

NOVEMBER 2018

# iVT

## INTERNATIONAL INDUSTRIAL

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# Inside story

## SPEAKER SPOTLIGHT

**Alexandra Herrmann**, marketing and PR manager at Fritzmeier Systems, explains the achievements of the Cab Concept Cluster project so far

### What is the Cab Concept Cluster and what's the difference between the Smart Cab and Genius Cabs you have developed?

The Cab Concept Cluster (CCC) is a cooperative industry association set up to push the boundaries of cab design. We launched the construction-focused Genius Cab at Bauma 2016 and the agricultural Smart Cab at Agritechnica 2017. The Genius cab is a pure concept that was never intended to be sold, but is still setting standards today. It shows the great potential of smart integration of innovations. The Smart Cab in its basic version is a serial product that Fritzmeier offers to sell. We do have high interest and we already have customers.

### What is your role in the project?

My role in the Cab Concept Cluster is as the project and communication manager in bringing both innovative cab concepts to market: the CCC Genius Cab with all-new concepts for safety, comfort and system

integration; and the Smart CAB focusing on x2x usability, smart and digital farming readiness, and full modularity for operator comfort, functionality and productivity.

### How did the project come about, how far has it progressed, and how did it get where it is now?

To be competitive in the market, it is important to present and offer innovations to the customer at regular intervals. A successful example of this is our Cab Concept Cluster, which brings together and integrates leading OEM suppliers in a cooperation of the latest technical innovations.

### What has been the response from OEMs?

We have been on a road trip and visited more than 20 different OEMs and we had several cluster meetings with cross-functional teams. The response has always been very positive. Our customers see us as a very innovative company, as a leader in our industry.

*Alexandra Herrmann will make a presentation at iVT Industrial Vehicle Cab Design and Technology symposium. Herrmann and other industry experts discuss the future of off-highway vehicle cab design further on [page 38](#)*

## Other Cab Concept Cluster partners speaking at iVT Expo include...



Prof. Jens Krzywinski, head of industrial design engineering, Technische Universität Dresden, Germany



Wanja Steinmaier, managing director, Lumod, Germany



Robert Laschober, global sales agricultural, turf, and utility machinery, Hella Group

## Additional speaker highlights in Cab Design & Technology



Dr Rafal Sornek, SVP technology, Fortaco Group, Poland

## Enhanced productivity and driver comfort in operator cabins



Jérôme Regnault, product marketing engineer, ESI Group, France

## VSS: Overcome autonomous vehicle cabin challenges with virtual prototypes

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**"TO BE COMPETITIVE IN THE MARKET, IT IS IMPORTANT TO PRESENT AND OFFER INNOVATIONS TO THE CUSTOMER AT REGULAR INTERVALS"**



A KEY USP IN TODAY'S OFF-HIGHWAY VEHICLES IS CAB ERGONOMICS, WHICH IS WHY IT IS A PRIMARY FOCUS FOR INNOVATION. iVT MEETS THE OEM DESIGNERS AND TIER 1 SUPPLIERS WHO ARE HELPING TO DEFINE THE OPERATOR AREAS OF THE FUTURE

# CABIN



# FEVER

The Cab Concept  
Cluster's Smart Cab for  
agricultural vehicles



ABOVE: JCB's CommandPlus cab, developed for the first in its X Series – the 220X excavator – has a low in-cab noise of 67dB(A)

▶ The challenge with cab construction today is to combine safety with reduced use of materials, functional integration, and modern, lean designs. At the same time cab companies must keep track of all standards and regulations to fulfill safety mandates, and prioritize the comfort of the driver.

“At the center of our cab design is the well-being of the operator and the desire to make their job easier,” says Gustavo Guerra, design director at Volvo Construction Equipment. “We build cabs that are ‘premium by purpose’, meaning that we focus on enhancing safety, efficiency and comfort. We start by looking at customer needs and how the machine will be used, then design a cab that fits these requirements. Unlike the automotive industry, construction isn’t about fancy features. We focus on safety, all-around visibility, comfort and easy-to-access controls.”

### Materials

Whether it’s a construction machine, agricultural solution or forklift, manufacturers of off-highway vehicles are under great cost pressure

## THE FUTURE OF CABS

In 2014 a group of experienced OEM suppliers, including Hella, Bosch and Fritzmeier Systems, linked up with renowned designers, scientific institutions, industry associations, machinery hire companies and operators to form a collective of agricultural and industrial truck manufacturers. They called themselves the Cab Concept Cluster. Four years later they are still driving the future of cab design.

“The objective of Cab Concept Cluster is to illustrate the incredible potential of efficient system integration in construction and agricultural,” says Alexandra Herrmann, product manager at Fritzmeier Systems, a partner in the Cab Concept project. “Our innovative features are setting new standards in global markets in terms of safety, intuitive operation, operator comfort, maintenance and design.”

The group is divided into two separate divisions: Smart Cab, for agriculture, and the Genius Cab for construction. The two divisions also differ in that Smart cabs are concept only, while a basic version of the Genius is now being marketed to OEMs across the industry.

The Smart Cab is multifunctional, designed for agri vehicles such as

harvesters and field sprayers, and transfers growing trends such as serial-tested modularity and smart farming, which enables communication between vehicles, the cloud and even drones. Its was unveiled to much great acclaim at Agritechnica 2017.

Its Genius equivalent previewed concept versions of Smart technology. A mirror replacement system combining variable rearview camera surveillance with a central touchscreen interior display panel enhances visibility. Ultrasonic sensors detect hazards and obstacles in the vicinity; smart lights illuminate them. The modular exterior is constructed from welded aluminum profiles and boasts a 30% reduction in weight. Last but not least, the finished product has undeniably sleek lines and a futuristic look.

The first Genius Cab won the innovation award at Bauma in 2016. The guiding theme was ‘human centered design’ including a drive to maximize ergonomic comfort.

“We were very successful in the construction industry with Genius Cab as a pure concept cabin,” says Herrmann. “It is still setting standards today. Even though we started it back in 2014, people consider the Genius Cab a prime

**“THE HMI CLUSTER’S  
GOAL IS TO MAKE  
HMI SIMPLER AND  
SAFER FOR  
DIFFERENT  
MACHINES”**

Alexandra Herrmann, product manager,  
Fritzmeier Systems

example of how we provide a platform to integrate different functions from different suppliers.

“As for the hard future of cabs, human-machine interfaces [HMI] and standardization in the context of M2M communication is a very big trend topic for the future viability of the off-highway sector. The topic is becoming increasingly important in the context of driver assistance systems and meaningful use of data in particular. To this end, Fritzmeier co-founded an HMI Cluster in October 2018 with partners from the construction industry, OEMs, suppliers and universities. The HMI Cluster’s goal is to make HMI simpler and safer for different machines. The first results will be presented at Bauma 2019.”

*Alexandra Herrmann will be giving a presentation at iVT Expo, for our full preview see page 16*



ABOVE: **Genius Cabs** are developed to show innovation potential, rather than sold on the market

LEFT: A ‘human centered design’ theme helped the Genius Cab win an innovation award at Bauma 2016