

CASE EXROBOTICS

Send robots into hazardous places

Imagine a remote and hazardous place, like a gas facility. You need inspections to keep things safe, but sending people into these sites can be dangerous. And sometimes expensive. What if you could use a connected robot to be your eyes, ears and nose? ExRobotics have developed the first robot operator for remote unmanned facilities.

Bots on the lookout

Robots doing people's jobs. That might actually be an excellent idea when it comes to inspecting hazardous environments, like gas facilities, oil refineries, chemical factories or offshore platforms. Keeping remote facilities safe comes with potential risks and financial costs. Dutch company ExRobotics have developed a rugged connected robot, called the ExR-1, which performs inspection tasks. With no need for humans to be anywhere near.

A certified challenge

Building a remote-controlled or even autonomous robot is a challenge. It is even more challenging to develop an electrical machine that's safe enough to work in gas facilities or chemical plants – electricity and gasses are a highly flammable combination. ExRobotics have successfully met both challenges with their EXR-1, the first ever remote modular robot certified to work in potentially explosive facilities (with an ATEX/IECEx zone 1 certification).

The ExR-1 can be controlled from anywhere in the world, using M2M connectivity. It can even drive autonomously.





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'Wherever we deploy a robot, we always want the best network available'

- Iwan de Waard, founder of ExRobotics

The robot is equipped with a camera, microphone and gasdetecting sensors, acting as the eyes, ears and nose of its operator, who can be hundreds of kilometers away.

Connected over four continents

Founded in 2016 and operating on four continents, ExRobotics have produced over 30 robots. The bots need reliable connectivity, to control them remotely. But also to send and receive data - like video, audio and sensor data without latency. 'The ExR-1 is as good as it's connectivity', tells Iwan de Waard, founder of ExRobotics. 'Without a good connection, we simply have no product.'

The robot company partnered with KPN IoT for its M2M connectivity. Because the robots work in remote places, ExRobotics needs a great connection anywhere. 'Wherever we deploy a robot, we always want the best network available',

says Iwan de Waard. 'We're very happy with the non-steered roaming KPN offers.' The ExR-1 now uses 4G connectivity. KPN and ExRobotics are also exploring next-gen connectivity, working together in KPN's 5G Field Lab.

Who you gonna call?

Recently, ExRobotics had the opportunity to demonstrate their ExR-1 in the Middle East, in the presence of a Saudi Minister of Energy. But just before the event, the team encountered a technical challenge with the robot. De Waard: 'In situations like that, I'm glad that I can call KPN, day or night.' With the help of KPN IoT, the robot got connected and up and running – well in time for the demonstration.

For more information and relevant IoT cases go to <u>m2m.kpn.com</u>