

# SMART GLASSES: A NEW LOOK INTO THE FUTURE

The insurgence of Corona virus in March 2020 contributed towards accelerating the use of smart technologies, many of which were already on the market but were not yet a part of our lives, and VTU Engineering was ready and willing to embrace what can be called a true revolution.

Smart glasses represent one of the opportunities taken by VTU to put Smart Engineering into practice and get closer to its customers. This is the case with the EPCM project for one of our customers, Kemira in Goole (UK); the project was assigned in January 2020 after basic engineering had been carried out and it aimed to expand production, substantially in the form of new equipment, civil works and new pipelines for utilities. Therefore, this was not the best scenario for remote working, but because of the travel restrictions which were also in place in the United Kingdom, projects could not be managed using the same attitude and approach used in the past, and a number of new technologies had to become an integral part of our lives. We realized that we were right in the middle of a revolution, where physical location was no longer important; the important thing was having the right devices and a connection!



In terms of operations, a local civil engineering company was selected. The devices were shipped to the facility and during the construction phase, the local team was set up so they could receive practical instructions from the civil engineers based in Italy. Even though these technologies were already available on the market, we must admit that we had some initial doubts due to the small number of practical cases on an industrial scale and the resistance to change expressed by the technicians and the customer (who usually wants people on the ground). Contrary to our doubts, this situation has meant that money has been saved in terms of travel, the margin of error has been reduced, reactivity in the event of problems has been enhanced and project due dates have been observed: factors that have contributed towards a happy customer.

People do not all need to be in the same place to collaborate and this is a great lesson that we have all learned from Covid-19. Apart from this, the remote team has all the documentation available and ready-to-use on their laptops, they can rapidly run tests if needed, take a dynamic look at any procedure and in the case of a mismatch, take prompt action. Therefore,

the real important change is that senior experts can virtually and dynamically visit and check sites without having to travel and they can monitor a greater number of installations in less time. For another thing, the local team feels more secure, they can work faster and in the event of any issues, they just have to enable a connection using a single smartphone as a hot-spot and an expert is at the ready to immediately connect and offer support. Other applications such as Microsoft Teams, Vuforia Chalk and Librestream are already supported and add extra functionality to the shared use of HMT-1 Realwear, Smart glasses, our current means of support. At last you can say that “when you are connected, you are never alone”!

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### Some information about Realwear glasses

When the glasses are worn, an operator can carry out their routine work hands-free while interacting with an engineer located in a completely different location. This means an issue can be shared and discussed, for example: from their office, the engineer can see what the engineer in the field is looking at or follow a number of steps to carry out a specific technical procedure or navigate a document and share an image. It is also possible to carry out traditional procedures, such as take a photo that can be added to a test phase, for example, or record video footage. This is promising technology that offers many possibilities in terms of expanding its functionality and use. For example, the Smart Helmet is equipped with multiple 360° video cameras, WLAN, Bluetooth, GPS, a solid-state memory and an infrared transmitter as well as the smart glasses. It displays graphic information about the system, the engineering or how it works directly within the user’s field of vision. Technicians can view other maintenance or repair manuals, or they can receive support about machine procedures from a remote expert, as well as receive prompt warnings about safety hazards. Users always have both hands free to carry out manual procedures without hindrance.

Another possibility is having Artificial Intelligence integrations to recognize objects and give more support to the person who has to carry out procedures. As far as the pharmaceutical sector is concerned, GMP features such as user recognition and electronic signatures in environments with integrated supervision are starting to be common and topical also in terms of smart glasses. VTU Engineering has chosen Realwear HMT-1 smart glasses because they are powerful, wireless and they also feature completely handsfree voice control. This means that there is no need to scroll or touch, only voice commands are necessary. The device includes a full-shift internal battery with replacement in the field to enable continuous use, therefore there are no interruptions while carrying out important procedures. The glasses are comfortable to wear on the production line for industrial workers, for example, and in the event of procedures in the field, it is possible to add a number of options such as a helmet and lenses. Our motto is always “Better safe than sorry”! A HMT-1 display looks like a 7” tablet display and can be safely viewed during work procedures.