



Projekt
Good Food

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Project Management:
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Project Partners:
EU FP6 Consortium of 29
companies, research organiza-
tions, universities and institu-
tions of 10 countries.

Project Budget
CHF 495.000

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Institute of Electronics

GoodFood - Food safety and quality monitoring

The institute of electronics plays a major role in the EU project GoodFood, which controls and monitors the quality of food products and the food chain.

Motivation

GoodFood aims at developing the new generation of analytical methods based on Micro and Nanotechnology (MST and MNT) solutions for the safety and quality assurance along the food chain in the agro-food industry. The main demands identified by the agro-food sector will be the applications that will drive the technological developments within GoodFood. The need for increasing the control of products at different critical steps of the food chain (control of raw materials and food supply, improvement of food processing, monitoring of storage and logistics, and control of safety and quality of final products) will be addressed by GoodFood with a vertical and horizontal integration of food, bio, and electronics experience for developing a set of systems with clear breakthrough solutions to specific safety and quality and traceability requirements.

Description

It is the main aim of the GoodFood project to trace and monitor the food chain at every step, from farmer to the consumer. This will be accomplished by the massive use of intelligent sensor networks. The project, due to its multi-disciplinary nature, will be implemented in 9 separate work packages. Several sensors with specific functionalities will be implemented in various work packages. Communication between these sensors will be accomplished inside sensor webs. Each sensor web element, also known as a smart sensor, will consist of one or more application specific sensors, communication modules and a processor. These elements will communicate among themselves, hence sharing their data with every neighbour element. Data coming from neighbour sensors will add to self intelligence of each smart sensor, hence providing a means of adaptation. The elements of the web and eventually the sensor web itself will be a continuously evolving organism. In this sense, the sensor web can be likened to the human brain, where simple cells, when come together, form the complex and adaptive brain. The sensor web concept will be implemented within work package 7 (WP7) and HTA will have the following design and implementation responsibilities, which are perhaps the most critical parts of the GoodFood project:

- Wireless communication (SensorWeb) protocols,
- Development and miniaturisation of Satellite components,
- Secure communication architectures, protocols and interfaces.

Results

The miniaturisation achieved at the end of the GoodFood project will allow future migration of lab solutions to simpler MST based solutions, reducing size and cost of laboratory systems.

