

# Wirelessly Accessible Sensor Populations (WASP)

European (FP6) IST Integrated Project  
Run time: from Sep 1, 2006 to Aug 31, 2010  
Coordinator: Philips Research Europe  
(Martijn Bennebroek)



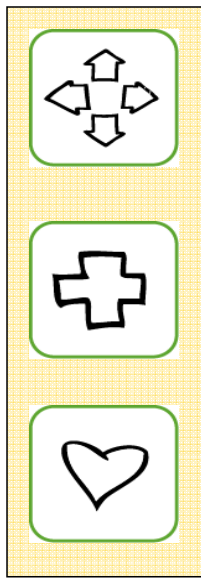
## Outline



- (short) WASP project overview
- test beds
  - Elderly Care -> Smart Elderly Homes (Ambient Assisted Living)
  - Livestock monitoring -> Smart Dairy Farms
- Wrap-up
  - link to UniversAAL and AALOA initiative



# Livestock monitoring - societal relevance



**Increasing farm scales**

*In EU: 90 million cows  
150 million pigs*

**Animal health**

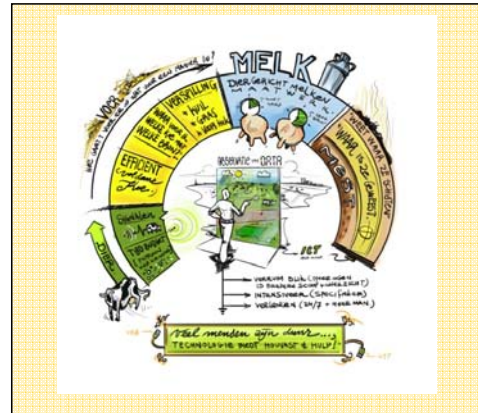
*From curative to preventive*

**Animal welfare**

*In full discussion*

## Towards Smart (Dairy) Farming?

*observation of individual animals*



- early identify cows that need attention (most costly to farmer)
- Four critical processes (feeding, oestrus, calving, and activity behaviour)
- WSN + behavior models capable of 24/7 observation?

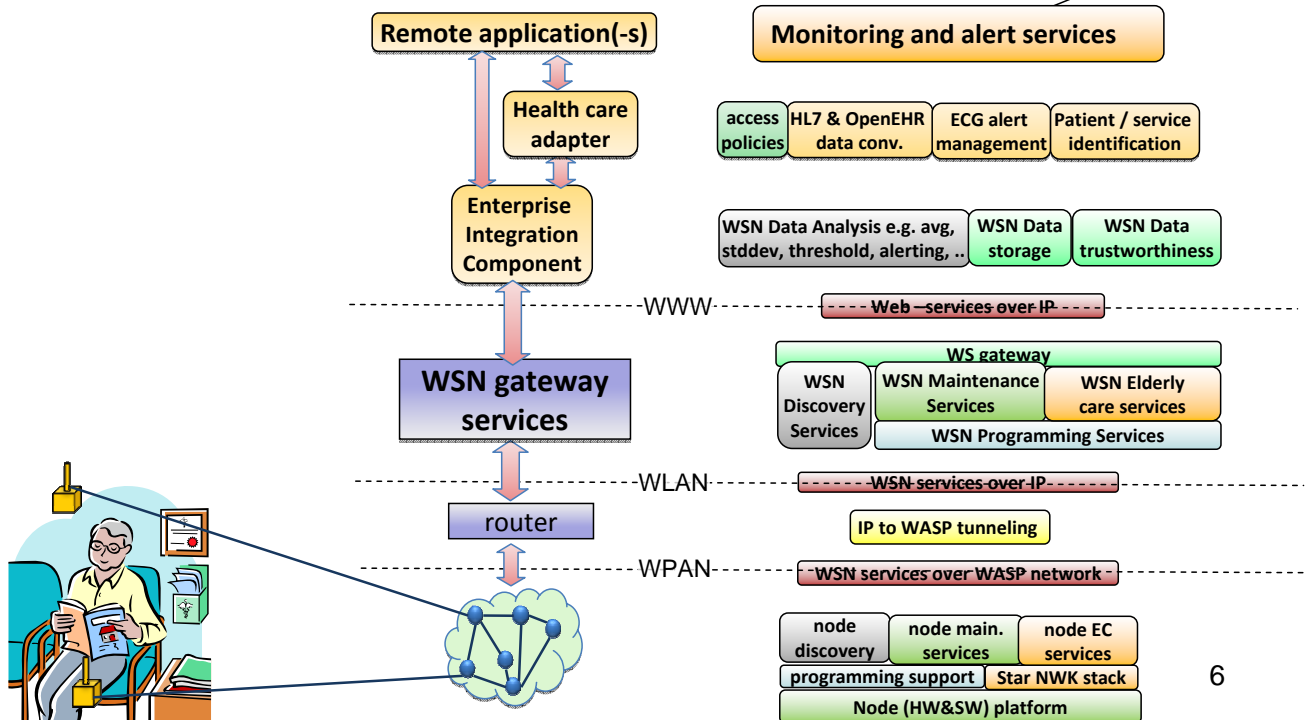
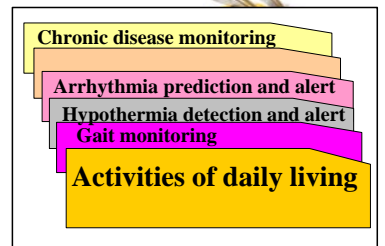


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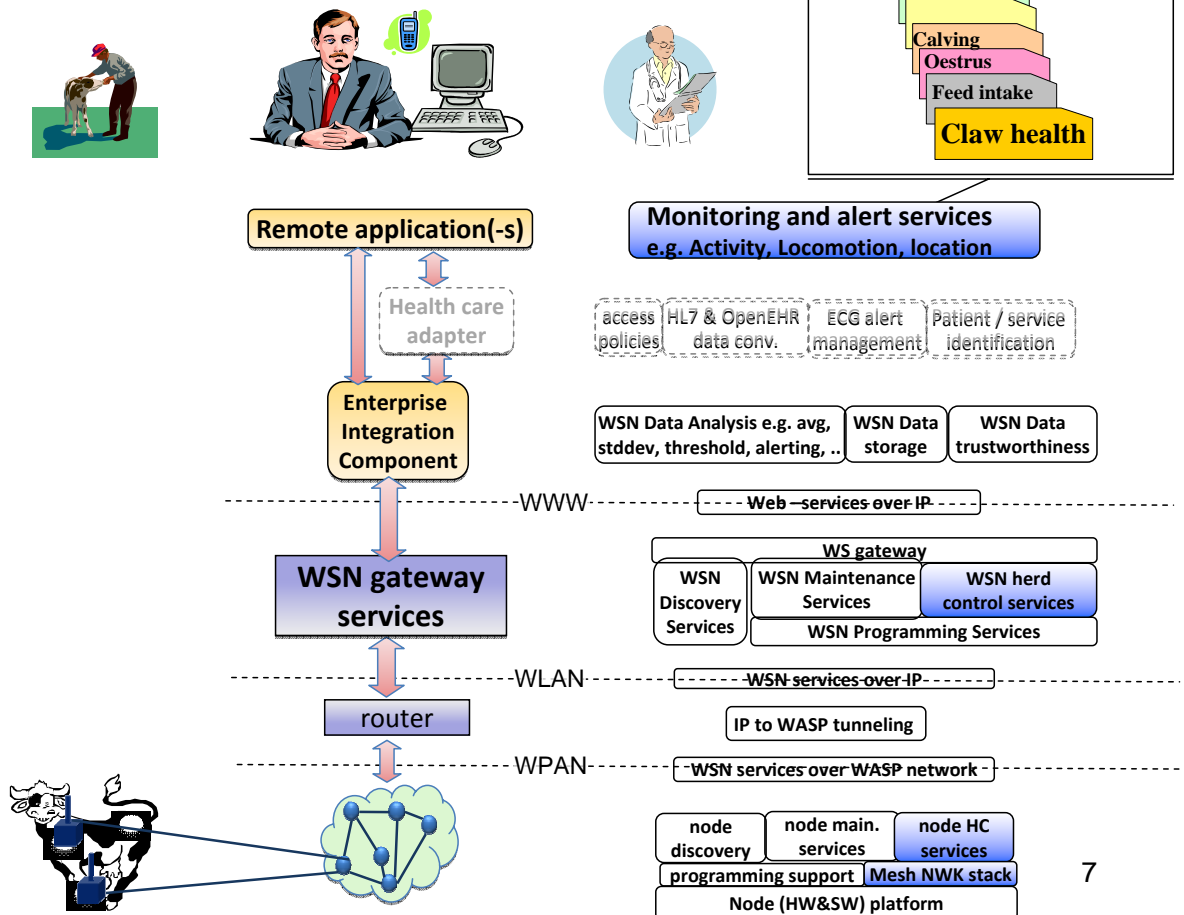
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# WASP - Remote Elderly Care Monitoring



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# WASP - Remote Livestock Monitoring



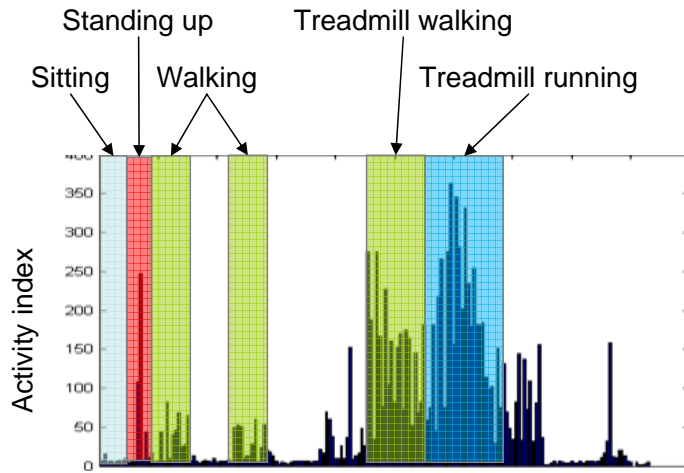
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# EC test bed status - *first scenario tests*

*e.g. monitoring of Activities of Daily Living*



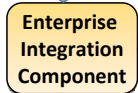
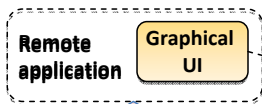
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# EC test bed status – *preparing for scenario extensions*

*e.g. monitoring of Activities of Daily Living*



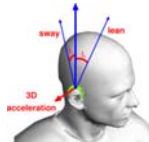
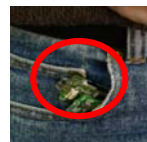
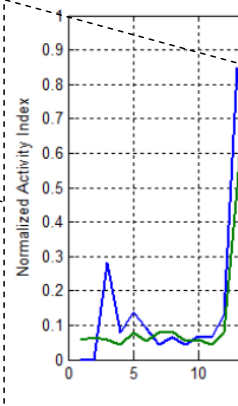
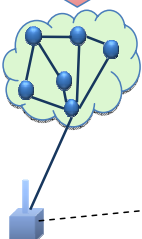
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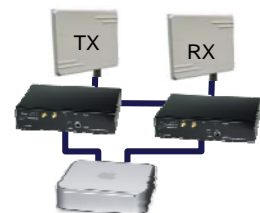
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WPAN

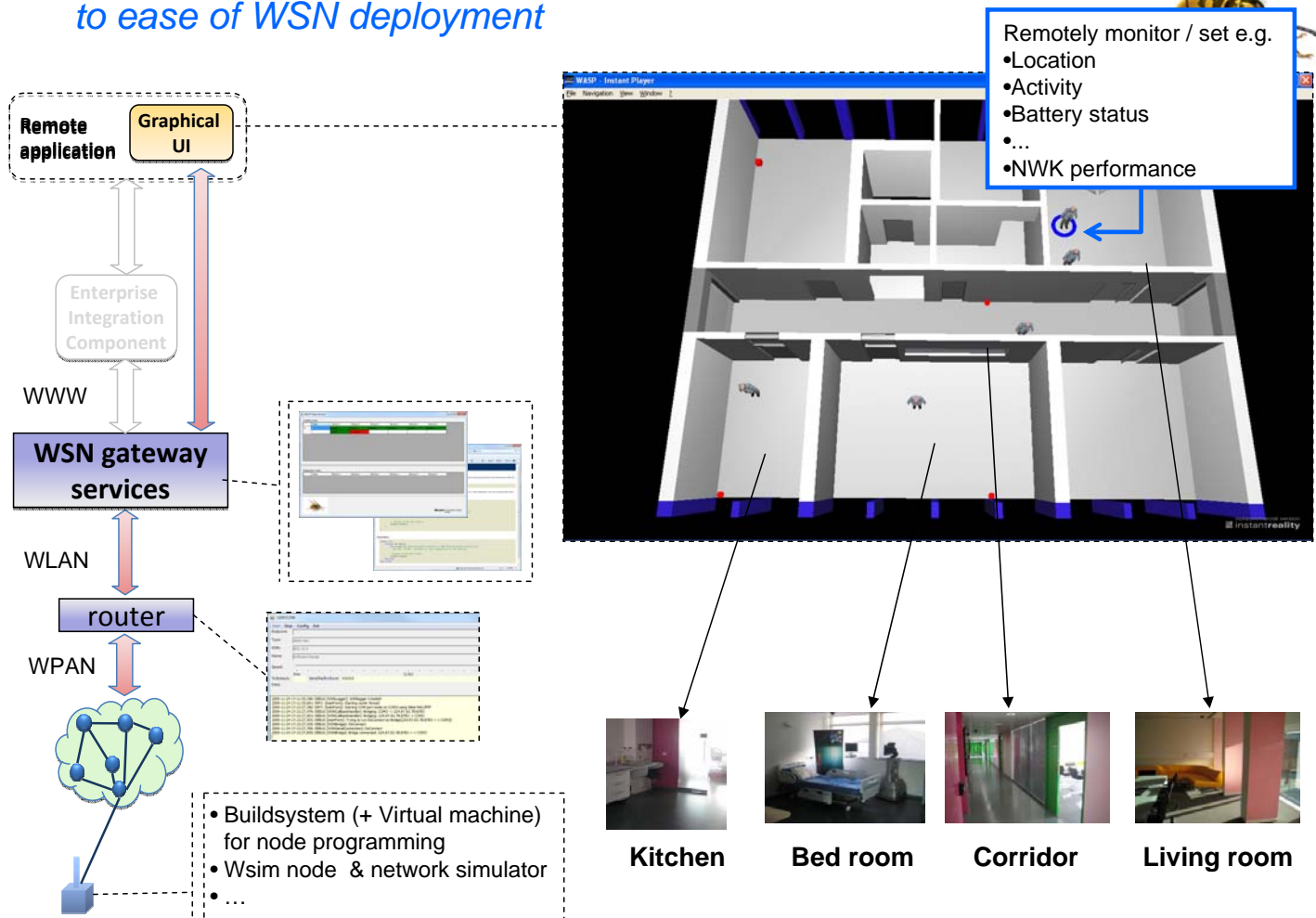


Body-worn activity sensors

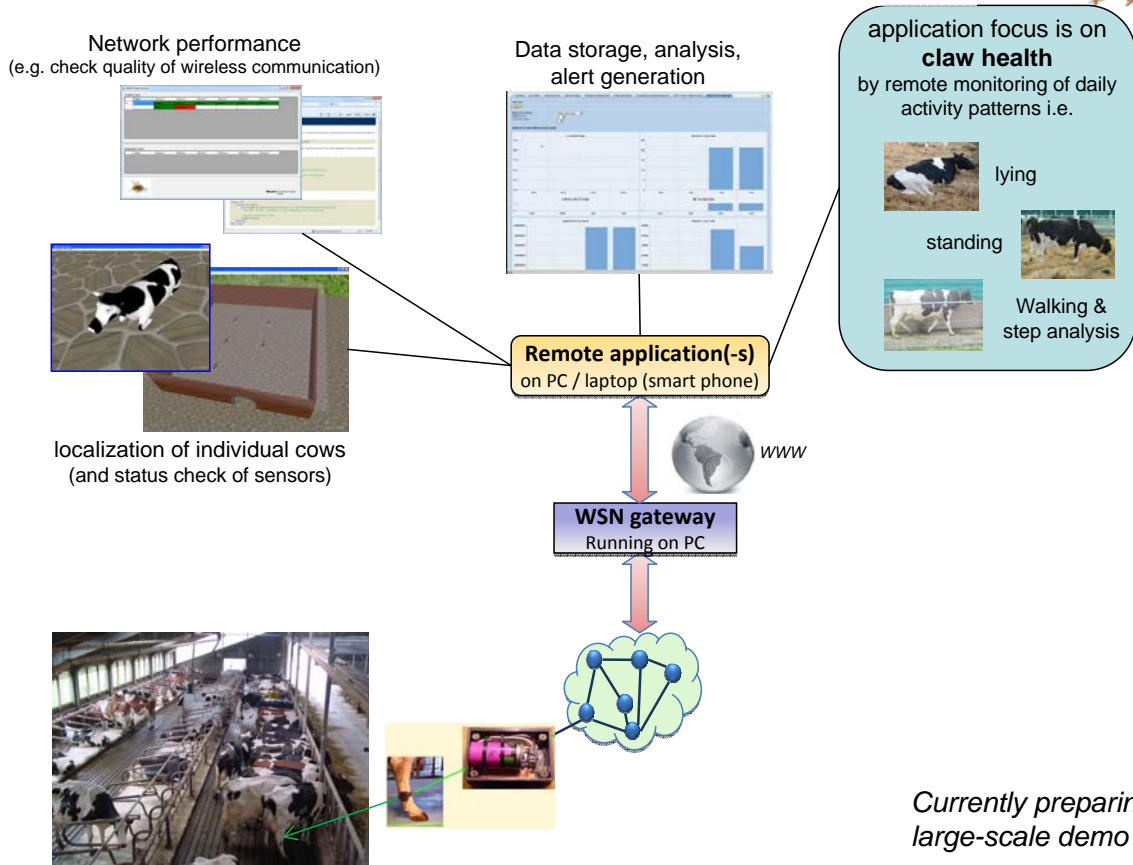


ambient activity sensor (concept)

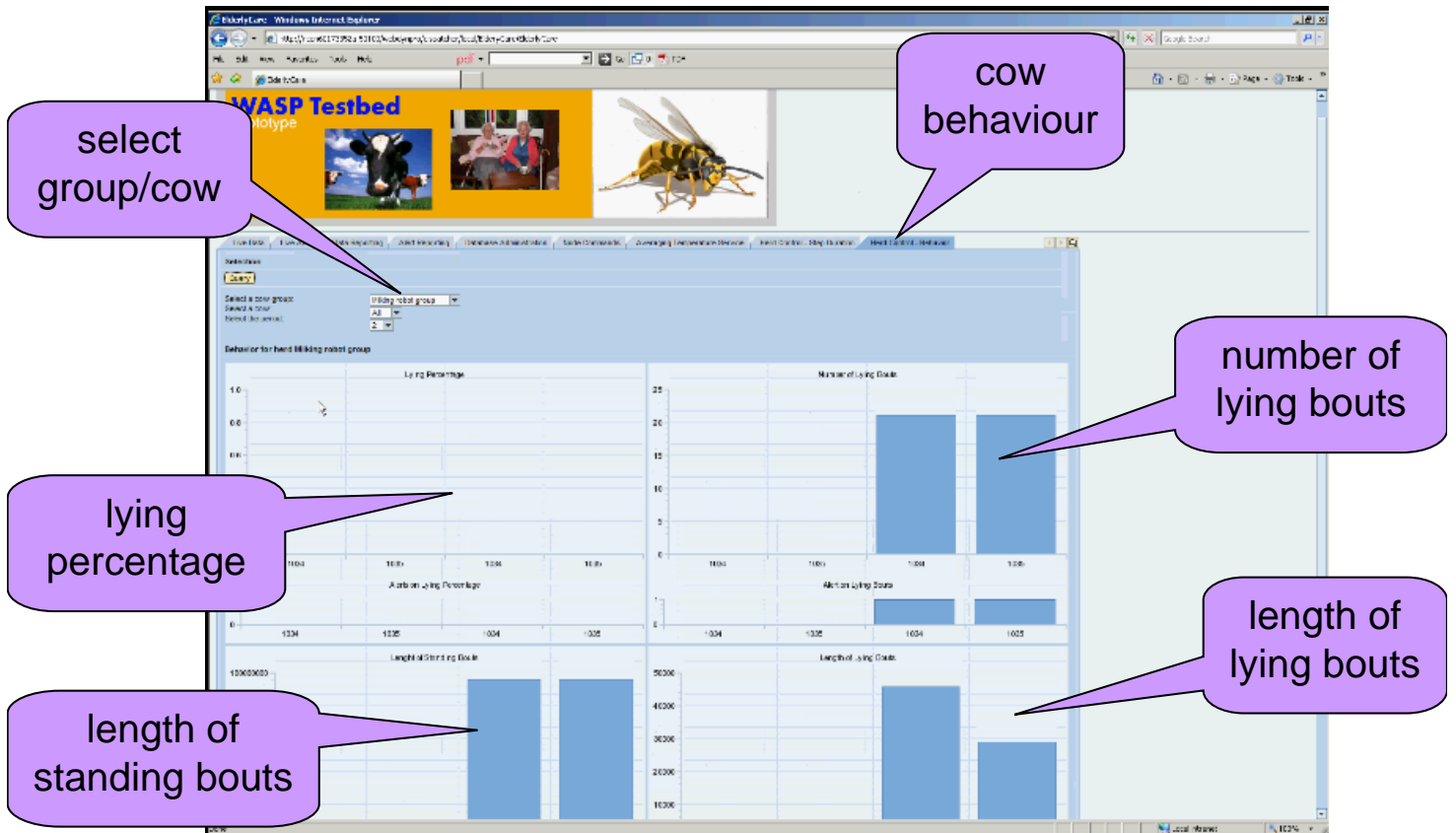
# Various (compile- & run-time) tools to ease of WSN deployment



# Livestock test bed – in Dairy Test Farm in Lelystad (NL)



# Livestock test bed – GUI for data analysis



## Wrap-up



- **Elderly Care and Livestock** test bed integration is progressing well
  - validate WASP technologies for relevant use scenarios
- Besides integration, also promising innovative work
  - e.g. energy-efficient on-sensor processing, QoS trade-offs, CCBR interaction, security, data trustworthiness, ...
- stay tuned through [www.wasp-project.org](http://www.wasp-project.org)
  - also on dissemination and industrial pick-up
- WASP linked to universAAL and its “Ambient Assisted Living Open Association” (AALOA)
  - several WASP partners interested in re-using WASP results
  - support universAAL and provide reference architecture
  - more information on AALOA presentation by Saied Tazaoui



# WASP – public website [www.wasp-project.org](http://www.wasp-project.org)



## dissemination page

- open source software (e.g. new modules, bug fixes, OMNET models, ...)
- sensor data sets
- ...<more to come> ...

watch some demo and test bed video's and a webcam link to the herd control test bed

Links to WSN-related programs, projects, and blogs

List of publications, presentations, and panel discussions

More info on work packages e.g. D7.2 on SME requirements

WASP news and events e.g. 3rd SME workshop start-up Industry pick-up

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