

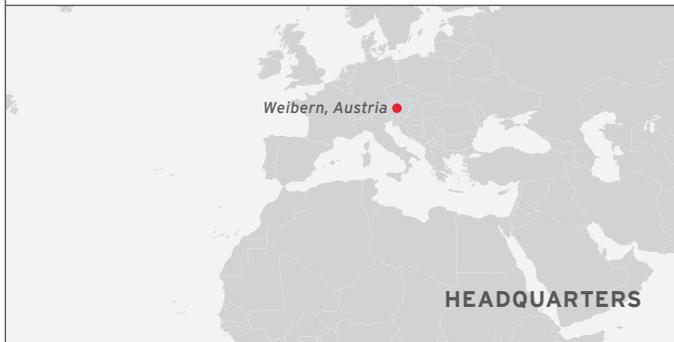
# SMARTBOW SUPPORTS CONTINUOUS SERVICE INNOVATION WITH RED HAT OPENSIFT



## SOFTWARE AND SERVICES

Red Hat® OpenShift® Container Platform

Agriculture technology startup Smartbow hopes to expand its smart monitoring services to 1 million cows worldwide by 2023. To meet this goal, the company worked with IT consulting firm eww ITandTEL, a Red Hat partner, to deploy Red Hat OpenShift Container Platform, a massively scalable, agile platform for developing, launching, and managing innovative services. This microservices- and container-based solution helps Smartbow's developers work and iterate quickly. The company can also scale to accommodate new customers and increasing volumes of data. As a result, Smartbow can use data insight to support food transparency and lead the digital farming industry.



## AGRICULTURE TECHNOLOGY

100 EMPLOYEES  
30 COUNTRIES

*“Our new approach is to try, fail, and learn fast. Red Hat OpenShift allows us to try new things easily, make adjustments, and move on to the next idea.”*

DAVID ANDLINGER  
HEAD OF ICT, SMARTBOW

## BENEFITS

- Gained scalability to accommodate rapid global growth in customers and data
- Increased development speed and efficiency with modular, reusable components
- Established support for continuous, iterative work on innovative services



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## **BUILDING SMART MONITORING FOR CATTLE FARMING**

Founded in 2009, Smartbow is an Austrian technology solutions provider for the global beef and dairy industries. The company has developed an ear tag to monitor the health of individual cows that is used on 100,000 cows in 30 countries worldwide. Farmers can use the Smartbow Insight Platform to track cows on a variety of metrics—from location and diet to fertility—and search data from each tag. For example, farmers can identify and isolate a sick animal in a herd of thousands of cows, or understand optimal times for milking.

“With 300 beef cows in a 500 square mile feeding lot, for example, one sick cow can quickly infect dozens,” said Erik Aigner, chief financial officer (CFO) at Smartbow. “Smartbow ear tags allow farmers to remove sick cows from the herd early, before they infect others. With beef cows selling for US\$2,950 each, even reducing loss rates from 5% to 4% makes a huge difference to a farmer.”

The company has set an ambitious five-year growth plan: tag one million cows by 2023. To meet this goal, however, Smartbow needs scalable data routing and storage. Each cow produces 10MB of data every 30 seconds, and the company expects to generate 5PB of data each year.

“How we manage this data and rapid growth, and continue to supply meaningful insight to individual farms, is our biggest challenge,” said David Andlinger, head of information and communications technology (ICT) at Smartbow.

The company needed a cloud computing solution that could adapt flexibly to unique customer needs, offer 24-7 real-time data availability, and meet high security and quality standards.

## **CHOOSING A SCALABLE DATA PLATFORM**

The search for a flexible, scalable solution led Smartbow to partner with eww ITandTEL, an Austrian telecommunications company. ITandTEL runs one of its eight datacenters near Smartbow’s offices, as well as owning fiber infrastructure in Germany and neighboring countries.

“At first we couldn’t see why a farming business would need datacenter services,” said Christian Sageder, solution architect at eww ITandTEL. “But when we saw the data collected by each ear tag, we knew they had an innovative product and would need an innovative data solution.”

Working with ITandTEL, a Red Hat Advanced Partner and Certified Cloud and Service Provider (CCSP), Smartbow deployed Red Hat OpenShift Container Platform in an ITandTEL datacenter. This container application platform supports developing and deploying traditional and cloud-native applications across multiple infrastructures. OpenShift integrates all of the architecture, processes, platforms, and services needed to support agile work practices, as well as leading container standards like Kubernetes—all at enterprise scale.

## **EMPOWERING FARMS WITH DIGITAL SERVICES**

### **INCREASED SCALABILITY**

Rapidly and efficiently on-boarding new customers is key to Smartbow’s positive brand reputation and leadership in the emerging smart farming sector.

With Red Hat OpenShift Container Platform, the company can easily and flexibly scale to accommodate rapid, global growth. The company can now handle an additional 3TB of data in a single week. Supported by OpenShift, its microservices-based approach helps Smartbow quickly scale systems and data storage to meet the needs of its growing customer base.

## AGILE SERVICE DEVELOPMENT

Smartbow must also stay innovative to stay competitive. With its new agile development environment, the company has embraced near-continuous innovation by improving its data algorithm, evaluating artificial intelligence (AI) capabilities, and more.

Developers can use the self-service capabilities provided by OpenShift to quickly create applications on demand, using their preferred tools. Administrators can adjust policies for optimal IT environment orchestration.

OpenShift controls the complexity of these different environments and tools with an effective microservices- and container-based architectures. “Regular virtualization with VMware was an option, but the on-demand features of Red Hat OpenShift were much more compelling and straightforward,” said Andlinger. “You just create or choose a container and go.”

## SUPPORT FOR CULTURAL CHANGE

The ease of creating, testing, and reworking ideas has transformed developers’ perceptions of work processes and innovation at Smartbow.

“Our new approach is to try, fail, and learn fast,” said Andlinger. “This view is perhaps a departure from the normal outlook in Germany and Austria, where developers want everything to be perfect from the start. OpenShift allows us to try new things easily, make adjustments, and move on to the next idea.”

As a result, Smartbow can quickly adjust ideas and use feedback to refine new services before launching them to market.

## EXPANDING DATA INNOVATION

Smartbow has now begun other projects that will rely on its Red Hat OpenShift environment. The company plans to extend the platform to pigs and other livestock, and it is evaluating how to work more closely with medical suppliers to help them gather evidence on drug and treatment efficacy.

“We’d like to provide farmers with a complete data set for each cow’s entire life, including what it ate, what medicine it was given—full farm-to-fork transparency,” said Andlinger.

In addition, the company is beginning a new data project, DaFeed. This platform will share data with farmers and other third parties to form a farming data marketplace with a shared interface.

Constant innovation and seeking new opportunities will help the company continue to compete as it matures. “Traceability within the food chain is paramount,” said Erik Aigner, CFO, Smartbow. “This transparency will be standard in the future, and we offer it today in part thanks to the Red Hat OpenShift platform. Even better, as we continue to grow, we’ll be able to grow the platform on demand.”

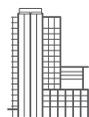


CUSTOMER CASE STUDY Smartbow supports continuous service innovation with Red Hat OpenShift

### ABOUT SMARTBOW

Smartbow is an Austrian technology startup providing smart monitoring solutions for dairy and beef farmers. It operates in 30 countries worldwide, and its tags can be found on 100,000 cows. It has plans to tag one million cows by 2023 and aims to capture, store, and analyze data throughout the cows' life cycles.

### ABOUT RED HAT



Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.



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**NORTH AMERICA**  
1 888 REDHAT1

**EUROPE, MIDDLE EAST,  
AND AFRICA**  
00800 7334 2835  
europe@redhat.com

**ASIA PACIFIC**  
+65 6490 4200  
apac@redhat.com

**LATIN AMERICA**  
+54 11 4329 7300  
info-latam@redhat.com

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