

# Smart Cities Spin-Offs

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### AEInnova Aeris Environmental Technologies All Read Machine Learning Technologies BD Care MassFactory Visual Tagging Services EnergloT Ctrl4enviro Davantis SensSolutions Tectum Garden



### AEInnova

AEInnova is a technology company founded in 2014 by high qualified researchers and engineers of the Microelectronics Department at the Autonomous University of Barcelona

The company carries out research and develop thermoelectric energy generation systems aimed at the recovery of the residual heat of the industry in order to offer cutting-edge technology capable of improving its energy efficiency and reducing its environmental impact.

AEInnova has developed INDUEYE, a robust, reliable and easy-to-install industrial IoT Condition Monitoring, fully powered by energy harvesting (waste heat), that allows to remotely monitor the health of machinery or process in order to predict the most optimal time for maintenance. Based on the latest technologies in electronics, communications and computing, AEInnova solution is very easy to install (pretty Plug&Play) and is particularly designed to be used in hardto-reach and cost prohibitive environments. These devices are already operational in the Barcelona Metro, or in the cement silos of Ciments Molins.

#### Contact

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www.aeinnova.com



### Aeris Environmental Technologies

AERIS is a spin-off of the Autonomous University of Barcelona, comprising experts from the GENOCOV research group, aimed at helping industries and public entities to improve the environmental quality of their emissions.

The activity of Aeris incorporates the assessment of the specific environmental problem of the client, integrating the design, the turnkey construction and the operation of biological and/ or physico-chemical systems for the treatment of contaminated effluents. In addition, Aeris can redesing on existing facilities, always seeking to

maximize treatment efficiency and minimize operating costs. In addition to the development of turnkey technologies for the treatment of polluted waters and gases, AERIS carries out extensive research work. Since 2015, AERIS holds the seal of Innovative SME of the Spanish Ministry of Economy and Competitiveness.

#### Contact

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### All Read Machine Learning Technologies

The AllRead Machine Learning Technologies (AllRead) is a spin-off of the Computer Vision Center of UAB: A unique convolutional neural network (CNN)

able to process images and extract structured alphanumeric information with an accuracy above industry benchmarks, in highly unconstrained and complex environments.

All Read develops intelligent reading systems to supply chains around the worldAllRead Software relies on unique deep learning-based recognition models providing highly robust reading in unconstrained environments "in the wild" – where traditional OCR tend to fail. The solution is based on a Convolutional Neural Network (CNN) architecture trained in an end-to-end manner which can directly output readings without any explicit text localization or segmentation step. Bypassing the above steps, and automatically ignoring irrelevant textual content, AllRead yields a 100% automatic, smart, end-to-end and high precision reading system.

#### Contact

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www.allread.ai



### BD Care

BD Care Research is a Technology Based Company (TBC) that uses technology and scientific knowledge developed in Universitat Autònoma de Barcelona

It has direct participation in the capital stock of the EBT aling with the participation of UAB professors and researchers and external professionals.

BD Care provides solutions and services within the field of massive data for companies and institutions, and especially in the general field of health and medical research.

#### Contact

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www.bdcare.cat





### MassFactory

Mass Factory Urban Accessible Mobility, S.L. is a hightech company, spin-off of the Universitat Autònoma de Barcelona (UAB) established in October 2012

The company develops systems based on mobile apps, with geolocation and on the cloud processing intended for route planning, guidance and supervision of people with special needs when going around the city, improving their mobility, quality of life and social inclusion.

The mobile application "OnTheBus" (nowadays "App&Town Going with you"), became the first service of the company.

App&Town is an accessible application for mobile devices with Android operating system that leads from a source to a destination using metropolitan transportation. The application uses the latest technology available on mobile devices, such as GPS, compass and accelerometer, recognition or speech generation and 3G or WiFi connection to provide a system of maps and guide.

#### Contact

- Email: info@massfactory.com
- www.appandtown.com

Spin-off Campus UAB

### Visual Tagging Services

Visual Tagging Services is a technology based company that develops and markets intelligent information systems that allow recognition of objects from images

Through a system of algorithms developed by the Computer Vision Center (CVC) at the UAB, the company has created a program able to analyse videos and photographies real time, classifying and detecting products, brands and logos, within their use context.

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www.visual-tagging.com



## EnergloT

EnergIoT is a spin-off of the Institute of Microelectronics of Barcelona (IMB-CNM CSIC). The company offers an unique high-level and specialized engineering service in matter of energy harvesting, self-powered devices, wireless sensor networks and Internet of Things

They carry out the full development-cycle, from design to characterization, going through simulations, fabrication and certification.

The company has developed a Smart Grid Monitoring Solution, an IoT smart device that monitors grid assets, helping to enhance services, reducing operational and maintenance costs.

#### Contact

 IMB-CNM, Carrer Tillers s/n, Campus UAB (08193, Bellaterra (Barcelona) Email: contact@energiot.com

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### Ctrl4enviro

Ctrl4enviro is a highly innovative computer vision analytics technology company based in Barcelona. It was founded in 2006 from a research project together with the Autonomous University of Barcelona

Collaborations with several research institutions and departments from the University, such as the Computer Vision Centre and the Statistics Physics Group, have led the company to achieve the best innovative solutions for many challenging projects.

Ctrl4enviro develops solutions for smart mobility, people monitoring, surveillance and optimization

of heating, water treatment and lighting. At the heart of the company solutions, there is their customized Image Analyser and IPP Kernel software platform to analyse video images and integrate, process and publish results.

#### Contact

 Eureka Building, Parc de Recerca UAB (08193 Bellaterra) www.ctrl4enviro.com



### Davantis

Davantis Technologies was founded in 2005 at the Universitat Autònoma de Barcelona. The company's focus on video analytics program writing and software development makes it unique in video security

Davantis systems can be incorporated into any video camera surveillance set-up, whether new or existing, analogue or IP, visible light or thermal, and can be integrated with any hardware manufacturer. Davantis use highly sophisticated proprietary algorithms to provide unbeatably accurate and effective automatic monitoring and notification of actual threat detection.

#### Contact

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Spin-off Campus UAR

### SensSolutions

SensSolutions is a company created in 2006 with the aim of creating innovative solutions to improve the environmental quality of air and water.

The company has developed a global IoT platform for real-time air monitoring based on smart sensors and data management service for in and outdoor, a global IoT platform for real-time air monitoring detecting and identifying the presence of bacteria in indoor spaces and a smart disinfection system for water eliminating automatically bacteria and microorganisms based on a controlled a non-aggressive purification.

#### Contact

 Eureka Building, Parc de Recerca UAB (08193 Bellaterra) www.sens.solutions



### Tectum Garden

Tectum Garden is a spin-off of the UAB, created in 2020 by the research group Sostenipra at the Institute of Environmental Science and Technology (ICTA-UAB)

The company is specialists in urban agriculture and has a multidisciplinary team with knowledge of technical and agronomic aspects, environmental impact, eco-design of elements, among others. They offer design, installation and maintenance services for urban gardens and other urban agriculture systems, training on how to build an urban garden, advice and consultancy.

They have recently presented, together with the furniture company Kettal, an Hydroponic Garden prototype. It consists of an office module in which a hydroponic garden with edible vegetables is incorporated. The aim of the Hydroponic Garden is the edible renaturation of indoor and outdoor spaces. The vegetables are grown without soil, in a light substrate that avoids overweight. The irrigation is low water consumption, drip, which contains dissolved fertilizers adapted to the plants, and the excess water rich in nutrients is reused. The lighting, artificial light using LEDs or natural, is adapted to each crop. The materials used are 75% recycled and 100% recyclable.

#### Contact

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