![SUSE logo]

SICK
Sensor Intelligence.

SICK AG makes uninterrupted production possible for manufacturing companies

SICK AG

Industry and Location
Manufacturing | Germany

Products and Services
Rancher Prime

Success Story

![SUSE logo]

At-a-Glance

Sensor and application solution provider for manufacturers, SICK AG, is strategically expanding its product portfolio to help the industrial sector digitize its processes. To do so, the company is leaning into container architectures to develop and operate modern applications.

Introducing SICK AG

From factory automation to logistics automation to process automation, the company's intelligent sensors and applications are used in manufacturing plants, logistics centers, recycling plants, power plants and refineries. Among other uses, SICK AG sensors ensure people and robots work together safely in production facilities, suitcases are loaded onto the right plane at the airport, and energy generators do not exceed permissible emission levels.

The opportunity: provide manufacturers with real-time insights

As the onset of Industry 4.0 (the latest phase of the Industrial Revolution focusing on interconnectivity, automation, machine learning and real-time data)

began to digitally transform manufacturing processes, SICK AG recognized it needed to transform itself to help its manufacturing clientele lead in the new age. By providing digital services that rely on deep learning, automation, analysis tools and even augmented reality, SICK AG would help client manufacturing plants circumvent downtime, facilitate planning for maintenance intervals, and improve safety and security. It therefore started looking at container technologies, agile processes and DevOps methods.

In 2018, SICK AG was developing a new container-based application for surface-mount device (SMD) production lines. The application would monitor placement of electronic components on printed circuit boards and tap into various data sources to give manufacturers real-time insights into production and quality. The application had to connect as easily as possible with other services. In addition, SICK AG wanted to be able to provide new features and versions quickly without any downtime.

> "[Rancher Prime] greatly simplifies managing and protecting Kubernetes clusters, whether they are running in our data center or with a cloud provider."

Roman Hess
IT Consultant
SICK AG

To develop and operate this and other container-based applications, SICK AG looked for a powerful container management platform.

erik sterck
Ihr digitaler Erfolg

Rancher Prime stands out as the most flexible and robust container management solution

After gaining initial experience with Docker Swarm, the IT team decided relatively quickly to use Kubernetes as its container orchestration tool. With automation and self-healing features out of the box, Kubernetes was the best technology to run large container environments securely and efficiently.

To make Kubernetes clusters easy to deploy, manage and monitor, SICK AG then tested different management solutions in proof-of-concept installations. In the end, the team decided to use Rancher Prime.

"Rancher Prime was able to best meet our requirements for a robust and flexible solution for the industrial environment," says Roman Hess, IT consultant at SICK AG. "The solution greatly simplifies managing and protecting Kubernetes clusters, whether they are running in our data center or with

a cloud provider. We can use Rancher Prime to apply consistent security policies and access rights across the entire environment, as well as securely separate different software development projects. This is a great added value compared to standard Kubernetes."

SICK AG had learned about Rancher Prime from IT service provider, Erik Sterck, which had developed a complete solution architecture, FramES, to help clients rapidly and securely implement Rancher Prime clusters at the push of a button. In addition, the architecture includes the SUSE NeuVector container security solution and provides support for different hypervisors, cloud platforms and hyperconverged infrastructures.

The impact
Accelerated transformation

By using this solution architecture, SICK AG was able to move very quickly into productive operation of Rancher Prime

> "We can use Rancher Prime to apply consistent security policies and access rights across the entire environment, as well as securely separate different software development projects. This is a great added value compared to standard Kubernetes."
>
> **Roman Hess**
> IT Consultant
> SICK AG

and accelerate the transformation of its application landscape. Ever since the project started in 2018, the team has doubled the number of containerized applications each year, with many business-critical applications running on various Kubernetes clusters.

Faster insights

The IT team now runs its resource-intensive workloads (for things like deep learning analysis) on cluster nodes equipped with powerful graphics cards; this enables new insights to be gained much faster when developing products and services.

Centralized management

"The biggest added value for us is how easily we can manage our environment," says Hess. "Whether we want to deploy a new cluster or expand an existing cluster, we can control all processes with a few clicks through Rancher Prime. Our employees don't have to deal with the details and

complexities of Kubernetes; instead, they perform all tasks through the intuitive user interface."

24/7 uninterrupted production

Rancher Prime also makes software updates very simple and straightforward. Today, when new versions of the operating system, Kubernetes or individual applications are deployed, these updates are largely automated and run in the

> "Operating system migrations that would otherwise have taken days or even weeks can now be done within hours while the system is running. New releases of applications are also immediately available to production staff without them having to interrupt their work. We are thus equipped for 24/7 production."

Roman Hess
IT Consultant
SICK AG

background. Operating system migrations finish within hours instead of weeks, and new application releases are immediately available without interrupting production-staff workdays, enabling 24/7 production.

A self-service model for faster time-to-market

Rancher Prime allows SICK AG to provide Kubernetes as a reliable service to its developers. With very little manual effort, the IT team delivers the needed resources, including persistent storage, for different projects. This allows developer teams to get started right away, add new people or allocate additional resources on their own as needed. This self-service model accelerates development processes and ultimately shortens the time-to-market of new digital services.

Full security control

The team maintains full control over the security of the environment and can manage user rights and security policies
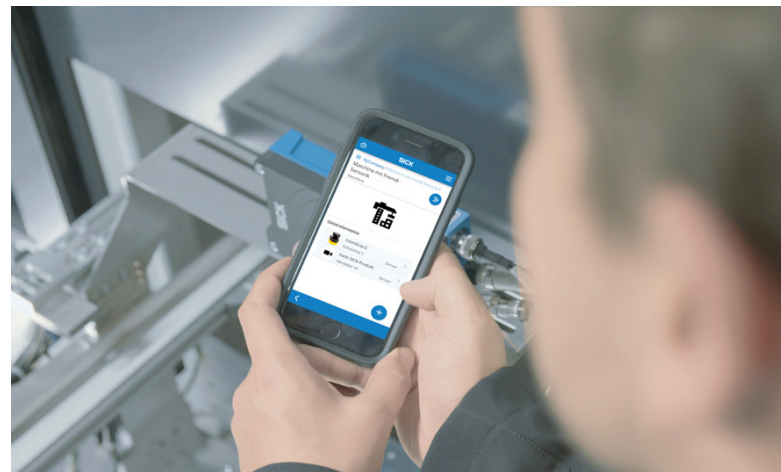
centrally for the entire environment, ensuring employees only ever have access to projects they're approved for.

High availability and reliable support

Rancher Prime ensures consistent cluster operations at all levels and helps SICK AG run modern industrial applications reliably and with high performance. In the four years after implementing Rancher Prime, SICK AG hasn't had disruptions or failures.

> "In the four years since the introduction of Rancher Prime, there have been virtually no disruptions or failures that have affected our work."

Roman Hess
IT Consultant
SICK AG

The team also praises the quality of SUSE's product support: "Requests are handled extremely professionally and at short notice," reports Hess. "The support specialists always knew immediately what the issue was during our previous calls and were able to present us with a solution very quickly. From our point of view, it's a huge advantage that SUSE supports the entire technology stack and can also help with questions about components such as monitoring and service mesh."

What's next for SICK AG?

As SICK AG continues to call on Erik Sterck for technology support, its next step is to talk about container security and take a closer look at the possibilities offered by SUSE NeuVector.

With pieces of its container-based environment all in place, SICK AG will be ready

to tackle sensor-intelligent solutions for the Edge. Innovations such as K3s are therefore also of interest to SICK AG. "We will certainly investigate where the use of Kubernetes and Rancher Prime at the Edge makes sense for us," says Hess.

Benefits

- Accelerated transformation of application landscape.
- Faster insights when developing products and services.
- Simplified Kubernetes cluster deployments, extensions and management.
- 24/7 uninterrupted production.
- Accelerated development processes and time-to-market of new digital services.
- Zero disruptions or failures in the four years after implementation.

Find out how SUSE can help you become an innovation hero!

- Sales-Inquiries-APAC@suse.com
- Sales-Inquiries-EMEA@suse.com
- Sales-Inquiries-LATAM@suse.com
- Sales-Inquiries-NA@suse.com

SUSE

For more information, contact SUSE at:

+1 800 796 3700 (U.S./Canada)

+49 (0)911-740 53-0 (Worldwide)

Innovate
Everywhere