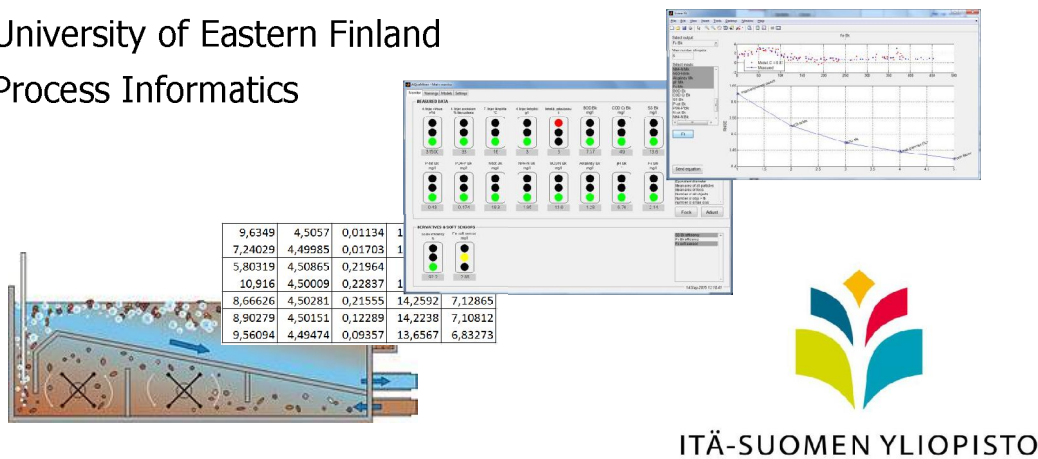


MMEA KeyDemo 17.9.2015

# AQuaMiner – Monitoring and modeling platform for water treatment applications

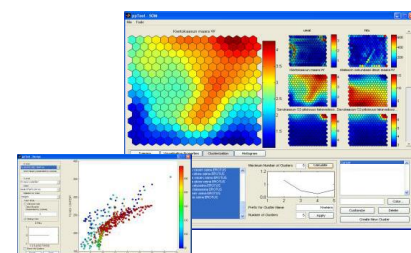
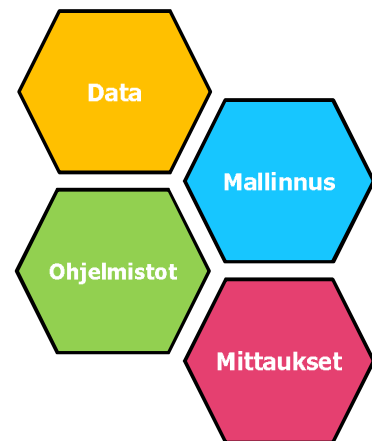
Mika Liukkonen  
University of Eastern Finland  
Process Informatics

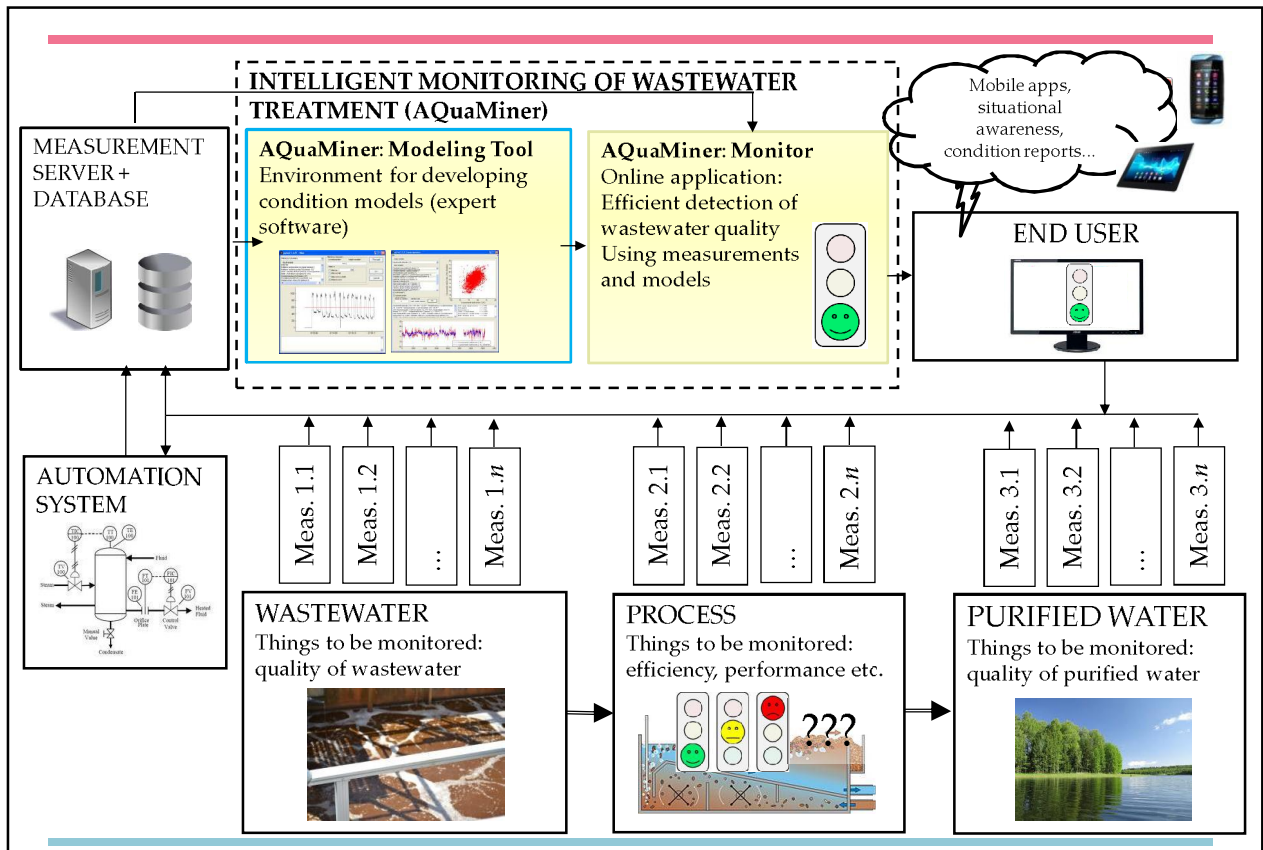


ITÄ-SUOMEN YLIOPISTO

## Prosessi-informatiikan tutkimusryhmä

- **Sijainti**  
Itä-Suomen yliopisto, Kuopion kampus
- **Know-how**  
Datankäsittely ja tiedonlouhinta, mallinnus, ohjelmistot, ennakoivat järjestelmät, erikoismittaukset
- **Referenssialoja**  
Energieateollisuus, kemianteollisuus, selluntuotanto, veden- ja jätevedenpuhdistus, elektroniikkateollisuus



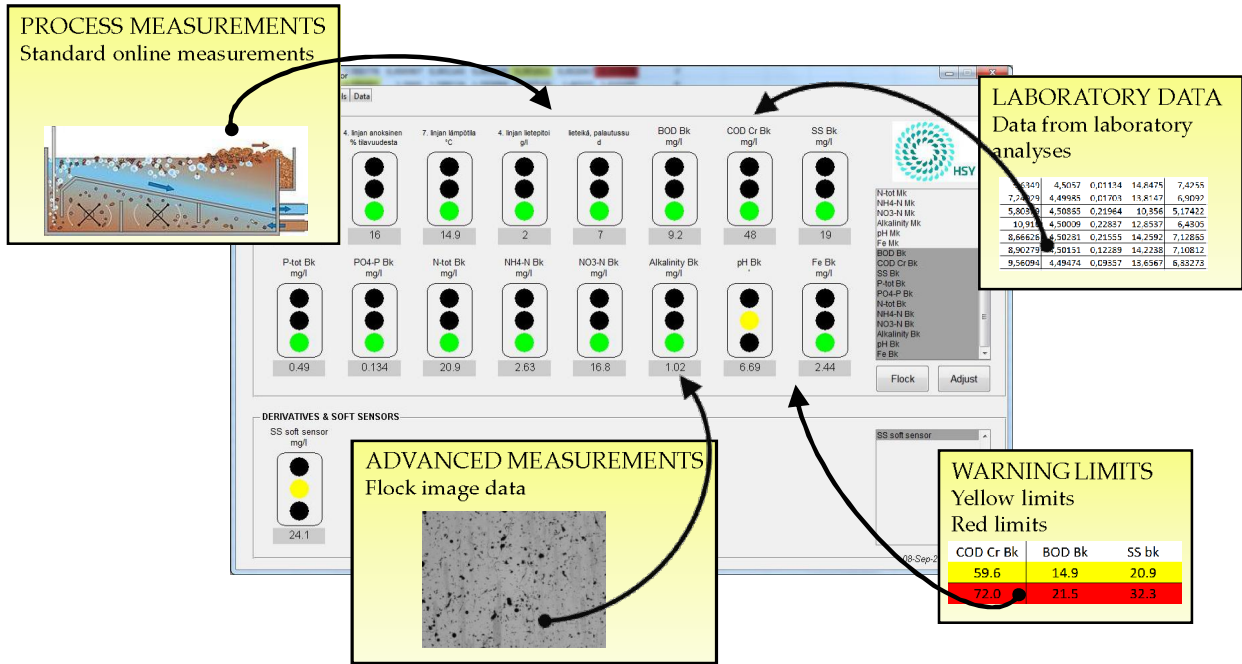


## Applications

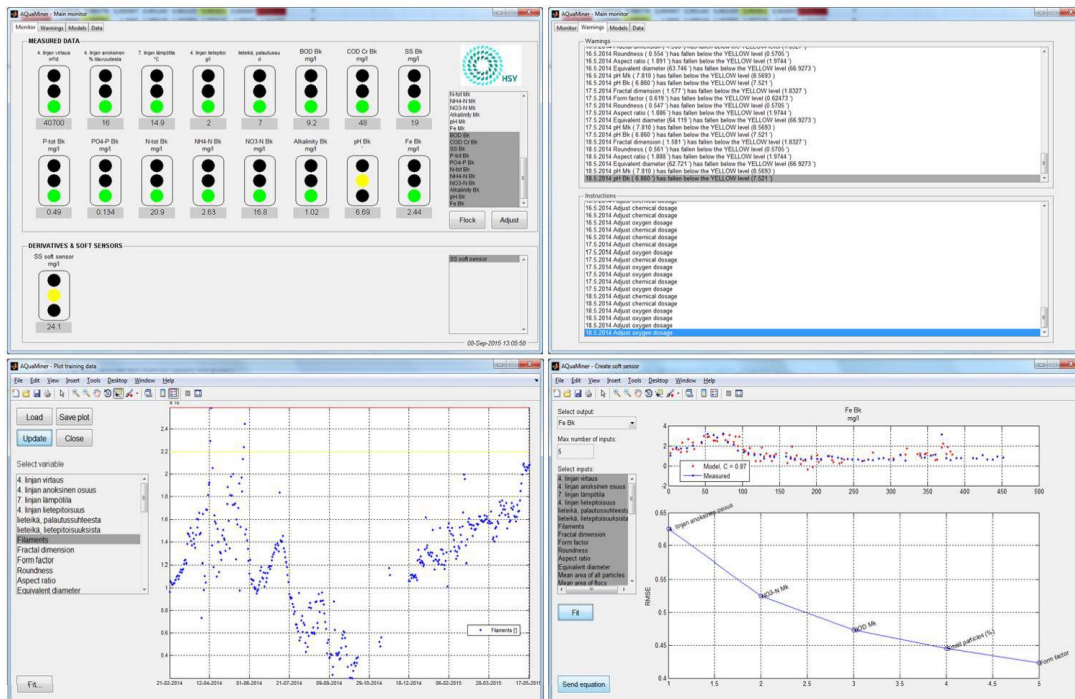
- Stora Enso Fine Paper (Oulu)
  - The activated sludge treatment plant of the pulp mill treats 300 – 500 l/s of waste water on an average.
- HSY Viikinmäki wastewater treatment plant (Helsinki)
  - Total flow rate 270 000 m<sup>3</sup>/d



# Introduction to UEF KeyDemo: HSY data sources



# The AquaMiner platform



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## Summary

- *AQuaMiner* platform for water treatment applications has been developed
- Presentation of different data sources in one single monitor
  - Process measurements, special measurements, lab data...
- Warnings and alarms
  - In-situ and mobile warnings
- Enables more efficient use of measurements
  - Direct, simple visual monitoring approach
  - Analytical properties (process history)
  - Applicability to provide predictive and derivative variables => decision support

