly reliant on product-based sales, but they have used Internet of Things (IoT) technology to create a new customer experience that includes an online consumer service for their products.

The Cumulocity IoT platform allows its business-to-consumer (B2C) customers to rapidly, efficiently and securely co-innovate with new customer offerings and create long-term relationships with their customers. Businesses are changing their strategies and technologies to be ahead of rapidly changing consumer demands. Trackerando is revolutionising their industries with IoT.

About Trackerando

Trackerando, is a forward-thinking GPS tracking solution provider which combines high-quality products with individualised service. Trackerando offers transportation sector solutions for automobiles, buses, trucks and powerboats; and personal tracking for humans and pets. The company was founded in Münster, Germany and has sales throughout Europe.

Trackerando's customers rely on its high-quality, secure and robust tracking platform to track their vehicles, people and assets. However, Trackerando was spending considerable effort developing, upgrading and maintaining its in-house built solution. These efforts put significant pressure on the Trackerando development and product management teams to support new features and new devices in a stable, secure, rapid and reliable manner. All of the time spent developing, upgrading and managing the platform meant that Trackerando had less time to ▶

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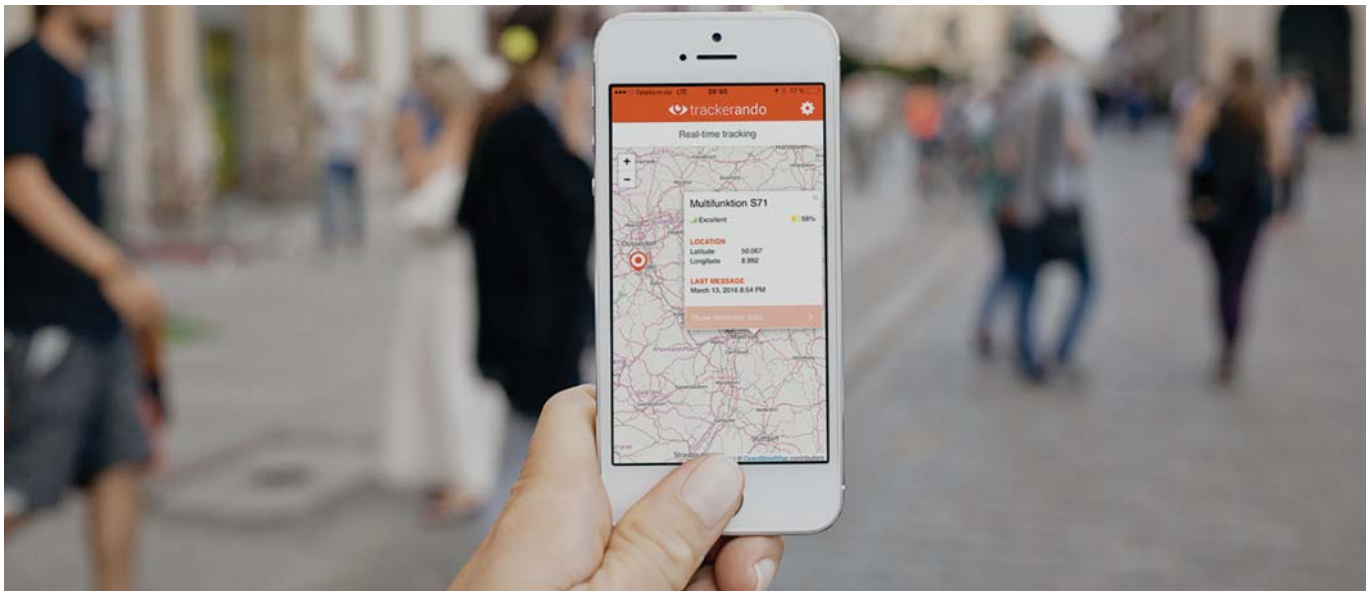
The Cumulocity IoT Platform delivered the Trackerando system in six weeks



spend creating revenue-generating, value-added services and delighting its customers.

In addition, the personal tracking market has become increasingly competitive in the last five years with the proliferation of low-cost devices becoming available. Consumers continued to expect high quality products with exceptional user interfaces that combined simplicity and refined design elements. Trackerando needed to make a change to meet consumer demands.

Trackerando adopts the Cumulocity IoT Platform

To reduce development and maintenance costs, increase scalability and flexibility and maintain security and privacy levels, Trackerando chose to implement a dedicated edition of the Cumulocity IoT Platform. Deployed in a German datacentre, this cloud-based solution allowed Trackerando to launch its new personal tracking service to the market and replace its older solution. This development would allow Trackerando customers to increase their levels of online service interactivity and engage with their products in a new digital way.

This IoT solution powered by the Cumulocity IoT Platform provides Trackerando customers with easy set-up, real-time monitoring and tracking features, and a simple-to-use app. Setting up a Trackerando device is extremely easy with zero-touch registration – the Trackerando device auto-registers on the Cumulocity IoT Platform and is fully integrated to Trackerando's online registration and payment systems. Once registered, Trackerando customers can use a set of smart rules to enable geo-fencing alerts, proximity-based rules and multi-modal alarms. Trackerando has built – and the Cumulocity IoT Platform seamlessly supports – an iPhone and Android smart phone app to provide a complete mobile experience to its customers.

Results

Cumulocity's IoT Platform solution allows Trackerando to successfully offer its IoT-powered tracking service to its customers. Customers have an ongoing relationship with Trackerando through the online service, thereby increasing customer satisfaction, longevity and loyalty.

Since Cumulocity is fully responsible for the updating and management of its IoT Platform, the Trackerando development and product management teams can now devote their time to creating value-added services rather than spending countless hours on management of an in-house built platform. And because the deployment of the cloud IoT Platform is in a German datacentre, data management meets German regulatory requirements and allays consumer privacy concerns.

End-customer benefits of a Cumulocity-powered Trackerando tracking solution:

- User-friendly, graphical mapping tools with geo-fencing alerts, proximity-based rules and multi-modal alarms
- Leading Cumulocity IoT platform future-proofed Trackerando for new, innovative requirements with tracking devices and other products
- Seamless integrations to Trackerando payments system for simple ordering
- iPhone and Android smart phone app

In addition, the Cumulocity IoT platform provides Trackerando several key benefits:

- Very fast time to market: Adoption of the fully customizable, ready-made software allowed the Trackerando-branded tracking service to be available in only six weeks.
- Multi-tiered customer support: The flexible Cumulocity IoT Platform provides Trackerando the ability to structure multi-tiered, sophisticated customer accounts to enabled different usage profiles.
- Cost-effective pricing model: The usage-based, monthly, Software-as-a-Service (SaaS) fee grows with customer additions. And set-up fees were fully transparent.

Bodo Erken, the chief executive officer at Trackerando, describes the significant value that the company has found from its IoT solution. "Cumulocity's open IoT platform allowed our fully tailored solution to be delivered within six weeks and also allows us to easily extend to non-tracking services in the future." ■