Robotic systems to keep humans safe from harm

Edinburgh-based Touchlab is working with another company, BOW, to develop robotic systems which will remove people from harm in battlefield situations or when decommissioning nuclear sites.

The software is being developed by BOW to control any robot in a wide range of scenarios, and Touchlab which has created touch-sensitive artificial "skin" for robots to feedback information to operators.

BOW's software is a one size fits all which means that developers no longer have to create a new programme for each robot even if they are doing the same task.

[Touchlab](#) has developed a product which is robust, thinner than human skin, and can be wrapped around any surface, hard or soft alike, enabling robots to roll pens, feel texture, and sense pain like a human would.
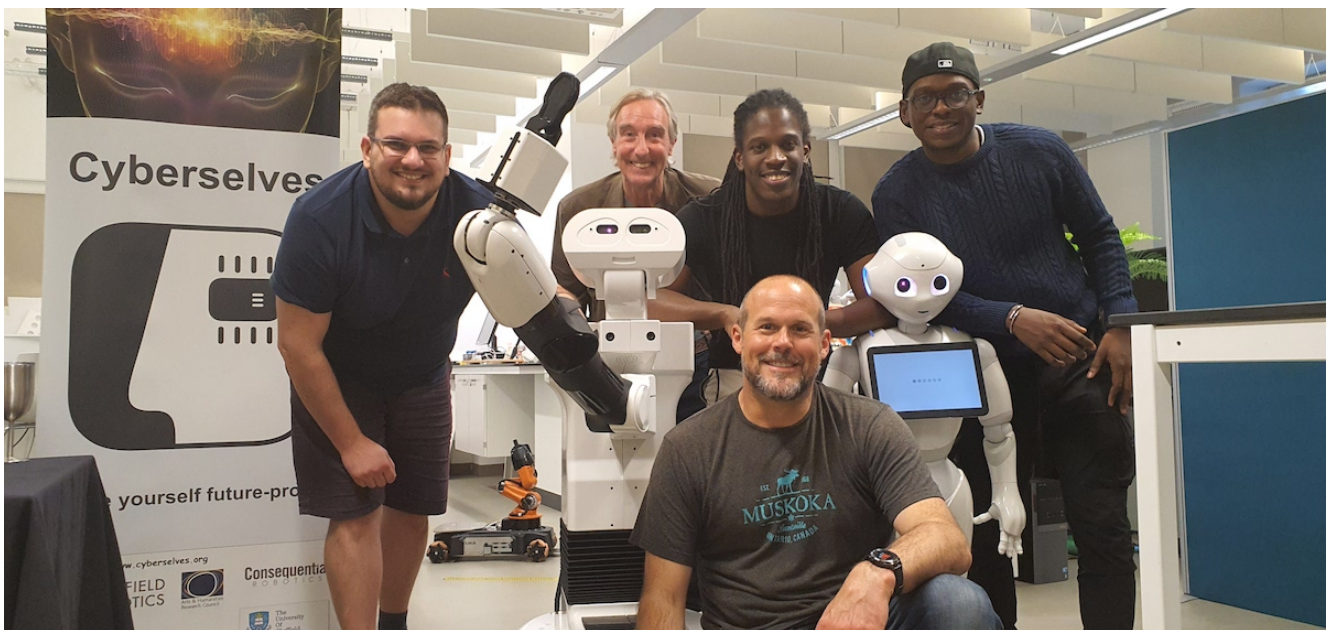
Daniel Camilleri, founder and chief executive of [BOW](#), said: "These two projects are great examples of how BOW can help keep people out of hazardous situations.

"Both projects allow skilled human operators to carry out important tasks but without putting themselves in danger. Each project involves integrating cameras, sensors, robots, and other technology into a single platform.

"We are taking human expertise and transporting it into a robot in real time to make the experience safer for people, building on work we've already led on in explosives disposal in hazardous underwater environments. Our software can control many different types of hardware, which means we can use off-the-shelf components for these systems, making them easier to replace and keeping costs down."

Dr Zaki Hussein, Founder and CEO of Touchlab, said: "In line with using our electronic skin to solve grand challenges for society, we have been looking into nuclear decommissioning and medical applications since our early days and tested our e-skin successfully in these demanding and dangerous environments. This project is an example of using robotics for good that will eventually take humans out of harm's way and save lives.

"Touchlab shares many goals with BOW and our companies have complementary technology. By combining the power of human touch with unique teleoperation software, we can together help realise the massive untapped potential of tele-robotics and enable new and unexploited markets."

BOW team