Swedish startups and scaleups in the forefront of deeptech innovations

Team SwedenTech | VINNOVA Sweden's Innovation Agency | Business Sweden | Swedish Energy Agency | SI. Swedish Institute | COORDINATED BY SWEDISH INCUBATORS & SCIENCE PARKS

AlignedBio AB

Aligned Bio is a Swedish deeptech/health-tech company founded in 2019 working at the interface of nanotechnology and the life sciences. The company has developed novel nanowire manufacturing technologies that enable fabrication of biosensors with single-molecule sensitivity at production costs 10-1000x less than current biosensors. The company can thus provide novel biosensors at prices that can penetrate new markets. High-sensitivity biosensors have broad applications across the life-sciences. The company has demonstrated its wide platform utility for diagnostics (cardiac, CNS, and inflammation biomarkers) and next generation sequencing (NGS). We aim to be the premier supplier of sensing solutions in these sectors.

Website

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Aplex Bio

Aplex Bio is disrupting the genomics landscape by developing and commercializing a next-generation Hyperplex PCR™ technology that solves several key limitations with current legacy solutions including qPCR, digital PCR and next-generation sequencing. Our technology brings genomic analysis to a whole new level and will reshape multiple fields in life science. Hyperplex PCR™ provides digital molecular analysis of 100+ different targets in each sample while conventional methods can only do 3-5, without the need for complicated equipment or workflows, increasing performance compared to current technologies by a factor of 20-100X.

Website

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Archeri

Archeri is at the forefront of revolutionizing the energy sector with its cutting-edge technology. By harnessing existing power grid data, Archeri has developed a groundbreaking solution that calculates real-time and future grid capacity, paving the way for more efficient energy distribution. Their innovative approach eliminates the need for additional hardware, streamlining the process and reducing costs. Moreover, Archeri's solution not only enhances the sustainability of the power grid but also improves its effectiveness and digitization, ushering in a new era of energy management.

Website

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BLIXT

BLIXT revolutionizes the electricity sector with a software-defined power system, challenging the traditional grid's one-way flow. BL!XT provides software-controllable technology to switch, store and convert currents and voltages, faster, greener and more efficient. The current product range consists of solid state circuit breakers (SSCB) and dynamic battery energy storage systems.

Website

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Caplyzer AB

Caplyzer has developed a unique electrolyzer technology that reduces green hydrogen production costs: with dynamic response and a broader load range, it optimizes production in grids with intermittent renewable energy. This, together with higher efficiency and lower manufacturing costs (due to no rare elements and robust design) create favorable economics. The technology also enhances safety and delivers pure hydrogen, increasing product value. Caplyzer introduces the next-gen electrolyzer, accelerating the green hydrogen transition.

Website

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Flexpenser

Flexpenser leads the charge in redefining convenience with its cutting-edge beverage dispensing solutions. From offices to public spaces, FlexPenser's user-centric design ensures hassle-free and consistent beverage experiences. With a focus on quality and reliability, FlexPenser delivers durable systems crafted to the highest standards. Embracing sustainability, FlexPenser minimizes waste while maximizing efficiency. Driven by innovation and customer satisfaction, FlexPenser fosters strong partnerships, offering tailored support and customization options. In essence, FlexPenser isn't just a dispenser manufacturer; it's revolutionizing beverage service, one pour at a time.

Website

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GREEN14

GREEN14 is a Stockholm-based advanced engineering startup that is transforming strategic raw material value chains with its focus on silicon materials for the green transition. GREEN14 uses hydrogen plasma to enable the modular production of solar-grade polysilicon and silane gas for solar panels and EV battery anodes. This innovative approach speeds up processing, reduces cost, cuts emissions by up to 98%, and outputs only water vapour.

Website

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IPercept

IPercept provides AI-based, hardware-enabled software solutions and services that can best be described as the fitness tracker for complex industrial machines. At the push of a button, you can learn about a machines' health, down to micrometer changes for each critical component. You can get insights into what maintenance activities you should apply and when. You can monitor how the machines are operated, how to optimize their utilization and much more. All of this is achieved through a plug-n-play installation - for old machines as well as new.

Website

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Järemo Vårdbolag

Järemo Vårdbolag invented a previous labor-intensive method using peripheral blood for diagnosing dementia. Currently, expensive drugs are introduced for curing Alzheimer (AD) requiring an adequate dementia diagnosis. Today it is necessary to do surgery (lumbar puncture) for diagnosing memory problems. Today it is automated and possible to use in the routine. Platelet concentrates (PCs) are transfused without any quality control to acute leukemia patients for avoiding fatal bleeds when on chemotherapy. Järemo Vårdbolag has developed PlateGuard™ which determines PC quality without infringing on sterility. AD diagnosis from blood is highly required and PCs are used worldwide. Thus, both inventions have huge potential.

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Nano Textile Solutions AB

Nano Textile Solutions, with the brand Metamorfish, develops multi-size adaptive textile components, custom-designed for integration into strategic positions of end products such as shoes, clothing, and accessories. Upon activation, the components can adjust to larger and smaller sizes, ensuring a personalized fit with precision. The size adjustment is reversibly possible hundreds of times, offering the opportunity for a circular economy and positive impact across multiple stages of the value chain.

Website

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Novatron Fusion Group AB

Novatron Fusion Group is an innovative leader in the field of fusion energy technology, with its headquarters based in Stockholm, Sweden. Established in 2019, Novatron Fusion Group AB has swiftly emerged as a key player in the pursuit of sustainable and clean energy solutions. At the heart of their endeavors lies the development and commissioning of the NOVATRON fusion reactor design, representing a groundbreaking advancement in stable magnetic plasma confinement. With a team of skilled professionals and a relentless pursuit of excellence, Novatron Fusion Group AB is poised to lead the way towards a brighter and more sustainable future powered by fusion energy.

Website

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NoviOcean, Novige AB

NoviOcean is a revolutionary Hybrid 1 MW Wave, Wind & Solar ocean energy solution, offering unparalleled efficiency and sustainability. With a remarkable output of 15 MW per square km, it surpasses traditional wind power by 1.5 times and achieves an impressive combined output of 2.5 times. Boasting a lifespan of 40 years, NoviOcean is characterized by its low noise, minimal visibility, and eco-friendly design, ensuring no harm to marine life. Utilizing light, few, and proven parts, this solution is cost-effective and delivers immense energy output compared to competitors.

Website

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Nrlyze AB

Nrlyze is a pioneer in optimizing energy flow within HVAC systems, offering innovative solutions that significantly enhance energy efficiency. By meticulously fine-tuning energy distribution, Nrlyze achieves remarkable reductions in energy consumption, costs, and environmental footprint, benefitting real estate owners with up to 20% improvement in efficiency. Their expertise lies in leveraging advanced technologies to precisely balance energy usage, ensuring optimal performance while minimizing waste. Nrlyze's commitment to sustainability and cost-effectiveness makes them a trusted partner for real estate owners seeking to enhance operational efficiency and reduce environmental impact.

Website

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Phoenix BioPower AB

Phoenix Biopower develops large-scale technology for predictable and controllable renewable energy with a potential for 100 million tons of negative emissions by 2050. Our technology platform also enables the production of CO2-negative green hydrogen and can utilize hydrogen as fuel with superior emission performance. The technology for high-efficiency bio-power is based on the integration of pressurized gasification with gas turbine operation. By injecting steam into the process, waste heat can be recovered in the gas turbine and the amount of compressed air minimized for increased electricity production. The technology is suitable for modern combined heat and power or Bio-CCS applications, both with superior performance.

Website

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PokaMind AB

Pokamind is your ally in creating a healthier workplace. We have developed a digital mental health tool using AI. For employees it is a video-journaling platform that empowers them on their mental wellbeing journey by providing them with a confidential space for mental health support, offering immediate feedback, exercises, and educational content. For HR managers, it delivers valuable insights into workforce well-being, enabling proactive strategies to reduce stress, increase emotional intelligence and improve productivity, preventing destructive behaviours.

Website

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Proligreen AB

Proligreen focuses on developing and manufacturing lignin products and process technology. Up to 30% of biomass constitutes lignin. Proligreen has developed a new process technology to produce user-customized lignin with preserved structure from unutilized biomass as raw material. The lignin is high-quality, without odor, and with a bright color that enables bio-based materials in a range of applications. Proligreen's innovative approach not only addresses the utilization of lignin but also contributes to the reduction of waste and the promotion of bio-based materials in various industries. By focusing on user-customized lignin production, Proligreen ensures that their products meet specific application requirements, offering versatility and efficiency to their customers.

Website

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Re:Lab AB

Re:Lab stands at the forefront of innovation in the realm of sustainable waste management. Specializing in life sciences plasticware waste, Re:Lab offers a pioneering closed-loop solution that converts plastics into new plastic products through circular chemical recycling. This approach not only addresses the pressing issue of plastic waste but also contributes to the conservation of resources by promoting a circular economy model. With a commitment to environmental stewardship and technological advancement, Re:Lab is revolutionizing the way we perceive and manage plastic waste in the life sciences industry.

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Reselo

Reselo is a bioeconomy and circular economy company that is driving the next rubber revolution. Based on research from the Wallenberg Wood Science Center and the KTH Royal Institute of Technology, Reselo have developed a cost effective process to turn residues from the pulp and paper and saw mill industry (birch bark) into a sustainable patented bio-rubber, the Reselo Rubber. Reselo will disrupt both the forest industry and the pollutive rubber industry when upvalue the wood residues and replacing both fossil-based synthetic rubbers and natural rubber and avoiding huge amount of CO2 emissions, cutting down rainforests to establish more natural rubber plantations.

Website

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Rivus Batteries

Rivus Batteries develops ultra low-cost, sustainable grid scale energy storage based on proprietary metal-free battery chemistry. With two customer pilots secured this year, Rivus is raising €5M for grid-scale deployment (ticket size: >€1M). Rivus introduces a plug-and-play solution for next-gen grid-scale energy storage. Their organic flow battery chemistry is completely metal free and exhibits exceptional robustness, with over 20,000 cycles, and remarkable safety being both non-corrosive and fire-proof. The raw materials (organic compounds, salts, water) can be sourced at low cost worldwide, aiming for a €0.03/kWh levelized cost of storage by 2026, an 85% reduction compared to lithium-ion batteries.

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Yangi

Yangi is pioneering the future of sustainable packaging with its high-speed and resource-efficient cellulose-based solution, a groundbreaking alternative to plastics. The global energy consumption will grow by nearly 50% between 2020 and 2050, according to International Energy Outlook 2021. All power grid operators are therefore struggling to expand their grids at the same speed as the demand increases. It´s therefore important to use the existing infrastructure to its full potential.

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Zparq AB

Zparq is challenging the limits of marine propulsion by providing the most compact and scalable direct-drive system for propeller-driven watercrafts on the market. Zparq offers electric motors for leisure boats and commercial vessels, where an environmentally friendly, efficient, and quiet propulsion with minimal maintenance is required. A novel yet elegantly simple motor design specifically adapted to submersible applications lies at the core of the technology.

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