

# NexGen wins CATRENE Innovation Award 2019 for advances in integrated mobile health monitoring and implantable sensor

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Helsinki, 21 November 2019 – It was announced today that NexGen, a project in the EUREKA cluster programme managed by AENEAS, has won the 2019 CATRENE innovation award. Bringing together interdisciplinary teams and led by Infineon, NexGen project addressed the need for sensor-systems and integration technologies for mobile and implantable healthcare systems. With populations ageing and chronic diseases increasing, such systems are seen as key to empowering people to remain healthy and active, while also reducing healthcare costs. NexGen was recognized for advances including solutions for continuous glucose monitoring for people with diabetes and multi-parameter sensing for health monitoring at home.

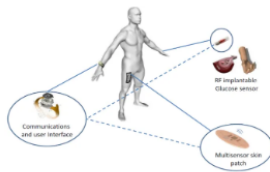
The European Commission has previously noted that implementation of IT solutions in healthcare lags up to 10 years behind other sectors where IT is applied.[1] However, the need is clear. For instance, the International Diabetes Federation estimates that global numbers of people with diabetes will increase from 425 million in 2017 to 629 million by 2045[2]. But developing technologies for mobile and implantable solutions is technically complex and commercially challenging.

As a consortium, NexGen could overcome these issues by combining strengths across the supply chain. It sought to provide missing elements in nano and micro-electronic technologies, targeting the creation of a set of secured sensors for body monitoring, improved energy-management systems, enhanced communication and biocompatible integration technologies.

For glucose monitoring, NexGen's work has resulted in a proof of concept for continuous glucose monitoring systems (CGMS) which has been validated in lab tests. CGMS is an attractive alternative to solutions that require patients to measure their blood glucose through finger-sticks, which can be invasive. Moreover, there is growing demand. The global CGMS market was valued at USD 878 million in 2016 and is expected to reach USD 13,672 million by 2025[3].

In multi-parameter monitoring, NexGen developed key micro-electronic technologies and components for a non-invasive on-body monitor. These included temperature, capacitance, resistance and ion (chloride) sensors to measure parameters such as hydration. This work led to an innovative printable patch that showed good results in human trials. It also paves the way to further developments such as future cloud solutions and many other applications in smart health.

Achieving acceptance for ethical tests on animals and humans is a major success in the development of healthcare solutions. The 16 partners in NexGen not only did this, but also demonstrated that a strong, focused consortium can produce results that give European companies the potential to break into the smart healthcare market and challenge the dominance of existing players. NexGen has also laid the foundations for future collaborative projects in areas such as energy management and printed batteries.



## Smart health secure body monitoring

### About CATRENE:

CATRENE is a EUREKA cluster programme operated by AENEAS. It was created in 2008 and focussed on micro and nanoelectronics research and innovation, which aims at achieving Technological Leadership for a competitive European ICT industry. It is based on the ambition of European countries, in partnership with European companies, to jointly deliver nano- and microelectronics-based solutions that respond to the needs of society at large, improve the economic prosperity of Europe and reinforce the ability of its industry to be at the forefront of global competition.

After 11 years of operation, more than 8 calls and 51 complete and still running programmes, CATRENE projects involving SMEs, large corporations, research institutions and universities have, and are, demonstrating great impact on societal challenges while promoting European economic development in this vital area.

About CATRENE: <http://www.catrene.org>

About AENEAS: <https://aeneas-office.org>

### About NexGen:



NexGen was an RD&I project consortium involving 16 European partners from Germany, the Netherlands and Belgium. The project partners were:

Infineon Technologies (Project leader), B Braun Melsungen, Charité – Universitätsmedizin Berlin, eesy-innovation, Evalan, IHP, Infineon Technologies Dresden, Maastricht Instruments NXP Semiconductors Belgium, NXP Semiconductors Netherlands, Philips, Quad Industries, Senetics health care, Siemens, SIOEN Industries and Stichting IMEC.

About NexGen: <http://nexgen-monitor.com/project-description/>

[1] European Commission eHealth Action Plan 2021-2020

<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52012DC0736&from=EN>

[2] <https://www.idf.org/aboutdiabetes/what-is-diabetes/facts-figures.html>

[3] <https://www.marketresearch.com/Inkwood-Research-v4104/Global-Continuous-Glucose-Monitoring-System-10752691/>