



Beviljade projekt 2022

Smartare Elektroniksystem

ELECTRONIC COMPONENTS & SYSTEMS

Ett strategiskt innovationsprogram för att öka konkurrenskraft och tillväxt i svensk industri

Beviljade projekt - Genomförbarhetsstudier

I utlysningen för genomförbarhetsstudier som stängde 7 september 2022 beviljades 10 av de totalt 20 ansökningar som lämnades in. Totalt sökte de 20 projekten om 8,1 miljoner kronor i bidrag och de 10 beviljade projekten får dela på 4 286 493 kronor. Projekten startar under första veckan i november och ska avslutas inom åtta månader (senast 30 juni 2023).

Fiber optic sensor system for high temperatures

Project budget: 603 208 SEK

Granted funding: 300 000 SEK

Partners in project: RISE Research Institutes of Sweden, RISE Fiberlab, Saab Surveillance

Objective: To demonstrate that the proposed technology has the potential to protect fiber at 750°C as well as to design a process flow for manufacturing HT-FBG, from fiber to finished sensor array.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

New distributed sensor technology for moisture and leakage detection in buildings

Project budget: 574 590 SEK

Granted funding: 286 690 SEK

Partners in project: RISE Research Institutes of Sweden AB - RISE AB - Digitala System, Lindbäck's Bygg AB, Derome Husproduktion AB, Sensative AB

Objective: The objective of the project is to evaluate the technical and commercial feasibility of an innovative idea and method for moisture and leakage measurement with distributed fiber optic sensor technology. The technology has the potential to monitor large areas and lengths in buildings and structures in a cost-effective way.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

Efficient systems for material recognition

Project budget: 1,001,000 SEK

Granted funding: 500,000 SEK

Partners in project: Acconeer AB, Lunds Tekniska Högskola Inst elektro- & informationsteknik

Objective: Development of a radar-based material classification prototype and conclusion on partner constellation for a future Smartare elektronisksystem project.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

Monitor ett taktilt hjälpmedel för att öka omgivningsperceptionen hos personer med dövhet eller dövblindhet

Granted funding: 479 803 SEK

Project budget: 971 847 SEK

Partners in project: Parivash Ranjbar, Region Örebro Län, RISE Norrköping, Motion Control Västerås, Pariception AB Örebro, Hörselskadades Riksförbund Örebro Förening, Region Sörmland Habiliteringsverksamheten

Objective: The objective is to redesign Monitor with printed electronic technology, integrate vibrator in textile/flexible material to increase comfort level, and miniaturize it using piezoelectric vibrators.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

Undersökning av lågkostnads omedelbar spårning för 5G-backhauling

Granted funding: 400 000 SEK

Project budget: 800 000 SEK

Partners in project: Chalmers University of Technology, Gapwaves AB

Objective: Investigate and experiment three innovative low-cost auto-tracking/steering technologies for mmWave 5G backhauling ultra-high-gain antenna by utilizing gravity and pendulum with anti-resonance function to cope with the beam swing caused by vibrations and wind load.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

FLASH-cancerterapi halvledardetektor

Granted funding: 300 000 SEK

Project budget: 600 000 SEK

Partners in project: ScandiDos AB, RISE Research Institutes of Sweden

Objective: Specification of the required modification of an existing prototype diode detector so that it can detect cancer treatment using FLASH technology as well as in today's technology.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

Proof of concept of an innovative method for producing more efficient laser materials

Granted funding: 420 000 SEK

Project budget: 840 000 SEK

Partners in project: NKT Photonics AB, Mid Sweden University, Royal Institute of Technology (KTH)

Objective: To combine two unique process methods to develop a nanoparticle-based optical fiber for fiber lasers that enables new optical properties and improved performance.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

In-situ mask creation for fabrication of state-of-the art nanoelectronics components

Granted funding: 500 000 SEK

Project budget: 1 000 000 SEK

Partners in project: AlixLabs AB

Objective: We envision three main breakthroughs at the end of the feasibility study:

- 1)** Gaining new further knowledge on fabrication of extremely small dimensional nanostructures using cost efficient method, which will be important for filing strong additional IP and create value for AlixLabs.
- 2)** Demonstrating a novel and less complex nanofabrication technology for production of electronic chips, which will enable AlixLabs to present the process to leading companies and potential customers in the semiconductor industry.
- 3)** Taking the stage to prepare for market instruction (wafer level process) and reaching a higher Technology Readiness Level with a cost-efficient method as an attractive alternative to semiconductor fabricators. Several meetings with leading semiconductor manufacturers in USA and Asia during 2021 and 2022 have given a clear feedback that a wafer-level feasibility and demonstration is needed for them to take the next step to support our technology development and consider the APS technology for introduction in their manufacturing flow.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

SAR-P Prototype Sensor

Granted funding: 500 000 SEK

Project budget: 1 040 000 SEK

Partners in project: VIDEM AB, Chalmers, Uppsala Universitet

Objective: To develop a SAR sensor that can detect a protein biomarker. Established relationships with partners for subsequent R&D projects.

Read more about the project at [Vinnova web](#) or the [project abstract](#).

Analog radio-over-fiber for future mobile fronthaul

Granted funding: 500 000 SEK

Project budget: 1 000 000 SEK

Partners in project: ERICSSON AB, II-VI Järfälla AB, RISE

Objective

System, component specifications, and proof-of-concept demonstration of analog radio-over-fiber (ARoF) fronthaul links for distributed-MIMO (D-MIMO) next-generation mobile networks using four channels in both uplink and downlink.

Read more about the project at [Vinnova web](#) or the [project abstract](#).