

M E D I C A L A N D H E A L T H C A R E

Creating
HIGHLY INNOVATIVE
Medical Devices
and Technologies



HEALTHCARE
SENSOR
Innovations 2019



Leading Technology Advancements

Plextek is a specialist electronics systems consultancy, providing innovative product design & development services in the medical & healthcare sector.

We provide unique solutions to sensing, data collection & communications challenges, solving our clients' hardest engineering problems and working with them to create market advantage and maximise their potential.

Turning a Domestic Handset into a Telehealth Device

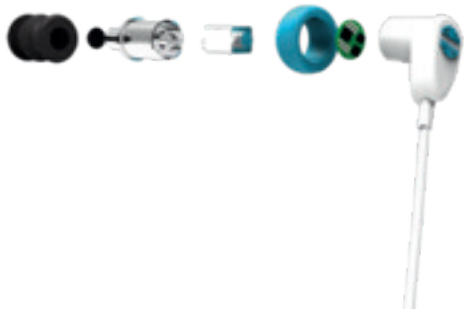
Developing an easy-to-use handset for telehealth monitoring of the elderly

Our client wanted an easy-to-use telehealth system based on a handset to reliably measure the vital signs of an older person.

Collected by sensors embedded within the handset, the developed solution evaluated patients' vital signs and transmitted them using in-band signals to a central server.



Early Detection Of Noise Induced Hearing Loss



Detecting the first signs of hearing damage through innovative auditory technology

We developed an innovative application that sends auditory clicks into peoples' ears while listening to music and detects the brain waves generated in response.

This system enables users to test their hearing daily and gain a 'fingerprint' of their response.

People can make lifestyle changes and implement hearing protection that may limit the severity of tinnitus onset.



Non-Contact Technology for the Measurement of Lung Function

Our client had developed an innovative approach using structured-light analysis to assess 3D movement of the chest.

We assembled a multi-disciplinary team experienced in medical device development, and took their early prototype system through to manufacture.

Delivering Medical Supplies to Remote Areas Using UAVs

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Delivery of medical supplies can be hampered by unseen obstacles such as powerlines, so we assessed the potential of mm-wave radar to provide sense & avoid data.

Full radar functionality was developed and produced on a single printed circuit board suitable for drone deployment.

Our airborne field trials demonstrated our technology's capability to sense & avoid small, static obstacles such as powerlines.



Real-time Monitoring of Patients in Challenging Environments

Our US-based client wanted to develop an ambulatory ECG monitor for patients in hospital.

Wireless networks in hospitals are notoriously unreliable due to interference with existing band signals.

We developed a new bespoke system which included radios, signal processing, software and a new secure band level for our technology.



GLOBAL

Based in the Cambridge technology cluster, we work with a network of companies in countries across the globe. We are experienced in delivering solutions to the highest worldwide standards, including ISO 13485:2016.

We possess world leading specialist skills and a highly innovative approach to problem solving.

We help clients to overcome complex engineering challenges.

INNOVATIVE

TRUSTED

We are trusted by governments, SMEs and global commercial organisations.

We have a reputation for commitment to delivery, providing our clients with significant commercial advantage.

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