Smart Metering and Process Monitoring
Optimization of water and energy consumption in tea factories

What is smart metering and process monitoring (IOT)?
Close data capture on real-time basis on resource utilization at factory and process scale is an important process to document, monitor and verify gains from water and energy efficiency measures. Smart metering coupled to an internet of things (IoT) platform allows for the dynamic and intelligent control of processes using data collected by smart meters. Close process monitoring helps to increase resource efficiency in tea factories, but also in other agro-processing facilities.

What are the main features?
The developed IoT-based smart factory energy and water management system helps to control different equipments wirelessly. Process data are collected by sensors and are processed to regulate end users. Fans are controlled depending the humidity level in the drying house and lamps are switched on/off based on light intensity. The water distribution to end users is based on real-time demand. With learning capability through integration of Artificial intelligence (AI) the system will have both predictive and prescriptive capabilities.

What are common uses?
The IoT platform is the central data repository and decision-making engine and driver for wood seasoning sheds and smart water and energy metering system installed at tea factories. The system optimizes the water and energy-resource utilization efficiencies of different processes in tea production.

Market Development
The internet of things is a field that has evolved due to the convergence of multiple technologies, including ubiquitous computing, commodity sensors, increasingly powerful embedded systems and machine learning. Developing customized IoT solutions for tea factories is expected to introduce technical, economical and environmental benefits to the overall production processes.

Project overview
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