

• Team Discover Miklos Knebel

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The late Clayton Christensen famously argued that the heart of any innovation is an understanding of the job it’s designed to do. ‘When we buy a product, we essentially ‘hire’ something to get a job done,’ he said.

As a result of the coronavirus pandemic, the jobs to be done for the healthcare sector transformed overnight. Consultations needed to be performed remotely, the population needed to be tracked and traced at scale, doctors and nurses needed to be protected from infection, and monitoring was required at a scale never before seen.

A team of entrepreneurs from EIT Digital’s Master School did their bit to help during the #EUvsVirus hackathon, developing a 3D printed remote monitoring device to measure the vital signs of coronavirus patients. Traditionally, the body temperature, oxygen saturation, and respiratory rate of patients would be monitored by the equipment installed in an intensive care facility, but for patients outside of these units, nurses would perform

the operation manually. As the number of patients overseen by each nurse mushroomed, the need for a technological solution presented itself, especially as the volume of patients often prevents nurses from changing the personal protective equipment that keeps them and patients safe.

Monitoring at scale

‘We came up with a medical device that allows patients to measure these vital signs for themselves,’ Miklos Knebel, a founding member of Team Discover, said. ‘It has three sensors, including an infrared thermometer that checks the body temperature from your forehead; a pulse oximeter to measure oxygen saturation; and a microphone to measure respiratory rate.’

Data from the device is then uploaded to a central system that allows medical staff to monitor readings. The team hopes to develop an AI-based monitoring tool to alert staff to readings outside of the expected range.



Website:

<https://devpost.com/software/team-discover-qg7kn3>



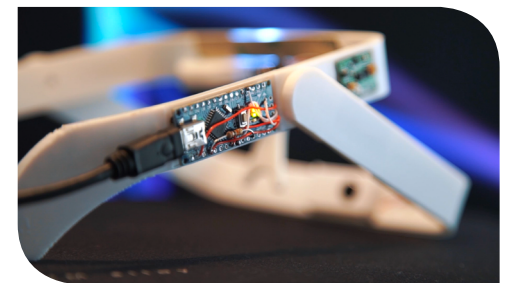
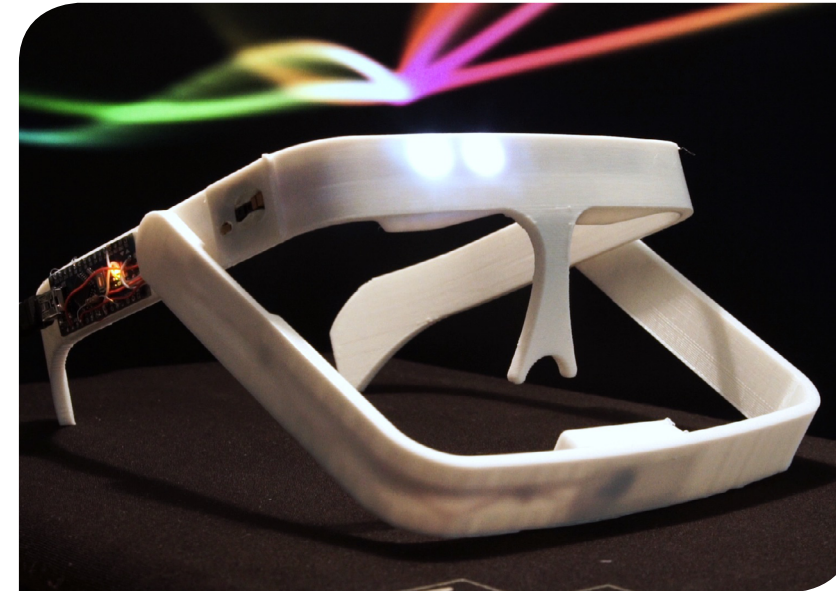
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<https://www.youtube.com/watch?v=t1UT1ONAkVM>



Country:

Hungary



The project, which won the ‘health and life’ category at the hackathon, has received support from EIT Health to try and find partners, both in manufacturing and in the healthcare sector itself, to enable the product to be manufactured at scale and taken to market as quickly as possible.

‘We need to find partners who have experience in manufacturing to enable this to be produced at scale, with further consultation with the medical profession helping to develop and prototype the device,’ Miklos said. ‘We’re in close contact with EIT Health, who were mentoring us during the competition, and they have such a rich network of hospitals and manufacturers that they will be a real help.’

Staying agile

The speed with which the pandemic has spread has forced agility on so many individuals and institutions across Europe, a quality Miklos believes is crucial if

countries are going to innovate their way out of the challenges they face.

The entrepreneurial spirit forged in the EIT Digital Master School has infused the team with such a mindset, and they are learning every day in their bid to provide key solutions to the challenges society faces at the moment. The hackathon veterans believe that the format of these events holds entrepreneurs in good stead, as they force teams to strip away all that is unnecessary and focus purely on what will drive results for the end user.

As the team brings the product to market, it’s likely to be the result of a collaborative effort from across the EIT, and as Miklos points out, this welcoming and supportive environment is so important in these uncertain times.

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