

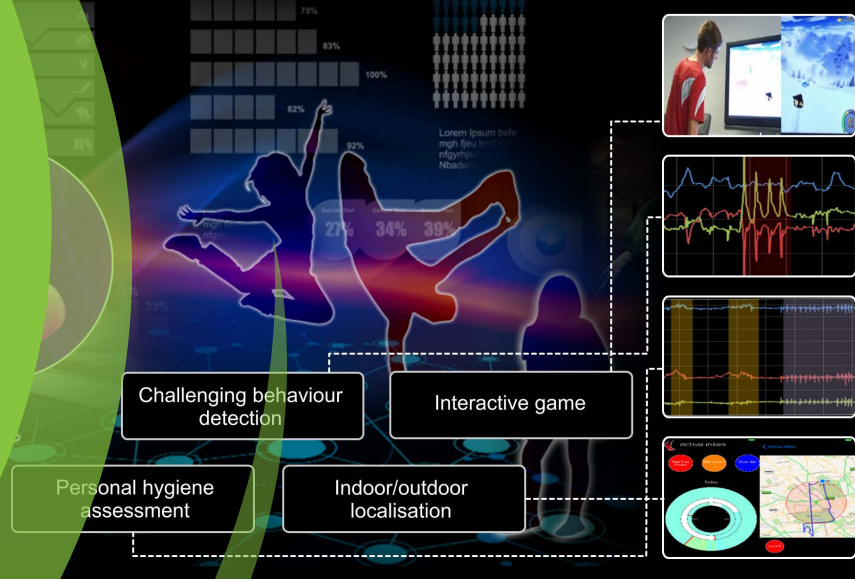


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# Case study: Sensixa Ltd



Challenging behaviour detection

Interactive game

Personal hygiene assessment

Indoor/outdoor localisation

## ECONOMIC IMPACT

Sensixa Ltd. is a spun-off company from Imperial College London. The company was setup to commercialise major research results in pervasive sensing developed by the Hamlyn Centre. The core expertise of Sensixa includes low-power microelectronics, sensor analytics and behaviour profiling. It has developed a number of novel miniaturised wireless sensors and devices for healthcare and sports applications.

It is estimated that 2% of people in England have a learning disabilities (LD). In England in 2011, an estimated 286,000 children and young people under the age of 18, and 905,000 adults in England had learning disabilities. Of people with a learning disability living in their family home, over 30% are supported by a relative aged over 70. In addition to general health problems, people with learning disabilities are known to have higher incidents of dementia, respiratory diseases, gastrointestinal cancer, ADHD and conduct disorders, epilepsy, physical and sensory impairments, dysphagia, poor oral health, and prone to injuries.

The SBRI Healthcare funded Care-for-All project aims to develop a novel, miniaturised sensor node (in a form of an ear worn sensor or wrist band) with a seamlessly integrated mobile app that adapts to individual care need and ensures improved access to diagnosis and care.

## PATIENT PERSPECTIVE

The Care-for-All device differs from the current solutions that mainly focus on alarm and event detection (e.g., flood and enuresis) to: 1) predict the onset of adverse events; 2) promote learning and behavioural change; and 3) provide context-aware, intelligent daily assistance and social integration. It allows better understanding of one's health, offers choices, helps making decisions, and boosts confidence and dignity.

## ECONOMIC IMPACT

Wearable technology made a big impact in 2014 and is set to keep rising in 2015 and beyond. In healthcare, wearable technology is making a big impact on reducing costs of healthcare with some firms forecasting a 10% cost reduction for some chronic conditions by 2017 (Gartner4). The combined NHS and Local Authority expenditure for people with learning difficulties is about £5.6bn a year. By addressing the specific needs for people with LD, the Care-for-All technology could lead to significant healthcare cost reduction for people with learning difficulties by improving the care with better information, facilitating learning and social interactions, encouraging behavioural changes – thereby enabling preventive care.

“This SBRI funding has allowed Sensixa to develop new wearable technologies to address the needs of people with learning disabilities and open up new opportunities in this relatively uncharted space for innovative products.”, Dr. Benny Lo, Sensixa Ltd.

Visit: <http://www.sensixa.com>

## CONTACT US:

A: SBRI Healthcare, 1010 Cambourne Business Park, Cambridge CB23 6DP

E: [sbrienquiries@hee.co.uk](mailto:sbrienquiries@hee.co.uk)