

Nymbly use LPWAN to develop new air quality sensors

Nymbly is a UK based startup founded in 2016 who use a fast track prototyping and scaling platform to create sensors that enable customers, mostly operating in the smart cities and smart agriculture space, to develop Internet of Things (IoT) solutions.

The challenge

Recently Nymbly worked on a project to develop air quality sensors to help monitor pollution levels in densely populated cities. To ensure success of the project, the company needed to create a sensor with a price point below £20 that was able to measure air pollution in an extremely localised way. Any more expensive and the solution would not be financially viable to deploy enough sensors to monitor air quality across large urban areas. Before Nymbly embarked on the project, the average price for a similar sensor was £6,000, which meant that even though they were extremely accurate, only 40-50 sensors could be located across the whole of London.

The solution

To help Nymbly succeed in their endeavour, Digital Catapult granted the company free access to the Things Connected LPWAN network which allowed it to connect its air quality sensors to the Internet of Things (IoT).

This access to the network proved critical in helping Nymbly further develop its sensors and create a pilot of mapping a high pollution area around Kings Cross in London using 20 of those new sensors. These sensors will ultimately help accelerate the adoption of more effective measures to improve air quality and quality of life.

Digital Catapult launched Things Connected in September 2016, an innovation support programme targeting UK businesses who wish to leverage the capabilities of LPWAN technologies. LPWAN networks are fast developing globally with millions of devices connecting to them. Thanks to the technology, devices can now be deployed in cities or remote areas without requiring access to the electricity network.

Benefits

Due to their association with Digital Catapult, Nymbly:

£100k

Secured major contracts worth £100,000.

100%

Increased its staff count by 100 percent.

100,000

Is developing its product and platform so it can scale up to 100,000 devices.

Expanded its network across experts and other IoT startups.

Is making plans to deploy its platform across numerous other projects.



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The results

With two working pilots and over 2,000 sensors in the field that are currently being tested, Nymbly is making plans to further develop their product and platform so it will scale up to 100,000 devices.

In fact, the company's platform has proven so successful that it's already being deployed across many more programmes including:

- Automated irrigation systems where water usage is optimised based on soil content, crop type and weather data.
- Connected bike sharing schemes where bikes are monitored and tracked to prevent theft and vandalism.
- Personalised medicine devices, with automated data analysis and data security.

Nymbly's team has also benefitted from attending Digital Catapult's Things Connected workshops and events which has helped it to meet with other successful businesses, build its network and secure a number of new customers. To service those customers, Nymbly has now had to expand the team by recruiting two software developers, and are also in a strong position to secure funding to grow the company further and maximise its business impact.

Based on the success of the project, Nymbly is now also able to change their business model to allow it to work with larger organisations who want to launch their own IoT services, but don't want to recruit a full team of IoT experts.

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“ Air quality is a high-profile environmental and public health problem in the UK, particularly in the capital, where air pollution limits are breached daily. With Digital Catapult providing free access to the LPWAN network, we've taken giant strides in our ability to deal with these issues first hand by deploying air quality sensors throughout London through the Things Connected programme.”

Jérôme Joaug

Co-founder and Director, Nymbly

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Things Connected

Digital Catapult's Things Connected is an innovation support programme targeting UK businesses who wish to leverage the capabilities of LPWAN technologies. It will foster the emergence of a strong UK based LPWAN ecosystem to ensure the UK is open and ready to innovate with the Internet of Things (IoT) and from that, empower businesses to develop exciting and novel IoT products and services that foster economic growth.

For more information on Things Connected, please visit:
www.digicatapult.org.uk