
BUSINESS
FINLAND
CleanWeb
Programme
Project examples

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Mayors' Sustainable Development Indicators

Benviroc Oy

Challenge: Cities worldwide set targets to pursue the Agenda 2030 Sustainable Development (SD) Goals, in order to improve state of the environment and quality of life. Comprehensive indicators allowing measurement and comparison of Cities' SD performance has not been available.

Solution: Mayors' Sustainable Development Indicators provides Cities with easy online access to data measuring their performance towards SD Goals. It also allows comparison across Cities and provides a platform for Cities to cooperate and share best practices.

Benefits: Cities joining the Mayors' Sustainable Development Indicators service get high-quality, annually updated data on their performance towards SD Goals in a cost-effective manner. The service facilitates informed action through unique benchmarking to other Cities.

The service allows Benviroc to broaden the customer base from Finnish to European and later to North American and Asian Cities.

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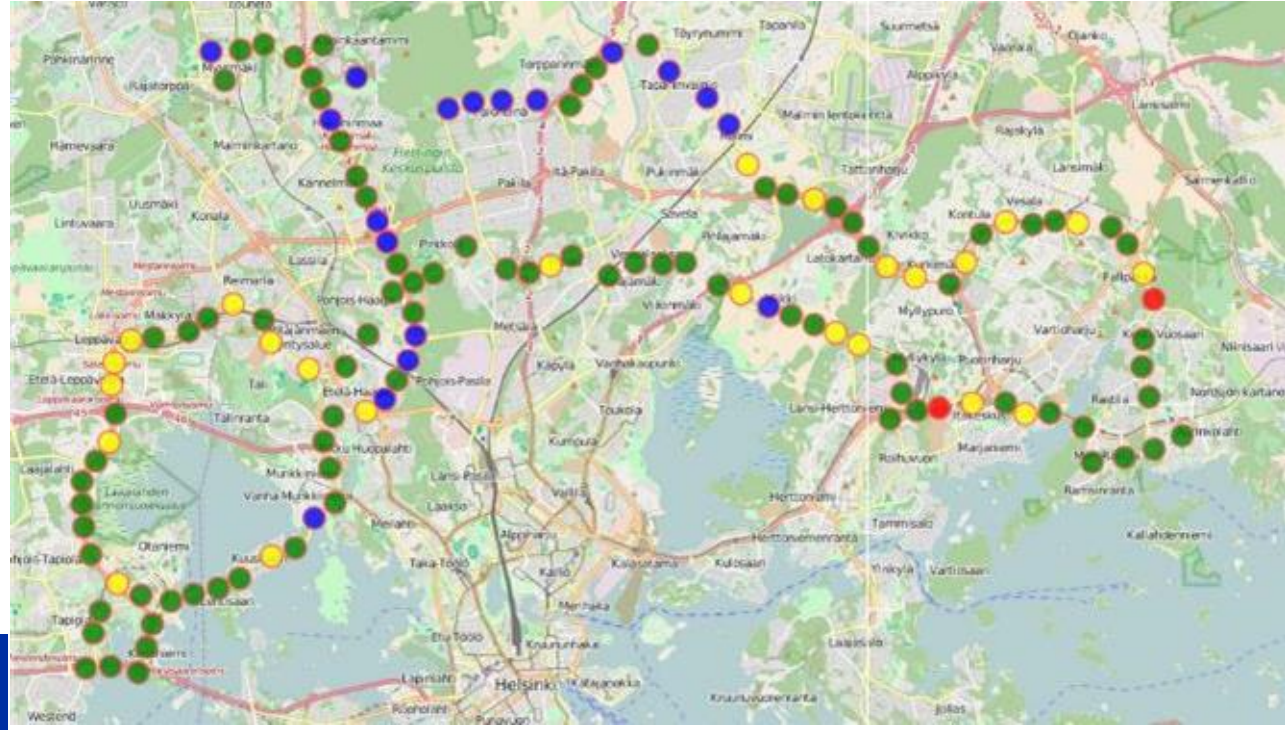
EEE Innovations: Real-time slipperiness detection and driver assistance systems for heavy traffic



Challenge: EEE Innovations is commercializing two patented inventions by VTT Technical Research Centre of Finland, to provide real-time information on road conditions and driving patterns. Vehicles are used as moving sensors, and data derived from their computers is refined, analyzed and forwarded to end users.

Solution: The eGrip slipperiness detection system can map hazardous road conditions such as black ice more accurately than any other methods currently in use, while eDas, the drive optimization system, can guide drivers towards more ecological and economical driving, resulting in improved road safety and significant savings in fuel costs.

Benefits: “The system we are now building provides valuable information for the benefit of drivers, road maintenance operators, fleet managers, authorities, insurance companies, vehicle computer manufacturers and self-driving cars.”

Jarmo Leino
CEO
EEE Innovations Oy

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On Demand Business Model for Waste Services

Enevo Oy

Challenge: Waste industry has been relying on the same old methods of scheduling trash collections based on static pick-up schedules for customers. This model is very costly in terms of time, energy, and money. The biggest market is in the USA.

Solution: Enevo wants to introduce totally new way of operating based on on demand pick-up schedules which are calculated dynamically using the real time fill level measurements from waste containers.

Benefits: On-demand business model could dramatically change the whole waste industry, create significantly better level of recycling, consume less resources and accelerate global shift towards circular economy. At the same time it would create vast market for Enevo's technology and waste services offering.

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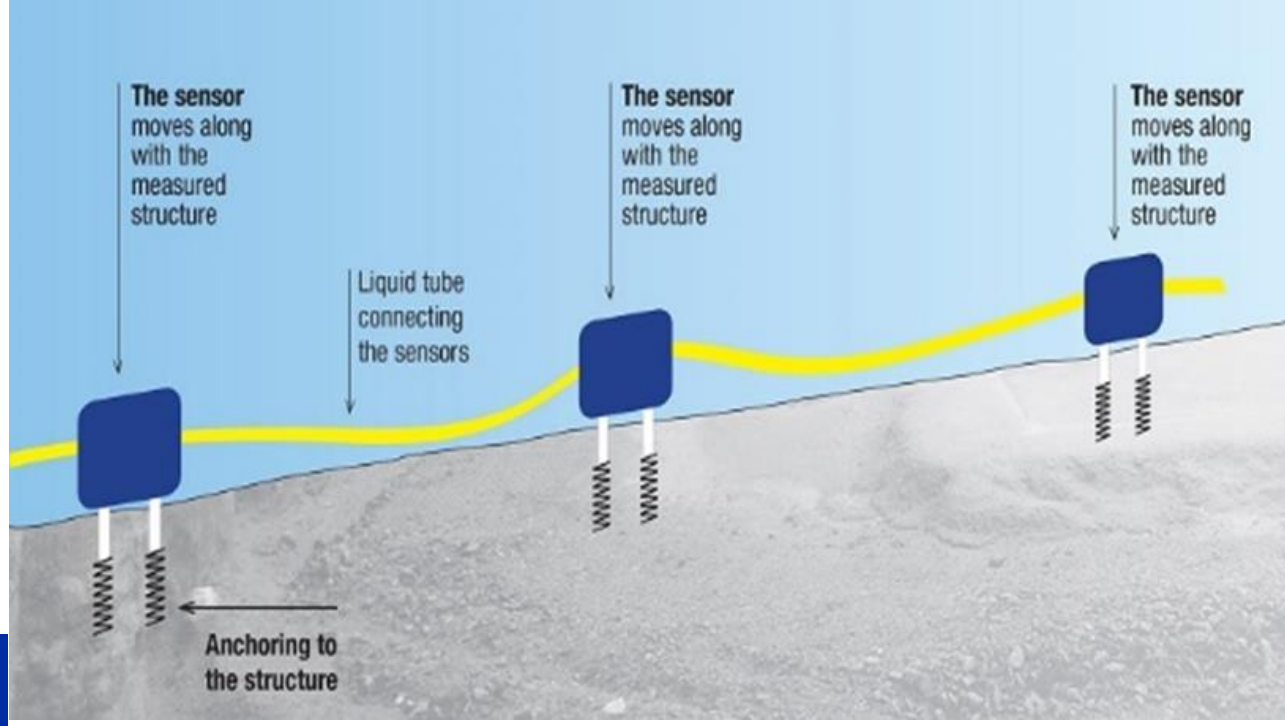
Automatic measuring of settlements

FinMeas



Challenge: Safety at work sites and infrastructure can not be guaranteed if movements of stuctures aren’t known. FinMeas's customers include infrastructure owners, construction companies and designers. Our target market is Northern Europe.

Solution: Our automatic monitoring solutions help you to increase safety, reduce costs and streamline working. The automatic settlement measuring device is used for monitoring the movements of road and railway structures, for example.

Benefits:

- Real time and exact information of possible settlements
- Remote reading reduces unnecessary costs, delays and risk of errors
- The service can be configured with threshold values which, when triggered, automatically send an alarm to mobile phones or emails of persons in charge

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Data-driven interactive decision making software to promote cleantech solutions

FINNOPT

Challenge: Decision making is difficult due to lack of tools that help the decision makers to learn about their environmental decision problems, understand the trade-offs that exist between solutions, perform what-if analysis and find a desirable solution to the problem.

Solution: Decision making is difficult due to lack of tools that help the decision makers to learn about their environmental decision problems, understand the trade-offs that exist between solutions, perform what-if analysis and find a desirable solution to the problem.

Benefits: Cleantech businesses and agencies around the globe are provided a possibility to make effective cleantech decisions.

"The ability to process several objectives and interactivity is what makes FINNOPT's software unique in the current market."

Silvia Poles
Noesis Solutions

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REINO: IoT to optimise building energy use for sustainable energy systems

Aalto University

Challenge: Buildings consume about 40% of total global energy. Increasing solar and wind electricity production requires flexible energy systems. Building energy use can become more flexible and energy costs can be cut by new, intelligent steering algorithms.

Solution: We develop intelligent demand management of the energy system with companies aiming at international growth. We develop building energy management algorithms and test them in real buildings. At Otaniemi campus, we conduct heating management tests and collect user feedback.

Benefits: Energy demand peaks can be cut with IoT and intelligent algorithms, resulting in savings for both the consumer and energy producer. User feedback helps to improve building conditions and to find the right measures for improved comfort and savings. New energy management products for growing international markets are created and tested.

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New Groundbreaking Concept to Measure Air Quality in Nanjing

Vaisala Oyj

Challenge: Air quality is a growing health problem around the world. More than 80% of people living in urban areas are exposed to air pollution levels that exceed WHO limits. While all regions of the world are affected, people in densely populated and highly polluted megacities, especially in Asia and in China, are impacted the most. Therefore decision makers seek for accurate air quality information and forecasts to target their activities. Also citizens are interested in air quality data to plan their activities in everyday life.

Solution: A dense 3-D air quality observation network will be built in the megacity of Nanjing and the Yangtze River Delta in 2017–2019. The project advances several new growth areas in ambient air quality monitoring: supplementary air quality networks, remote sensing for vertical pollutant profiling, advanced air quality modelling and nanoparticle monitoring. The key technologies have been developed in Finland and are now piloted in the demanding conditions of China.

Benefits: The air quality services and applications developed in the project will be crucial for local air quality forecasts and decision making in Nanjing area. They will also provide tools to better understand the complex air quality environment in China.

Generally the project will be a unique showcase for a comprehensive air quality monitoring concept which can be easily copied to global markets. Vaisala looks for strong growth in air quality business area based on this project.