

MindSphere Open Space Challenge

Case Specification

Company

Kampf Schneid- und Wickeltechnik GmbH & Co. KG

Company Details

Industry	Machine- / plant construction
Size (empl. / turnover)	600 employees / turnover € 120 million
Main Products, Innovations	Cutters and winders for all kinds of sheet materials up to 11m cutting width. Self-developed Ilot platform the@vanced https://www.youtube.com/watch?v=QNQb453sXio
Customer structure	From foil producers, e.g. for potato chips, to manufacturers of banknote security strips, and producers of TFT / OLED displays up to producers of lithium-ion-batteries for electric mobility. Packaging, sanitary products, displays, building industry, energy storage, etc.
Youtube Links / the@vanced	Autoslit III: https://www.youtube.com/watch?v=H-nTQczYAaU Universal: https://www.youtube.com/watch?v=Mai7O5EdY-U the@vanced: https://www.youtube.com/watch?v=QNQb453sXio

Informatizing processes is as new as it is future-oriented: Connected machines enable the production control through available data in real-time, which results in improved cutting programmes, shorter set-up and maintenance periods, increased energy efficiency, and more.

With its project "Converting 4.0", KAMPF follows a holistic approach to optimizing the entire production. Interdisciplinary teams, consisting of KAMPF experts and experienced competency providers develop new solutions.

These experts accompany our customers into the new, and connected production, with great benefits. The supervision and use of connected production data is going to increase productivity and flexibility, and facilitate the introduction of optimizing measures. KAMPF is now introducing a new tool into the market, which will provide so-called Smart Services in a comfortable manner. the@vanced will make the access into intelligent production landscapes possible. the@vanced was created by the intense exchange of producers and processors of sheet materials, offering electronic spare part catalogues and interactive documentations as well as additional process optimization modules.

The integrative the@vanced platform is based on cloud technology and a three-column efficiency strategy:



**1. Smart Production –
Being Efficient**

- Retrieving product information in real-time
- Automatically generating key performance indicators
- Providing convenience products with a complete digital vita

**2. Smart Maintenance –
Staying Efficient**

- Immediate access to replacement parts
- Detailed maintenance videos
- Comfortable retrieval and access via QR-Code

**3. Smart Operation–
Boosting Efficiency**

- Big Data Lake
- Potential analysis with Big Data analyses



Figure 1: Cutter, UNIVERSAL product family



Figure 2: KAMPF assembly hall

Case Title

Joint Platforms – Integration of MindSphere and the@vanced

User Story

A TFT display foil has several production locations. KAMPF cutters in the assembly lines cut the foil into the desired width.

The operation manager uses the@vanced to supervise the status of the KAMPF machines. The machine data, particularly the key performance indicators, shall be exchanged, displayed, and analyzed with MindSphere. The aim is to compare the various machines in order to detect potential for improvement.

the@vanced runs as an „On Premise Solution“ with a local server. There, among others, the various machine data are provided on the shop floor. This shall be connected to MindSphere.

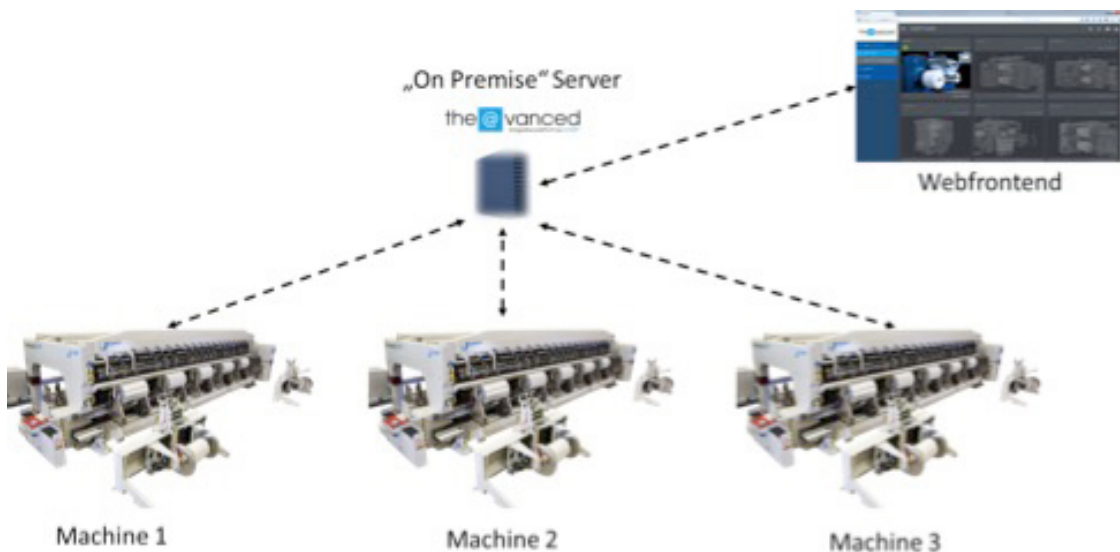


Figure 3: the@vanced in „On Premise“ operation

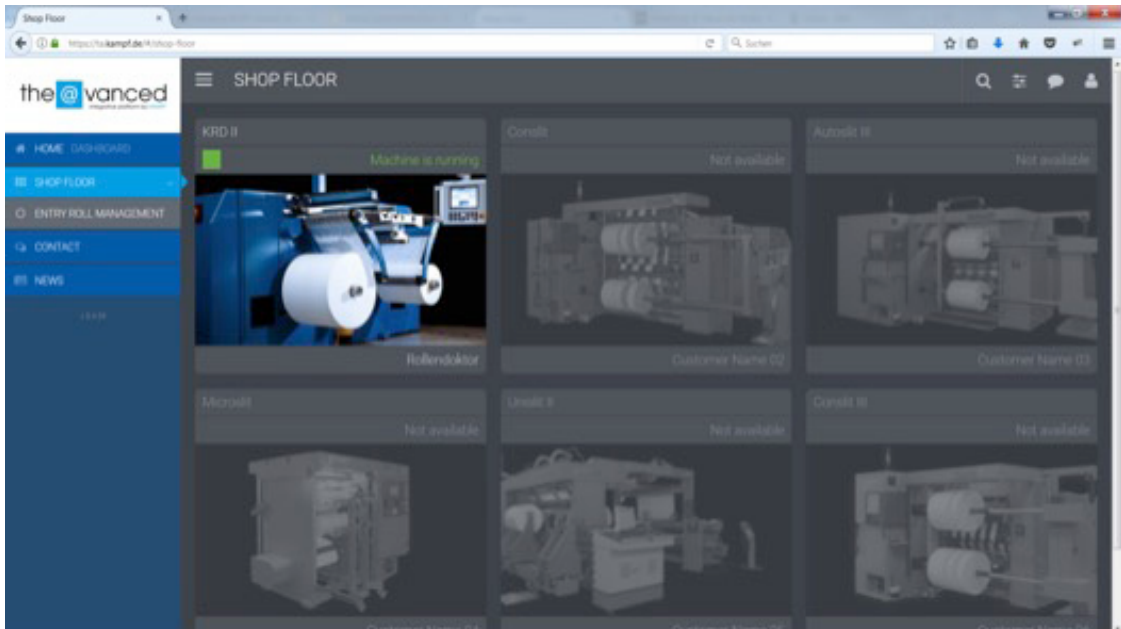


Figure 4: Screenshot the@vanced – shop floor view

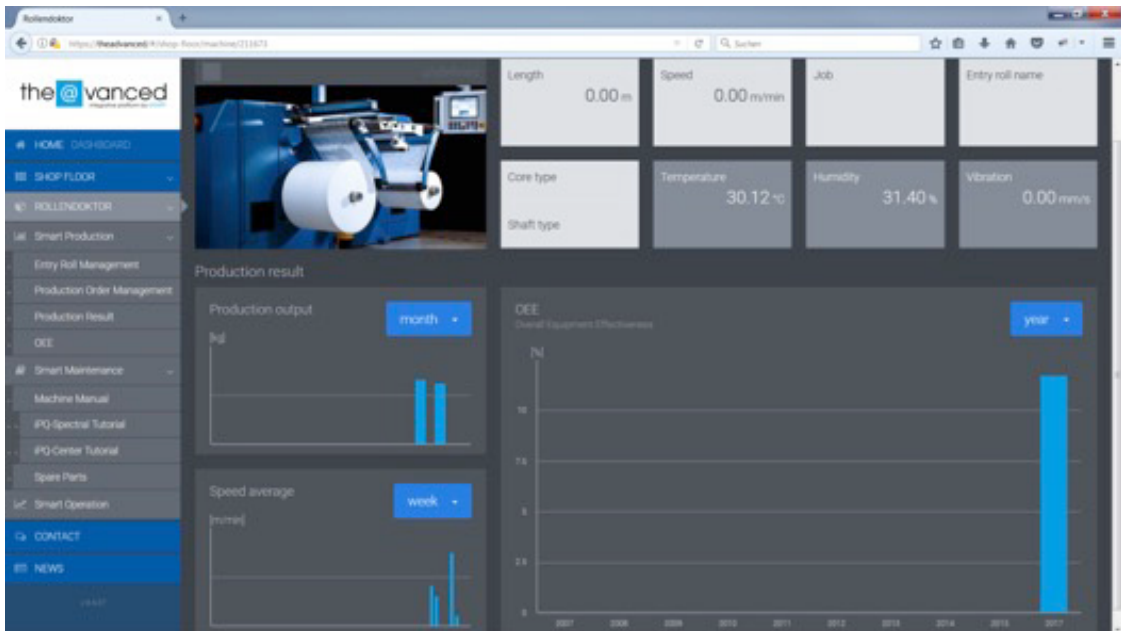


Figure 5: Screenshot the@vanced – live machine data

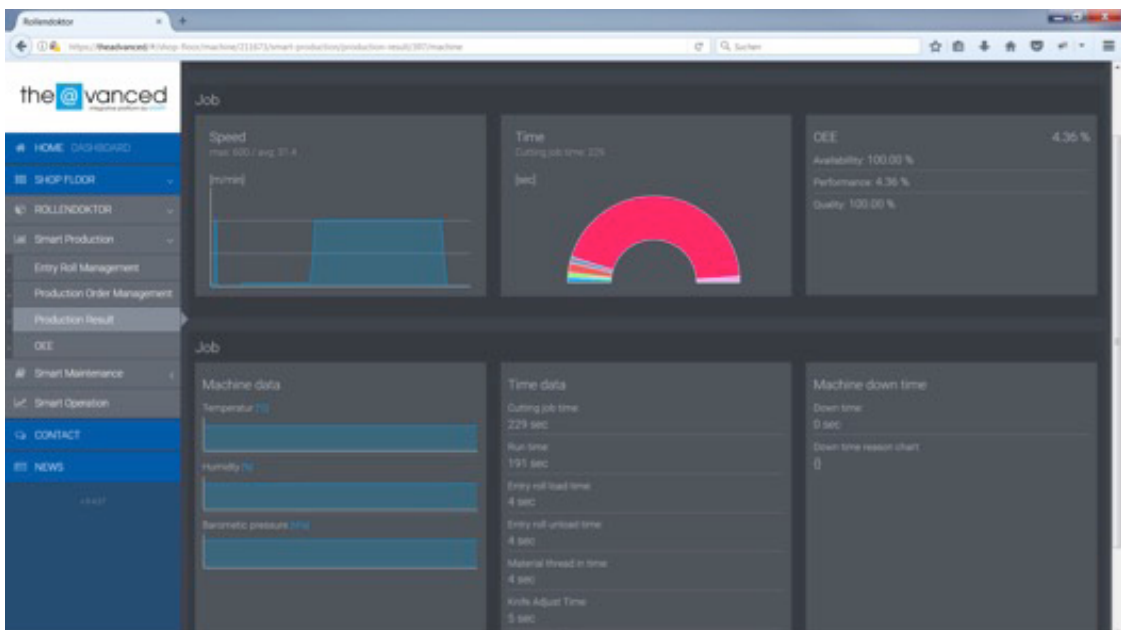


Figure 6: Screenshot the@vanced - key performance indicators

Problem Description

What are the problems you need to address?

„Federated Platforms“ – Integration of MindSphere and the @vanced at the example of key machine performance indicators. The focus lies on connectivity and platform interoperability.

How is the problem currently handled?

Data are provided “On Premise”, meaning locally. We interconnect the production sites via VPN. This task shall be done by MindSphere in the future.

Who is affected by the problem?

All of our customers with the@vanced

How critical are these topics to you and your customers?

Zentral data collection and interconnection with other systems based on MindSphere, as cutters are part of production lines.

Technical Provision

Type of machinery / plants?

Cutters and winders, see figures

Digitization / automatization degree?

Average to high degree

We invite all developers to visit us at our production site near Cologne for an in-depth insight into the matter.

Questions?

MindSphere Forum

<https://www.mindsphere.io/community/>