

# Future farming

---

Machinery

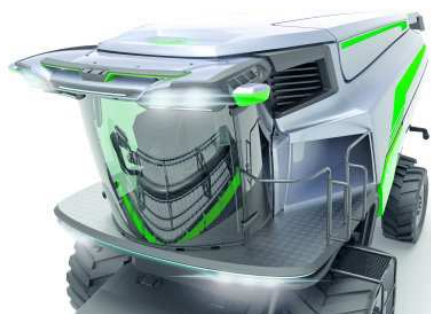
Background 4 Jul 2018

## The tractor cabin of the future

In the not-too-distant future, cabs may well look just like this Smart CAB. The CAB Concept Cluster, a collaborative partnership of 13 manufacturers and institutions, presented a study model at the Agritechnica trade fair, and the prototype is brimming with innovations.

The Smart CAB project requires a little explanation, because we are suddenly presented with a prototype cab that is brimming with new gadgets. Think of it as a study model instead: its creators are not expecting to sell the Smart CAB as a whole to a large OEM in the coming year. The actual purpose of it is to integrate their many innovations into a single prototype and cleverly promote them in the hope that an OEM will in fact adopt one or more components. The Smart CAB was built with self-propelled sprayers and harvesters, cutters or combine harvesters in mind.

The cab was built by 13 manufacturers and institutions (*see box below*), collectively known as the CAB Concept Cluster (CCC). Each team member focused on its specialism, and some took the opportunity to integrate innovations, such as the auto-dimming lights by Hella. But is this futuristic cab ready for practical application? Well, the project team claims that the entire concept is as good as ready for mass production.



In the not-too-distant future, cabs may well look just like this Smart CAB. The CAB Concept Cluster, a collaborative partnership of 13 manufacturers and institutions, presented a study model at the Agritechnica trade fair, and the prototype is brimming with innovations. Photo: CAB Concept Cluster

## No steering wheel

When you sit down on the luxurious, climate-controlled massage seat, the first thing you notice is that there is no steering wheel. The CCC believes that a conventional steering wheel and steering column impedes the view of the feed (of a cutter or combine), which is why the steering wheel has been replaced with a rotary knob in the left arm-rest. A conventional steering wheel is still available as an option in the Fritzmeier cab, incidentally.

In many countries, a steering wheel is mandatory in order to be permitted on public highways, and the CCC is aware of that, but, it claims that this design will be permitted

with an exemption. What is more, the CCC expects that this restriction will soon cease to apply.



## Smartphone and drone

What strikes you at the same time is the relatively large number of screens present in the cab. Two are operator's touchscreens, while 3 are camera displays, plus separate operating units for climate control and similar features. The CCC explains that it has implemented all possibilities of displaying information in this study model for demonstration purposes. In this prototype, climate control can be managed in 3 places, so one screen is enough in practice.

The CCC has also made connectivity a priority: smartphone, drone, the Cloud and the machinery itself are all connected to one another. The project team believes that in the future, a drone will constantly hover over the cab, which will recognise hazards (such as game) and provide a broad view all around the machinery on the terminal, while simultaneously scanning the crop.

## Light reference

A small camera is affixed to the cab frame at the front, and it points towards the driver. This small device recognises the driver's pupils, and monitors their movement. If the driver looks to the left, the work lighting will illuminate that area. The lights follow the movement of the driver's pupils.

Hella has incorporated yet more smart technologies in the lighting. To name one example, the Smart CAB is equipped with a sensor that measures reflection of light. The LED lights will dim automatically if the driver of an oncoming vehicle or another machine is being dazzled. The lighting also 'notices' if it is dazzling the driver when material is being blown around. All LED lights switch on and off individually. Finally, the lighting can be used as a means of communication, by projecting symbols or warnings onto the ground. So you could, for example, instruct a tipper truck travelling alongside you.

### The CAB Concept Cluster

The CAB Concept Cluster (CCC) is a project team composed of renowned manufacturers, suppliers and institutions that was established in 2014. The team

members combine their innovations into a single project in order to demonstrate them, and one example they built earlier was a concept cabin for earthmoving machinery. The CCC incorporated all manner of innovations in this Smart CAB that are suitable for agricultural machinery. The following manufacturers and institutions have been involved:

- Fritzmeier
- Hella
- Aurora
- S.M.A. Metalltechnik
- Bosch
- Grammer AG
- Mekra Lang
- Hydac
- Lumad
- TU Dresden
- Systems & Components
- Agricultural Industry Electronics Foundation
- Deula Bayern
- Embility
- InMach Intelligente Maschinen
- Beneq
- Vision Systems



## Bob Karsten

Editor for TREKKER magazine

---

To comment, register here Or register to be able to comment.



Reed Business bv. Copyright reserved.

The following rules apply to the use of this site: Terms of Use, Privacy Policy and Cookie Policy.

