PLANtAR

Minaturized monitoring sensor systems for plants and agriculture

Project Vision

PLANtAR aims to develop cost-efficient, miniaturized, networked and partly biodegradable monitoring electronics to help tackle one of the world's biggest challenges: producing enough food over 9 billion people while also protecting the environment. In order to solve the dilemma between high-yield intensive agriculture and environmental protection, cross-sector approaches are required, with digitalization playing a key role.

Project Goals

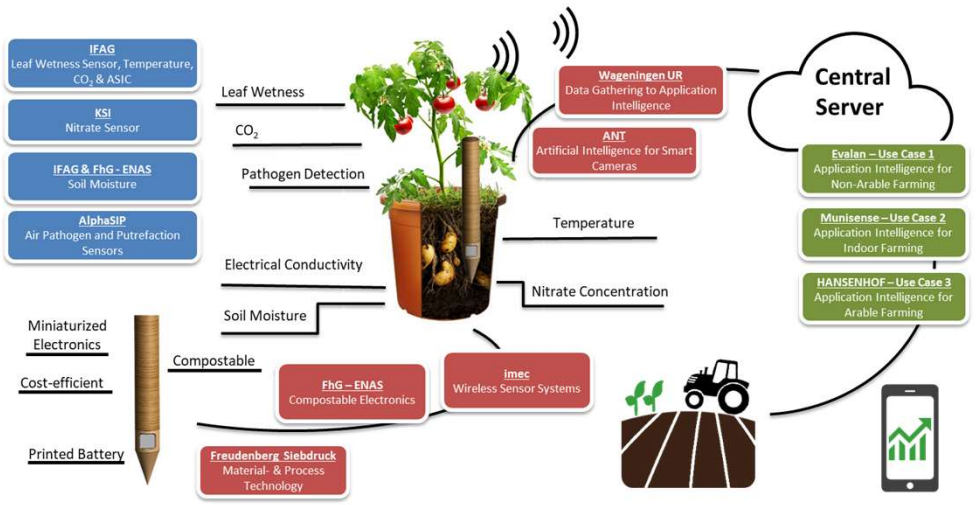
Sensors can provide timely warnings of plant stress and / or diseases. By measuring factors such as soil moisture, EC and content of nitrogen, ammonia, surface temperature, solar radiation, leaf wetness, CO_2 and detecting pests and plant pathogens, digital technologies can help significantly increase yields per cultivated area. And at the same time, they can assist in reducing water, energy, fertilizer and pesticide use.

Project Structure


Use Case 1: Non-Arable Farming


Use Case 2: Indoor Farming


Use Case 3: Arable Farming



Project Coordinator

Ulrike Glock

Institution

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Website

www.plantar-project.eu

Start

01-11-2020

Duration

36 month

Partner Organizations

Industry: 2
SME: 6
Institute/University: 4

Funding Organizations

GEFÖRDERT VOM
Bundesministerium für Bildung und Forschung
PROJEKTTRÄGER
VDI|VDE|IT
Ministerie van Economische Zaken en Klimaat
MINISTERIO DE CIENCIA E INNOVACIÓN
CDTI

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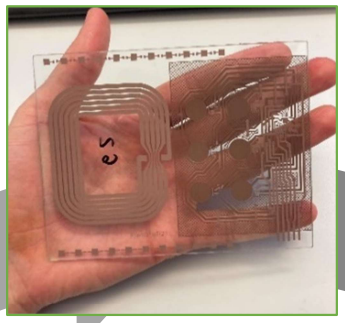
Project Objectives

Cost-efficient | Miniaturized Electronics | Biodegradable

Project Technologies and Development

Printed Antenna on Wood



Printed Circuits

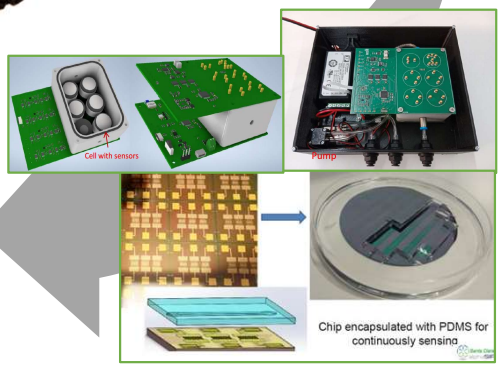
Leaf Wetness Sensor

Electrical Conductivity (EC sensor)

Biodegradable Battery

Soil Moisture Sensor

Nitrate Sensor



E-Nose (putrefaction sensor)

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