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COPD24: Future Internet eHealth Scenario

Katarzyna Wac¹, David Hausheer²

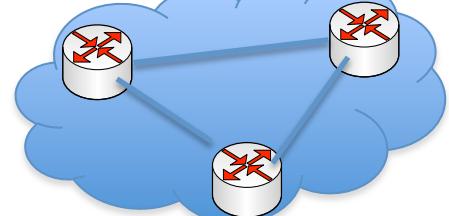
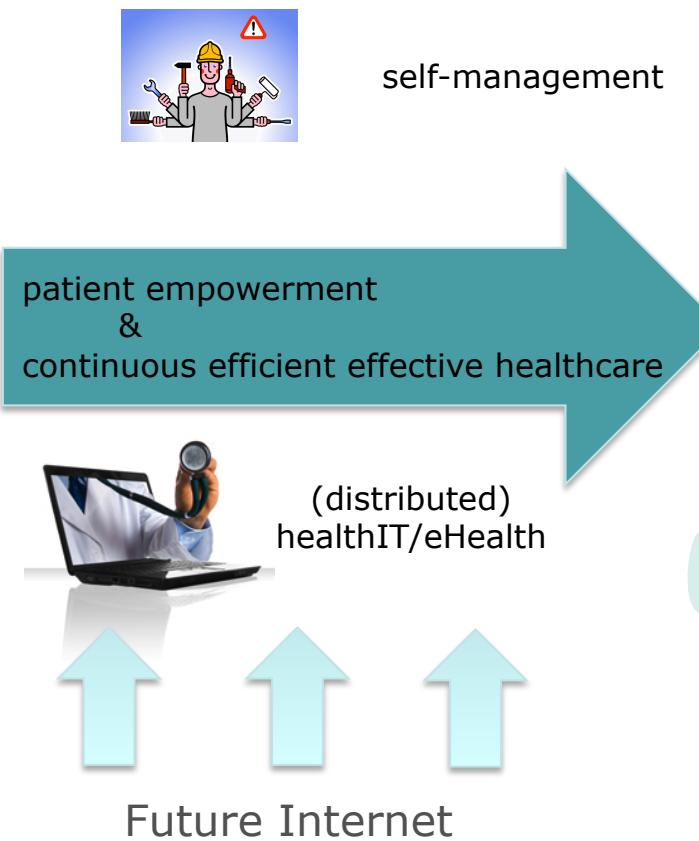
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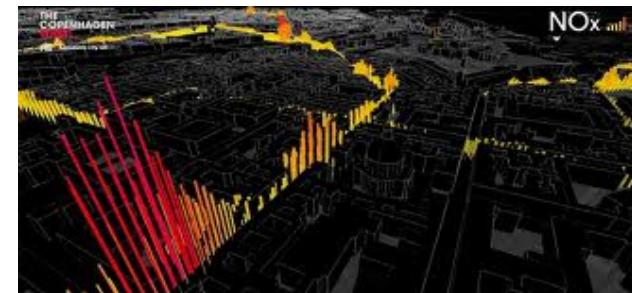
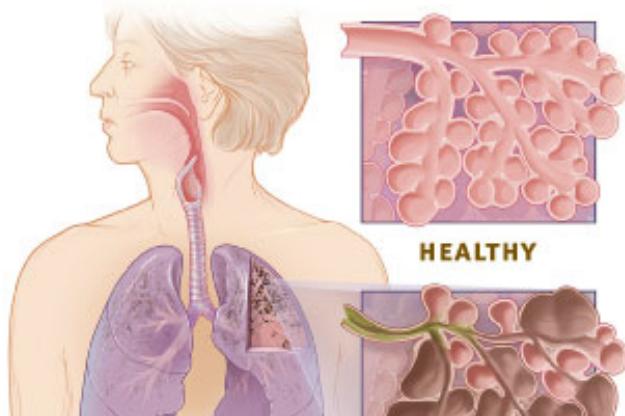
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Future Internet Assembly, Budapest, May 2011

Introduction

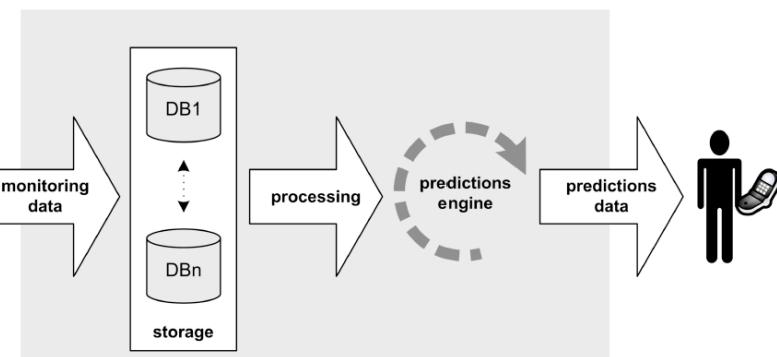
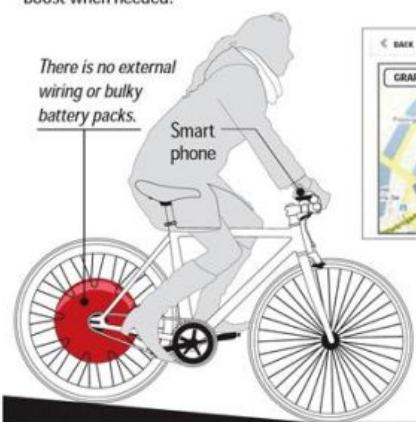
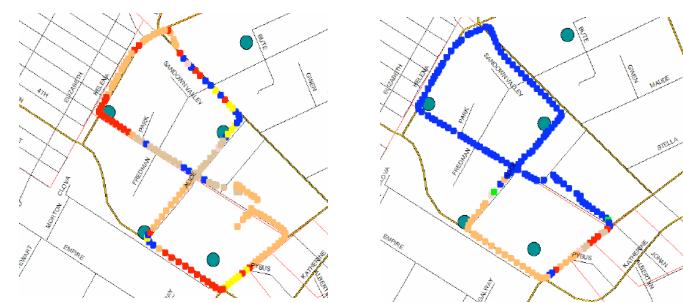
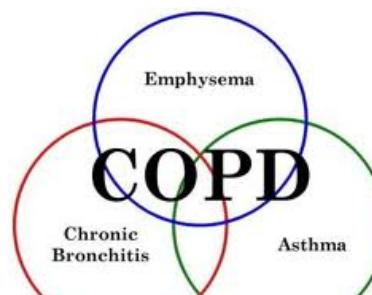


COPD24 Application Scenario



EXTRA POWER
The energy dissipated while cycling and braking is saved in batteries. That power can later be used to give the rider an extra boost when needed.

WHEEL'S BRAIN
Hub sensors and GPS allow riders to get information on air and noise pollution, congestion, and road conditions via a smartphone.

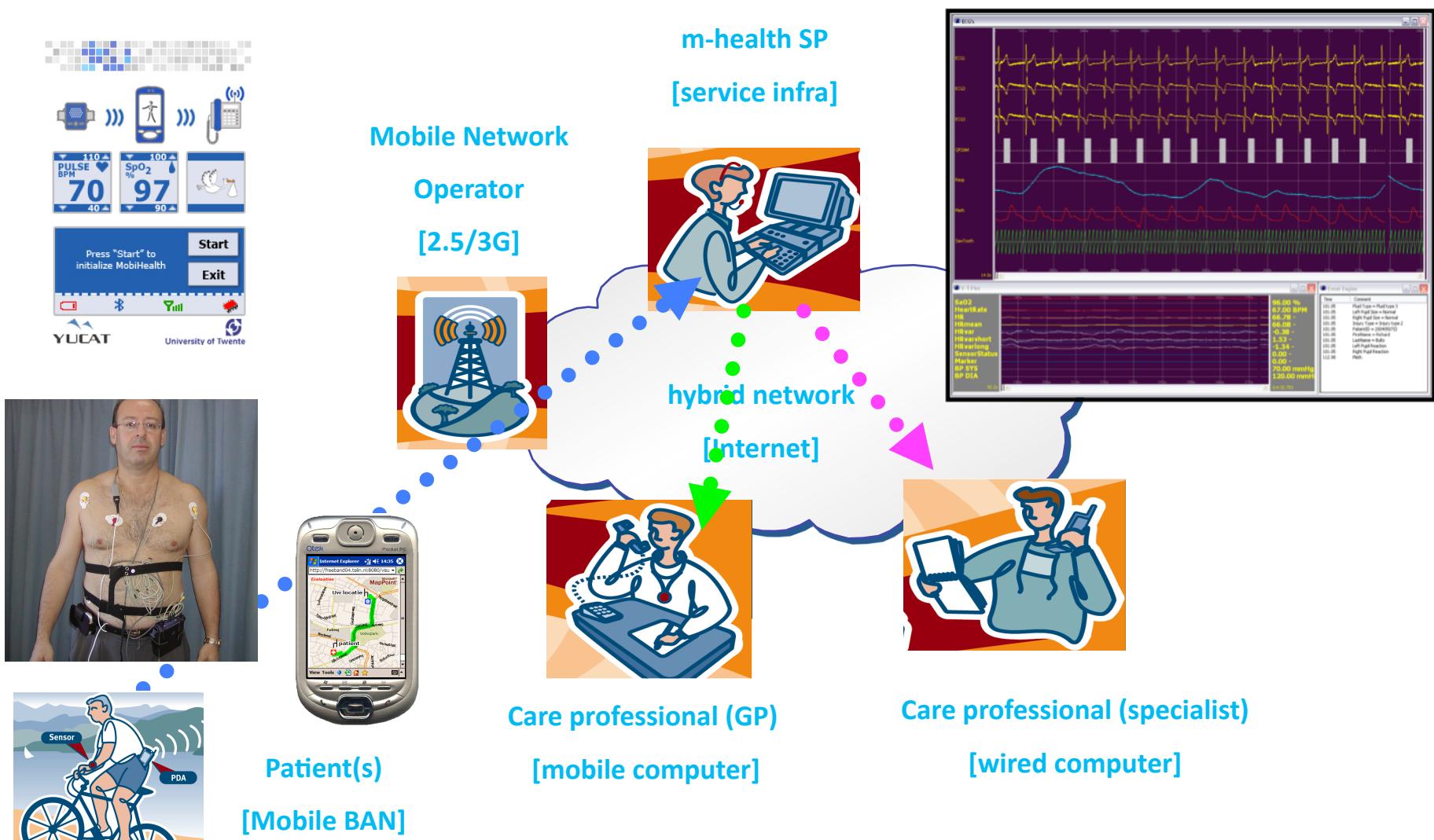


SOURCE: MIT's SENSEable City Lab

JAMES ABUNDIS/GLOBE STAFF

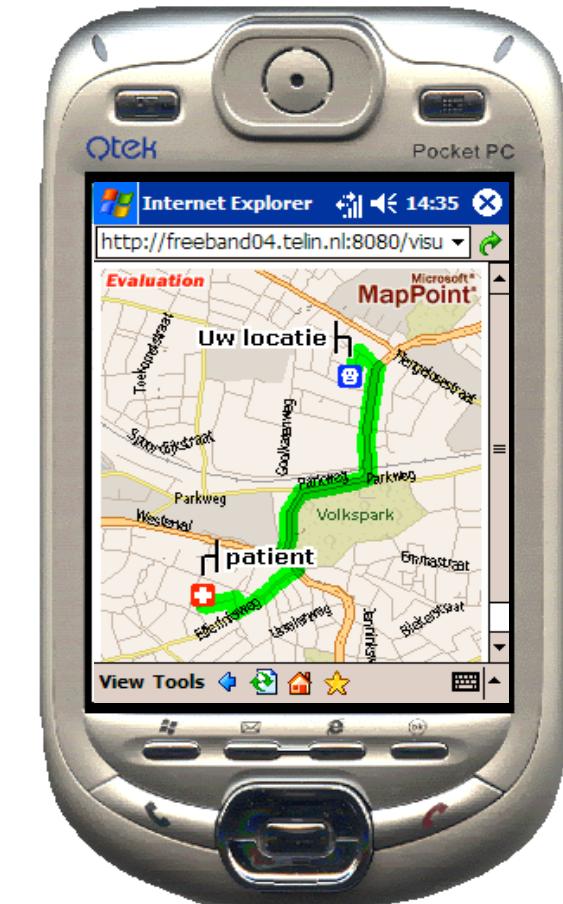
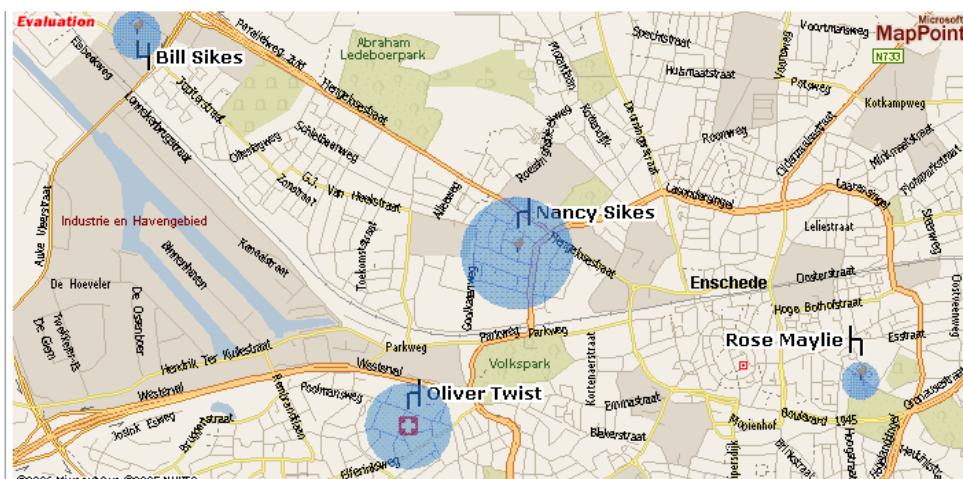
Source: [15]

Health and Air Quality Tele-monitoring



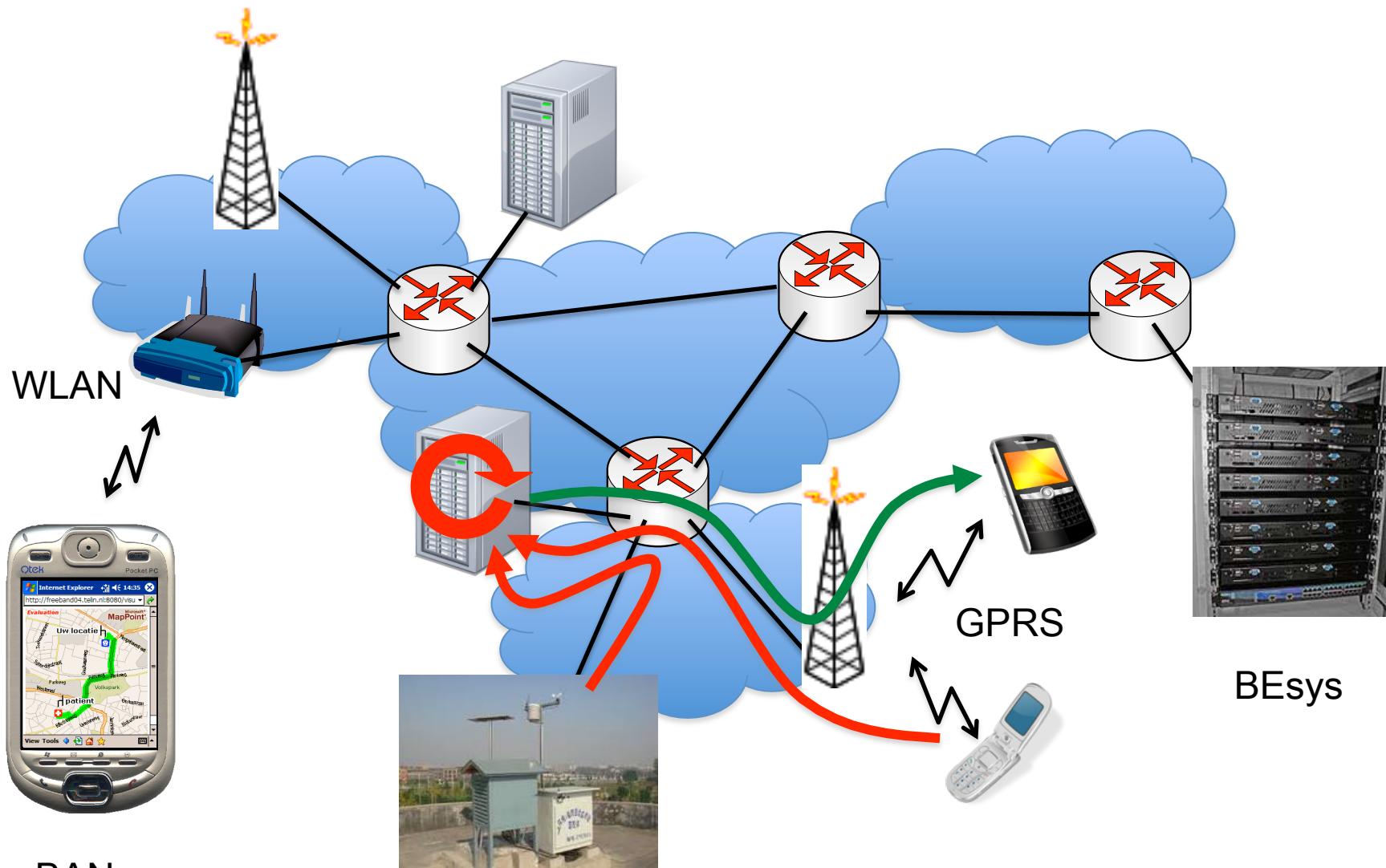
Sources: FP5 HealthService24, FP6 MobiHealth, Dutch Freeband AWARENESS project

COPD24 Use Case



Source: Dutch Freeband AWARENESS project

COPD24: Network Infrastructure

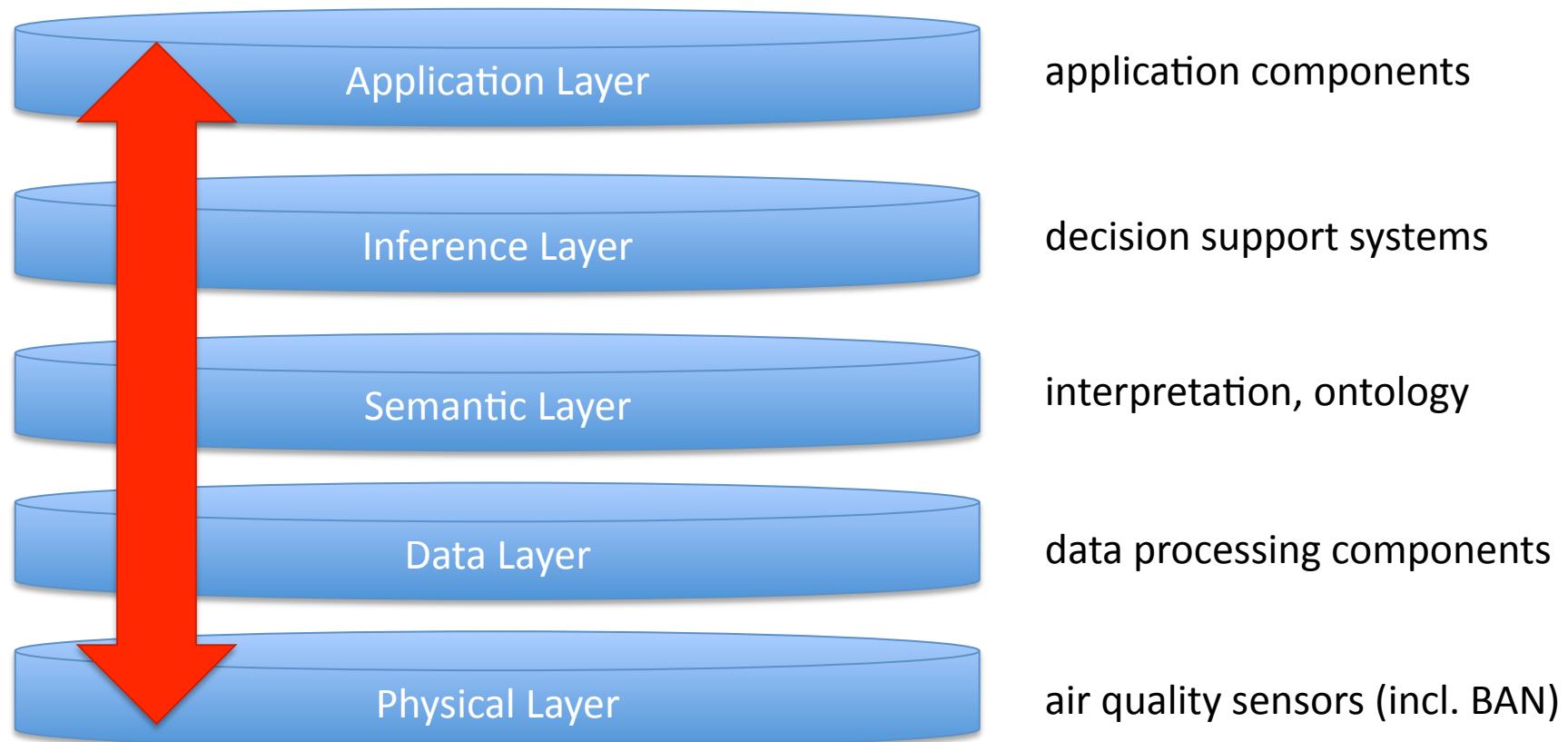


Source: Dutch Freeband AWARENESS project

Infrastructure Adaptation Dimensions

- Performance
 - ‘Best-effort’ network infrastructures
 - Delays: one way or round-trip delays
 - Throughput: consumer-producer paradigm
- Mobility: horizontal and vertical handovers
 - intra- and inter-operator
- Scalability
- Communication costs
 - Per MByte vs. ‘flat-rate’
- Security and Privacy-awareness
 - Data encryption
- Power consumption
- Miniaturization of sensors
- Service personalization
 - Individual user feedback
- Standardization and interoperability

Cross-Layer Adaptation



Thanks for your attention!

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