FÓRUM DE COMPETITIVIDADE DE IOT

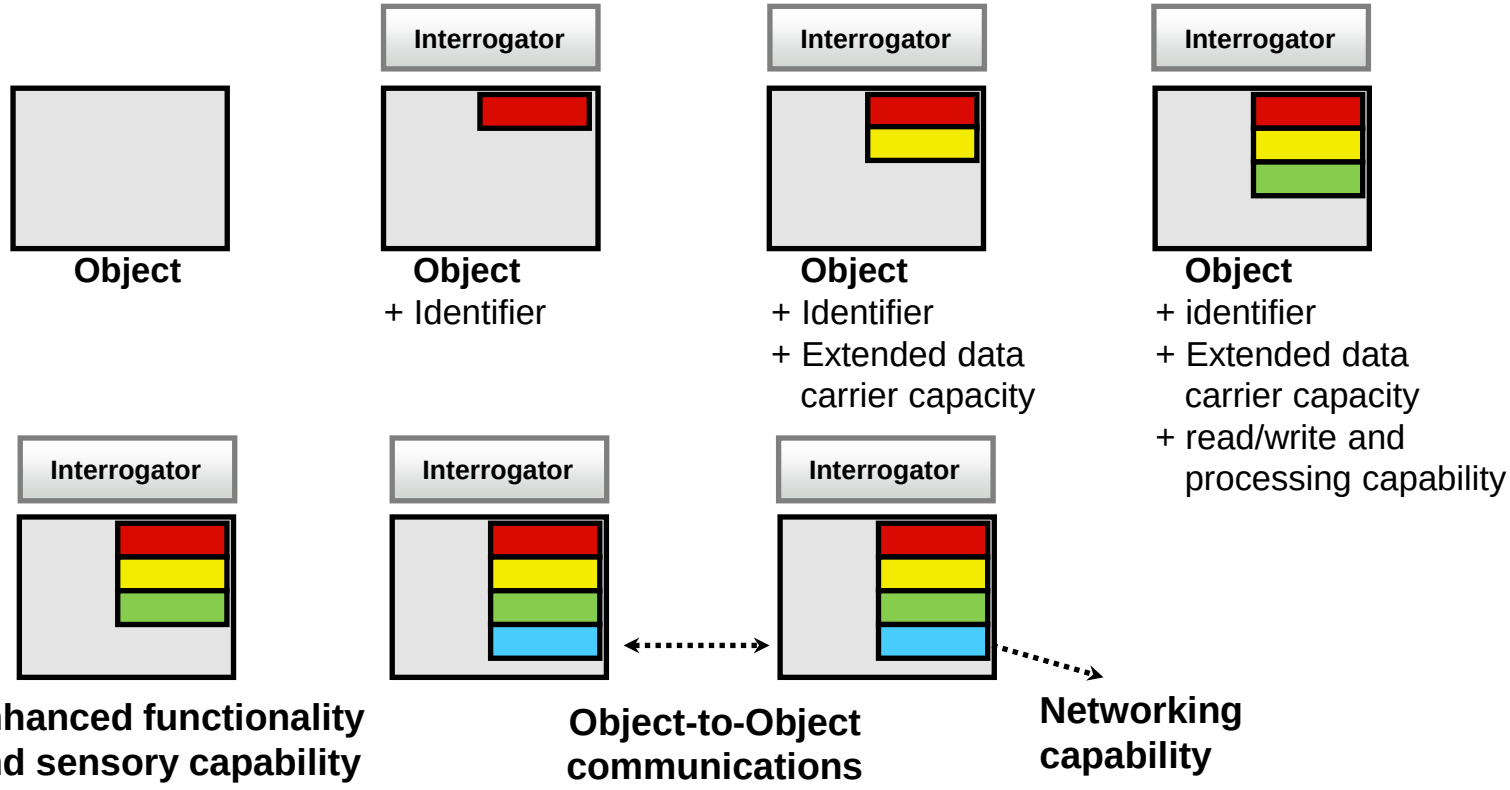
Energy Efficiency in the **Internet of Things:** *Ubiquitous Energy Awareness*

Profs. Drs. José Roberto Amazonas (LCS/PTC/EPUSP)

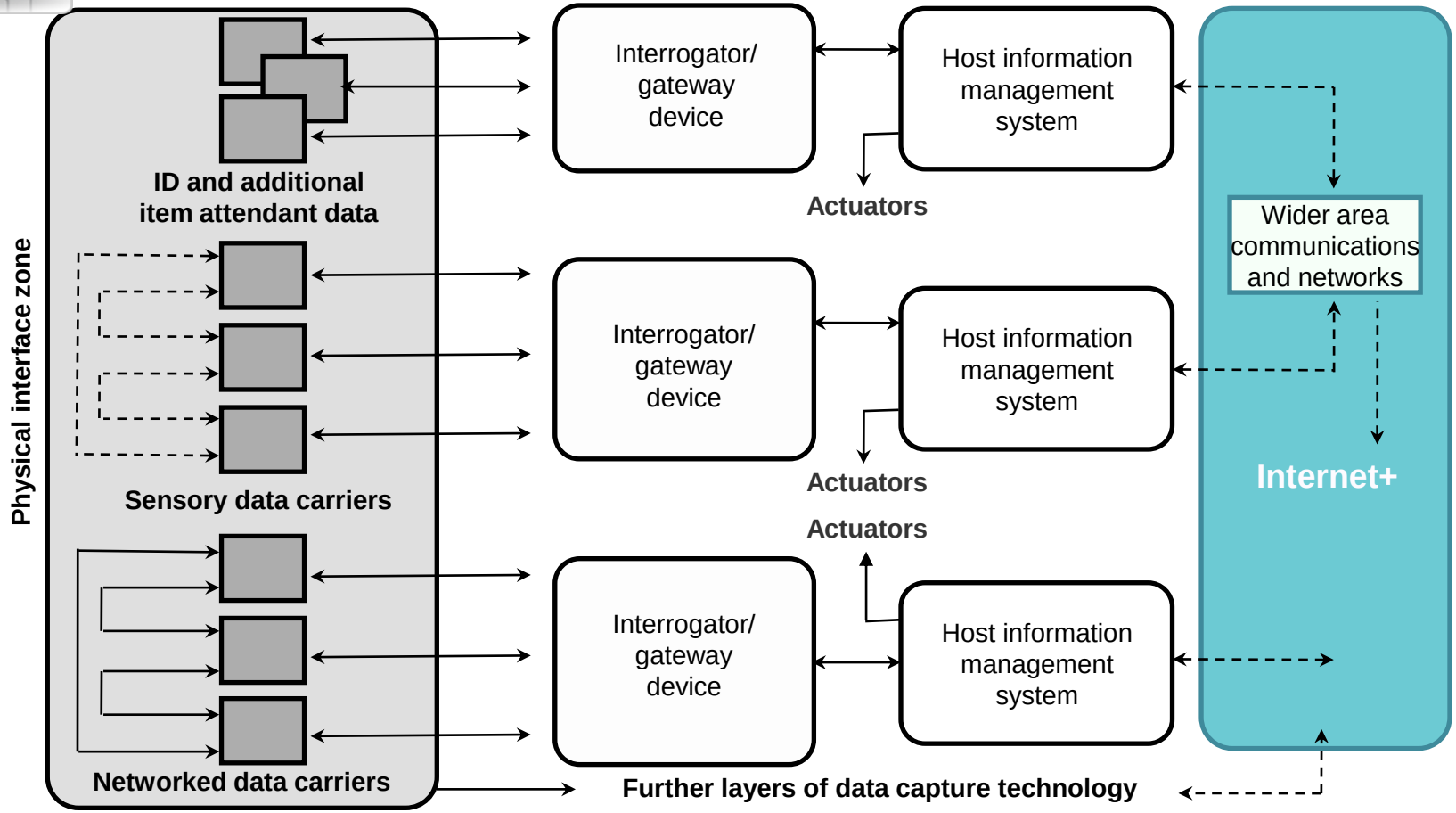
Internet of Things

The Internet of Things is a new network communications paradigm. The traditional Internet as we know it is a virtual world in which information is stored and can be accessed in computers around the world. The Internet of Things extends the Internet to objects of the physical, real world, providing capacity to interface and interact with them.

Adding intelligence to objects



CASAGRAS inclusive model



Internet of Things

key concepts and enabling technologies

AIDC in the Physical Interface Zone
(Automatic Identification and Data Capture)

Context awareness

Network access

← **Key concepts**

Enabling technologies →

AIDC: RFID, NFC, bar codes, biometry

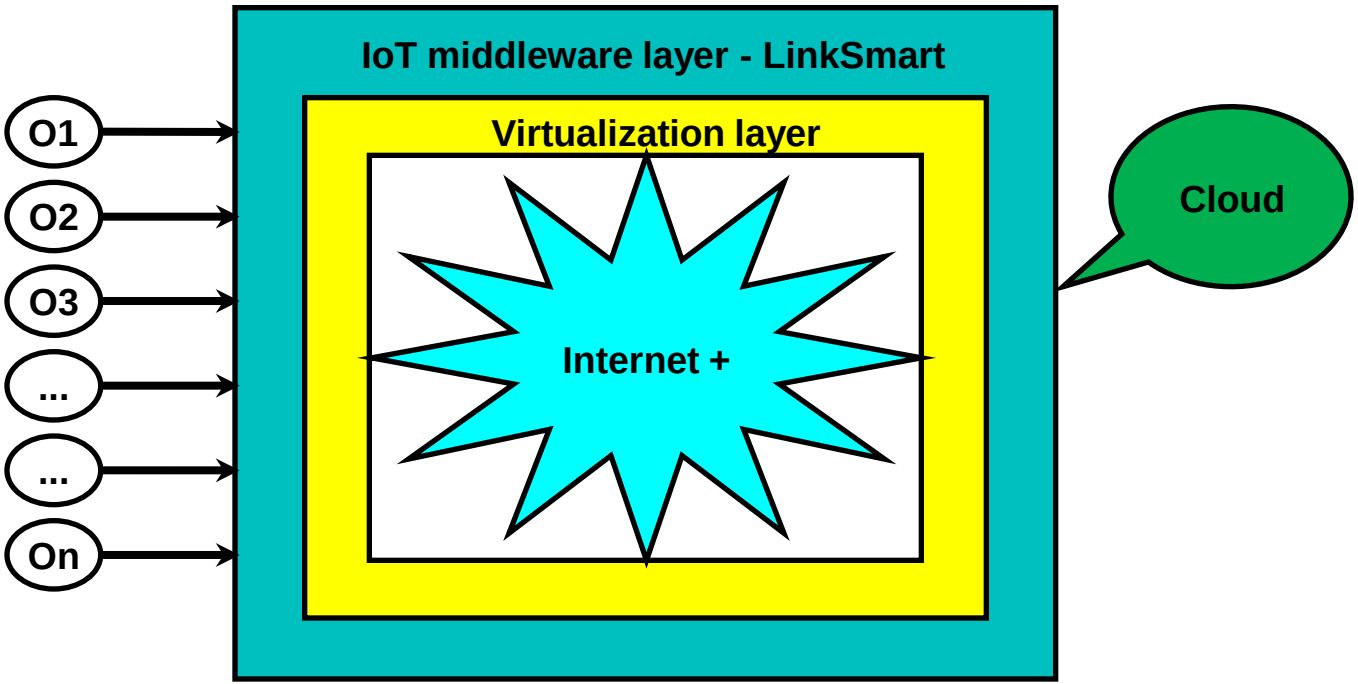
Cloud computing

Network virtualization

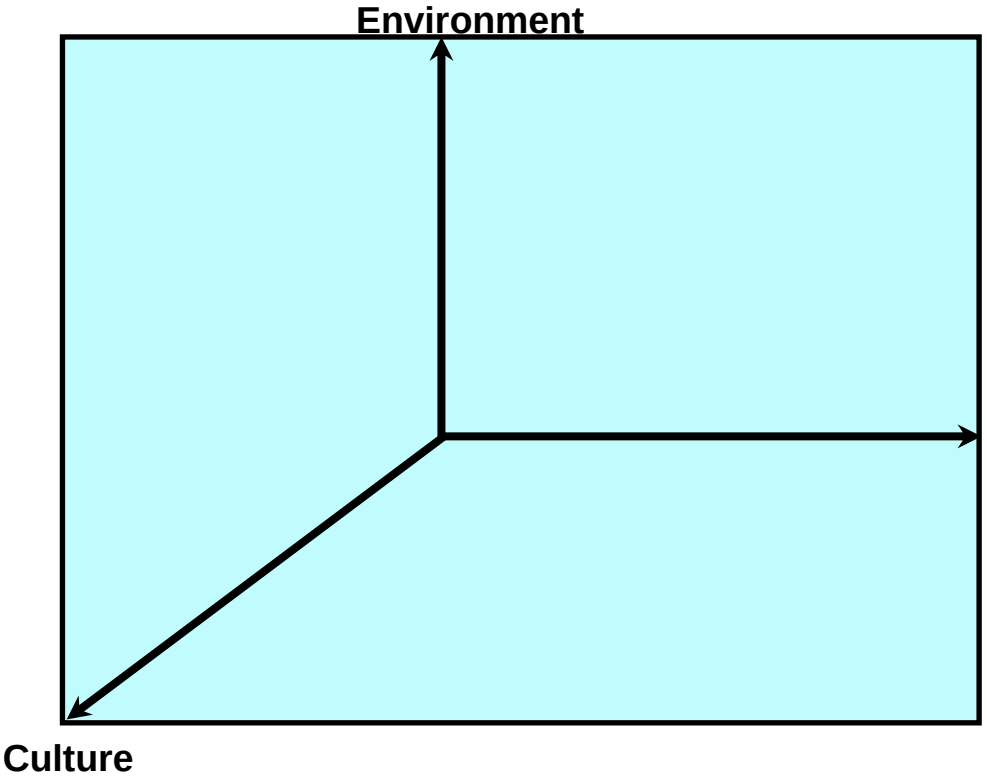
Semantic web

Projects architecture

conceptual view

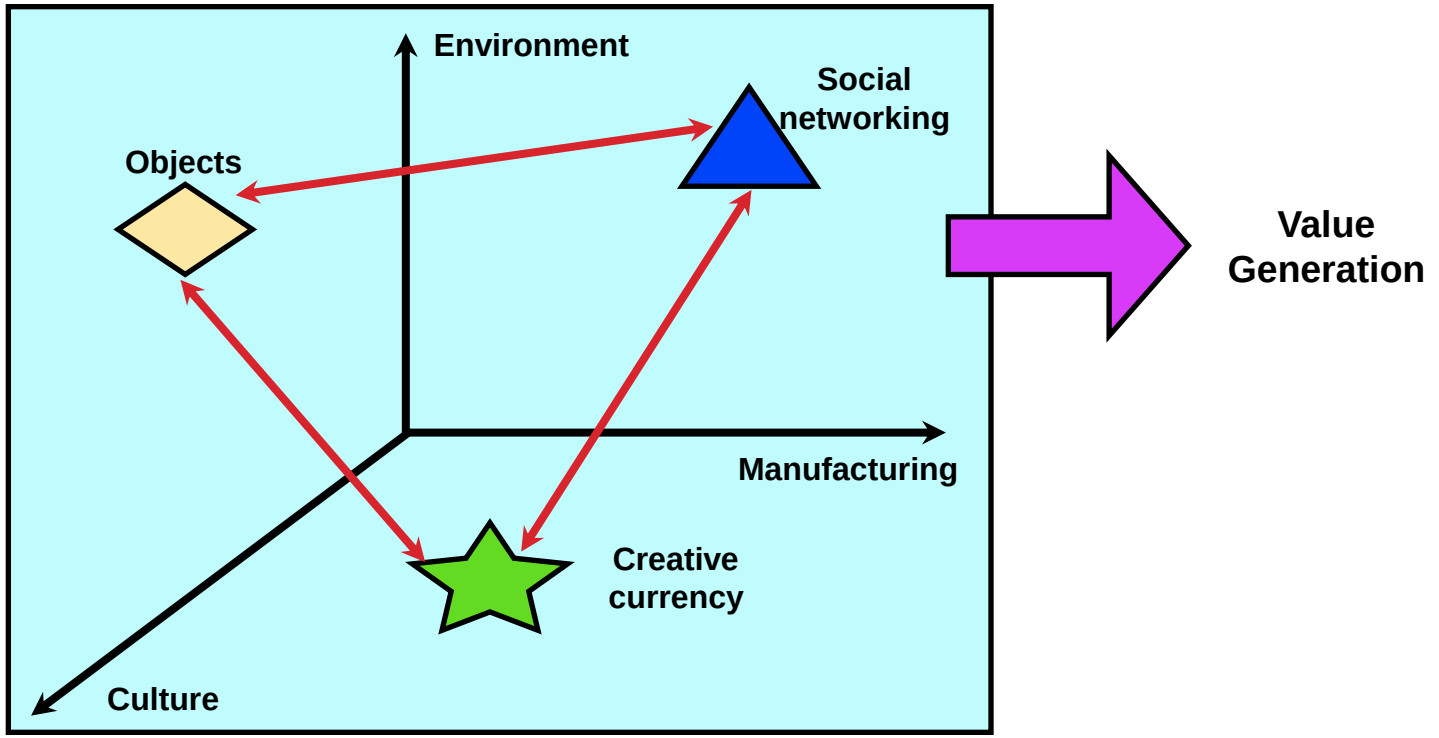


Axes of the new economy



Axes of the new economy

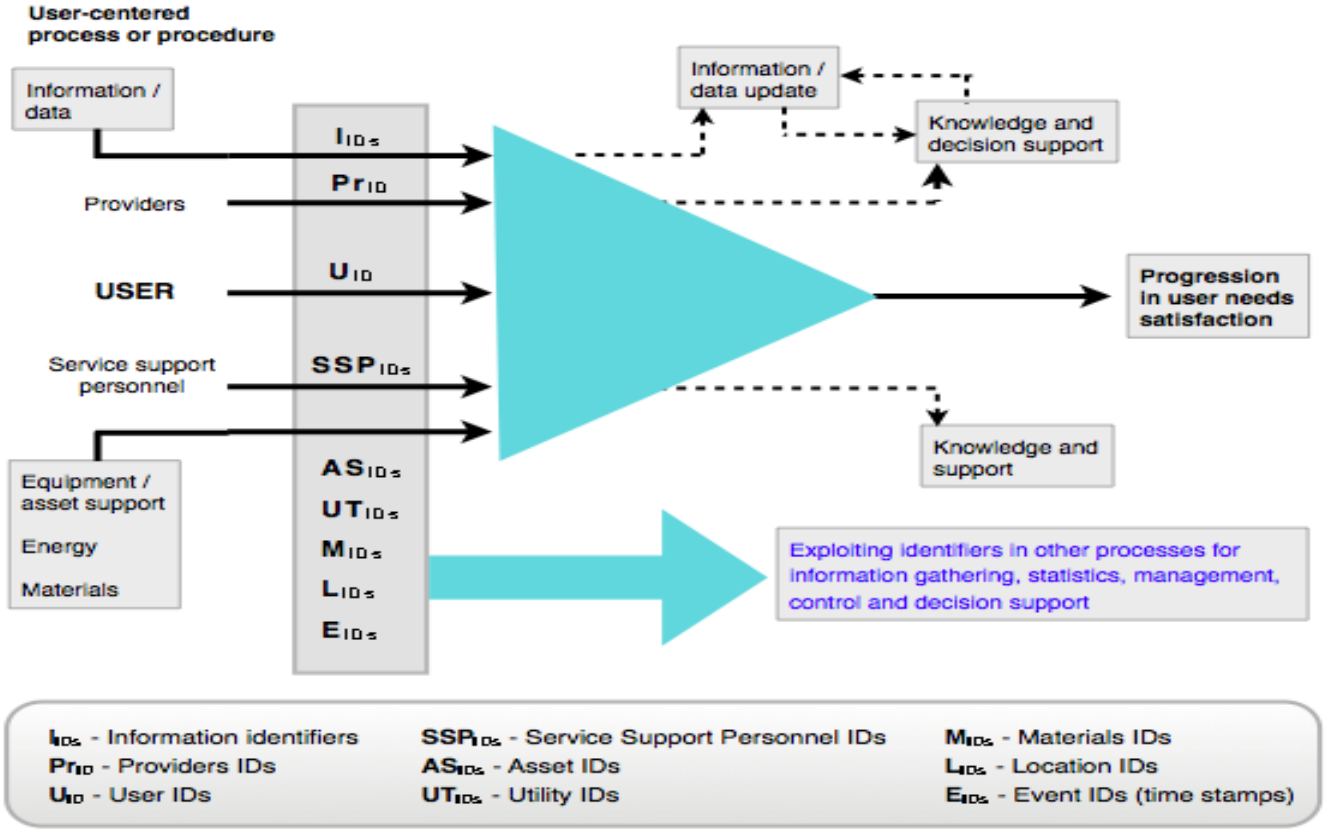
creative currency mediation: business model



Energy Efficiency in the Internet of Things

An energy efficiency project should develop and validate a **holistic framework** of energy performance incorporating architectural metadata, environmental parameters, business critical models, treating the occupants as the central reference point. The project's framework, identifying and analyzing the **occupancy behavior** (presence and movement) should align the points of energy consumption to the correlated functional aspects (activities processes, assets, facilities state (light, gas, etc.)).

Energy Efficiency in the Internet of Things



Energy Efficiency in the Internet of Things

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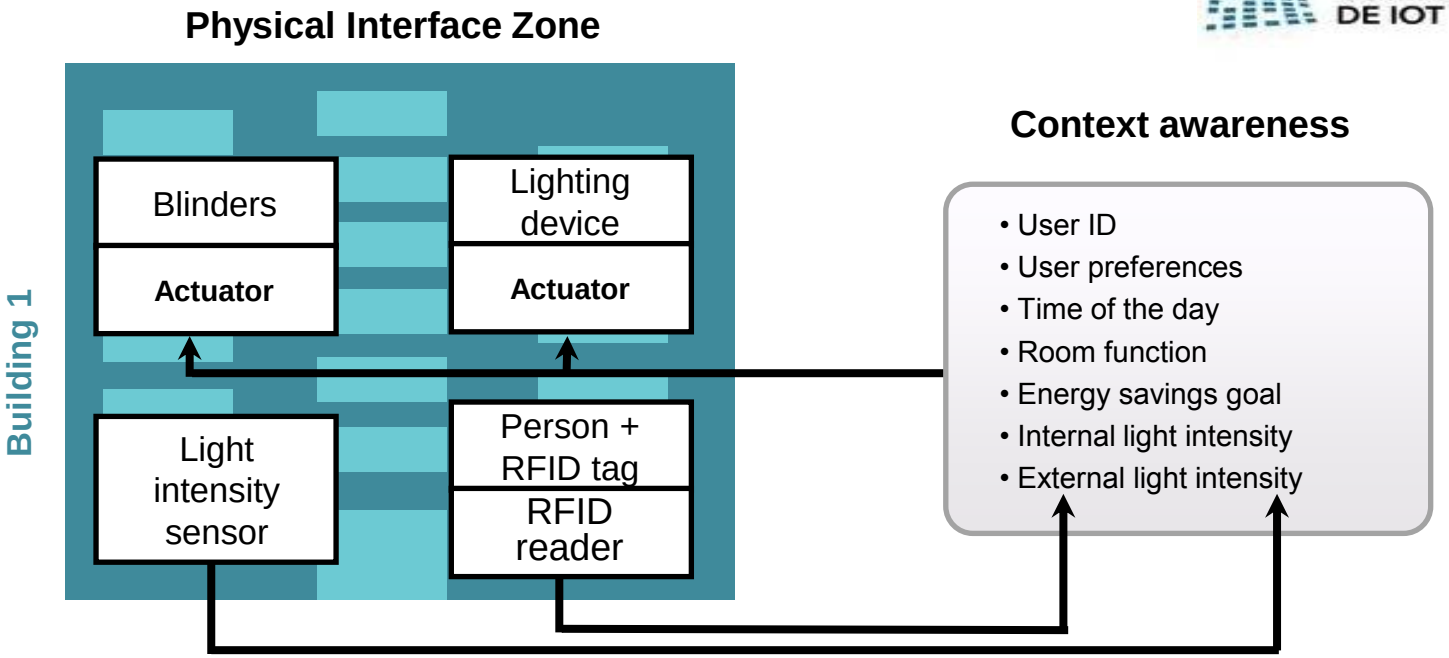
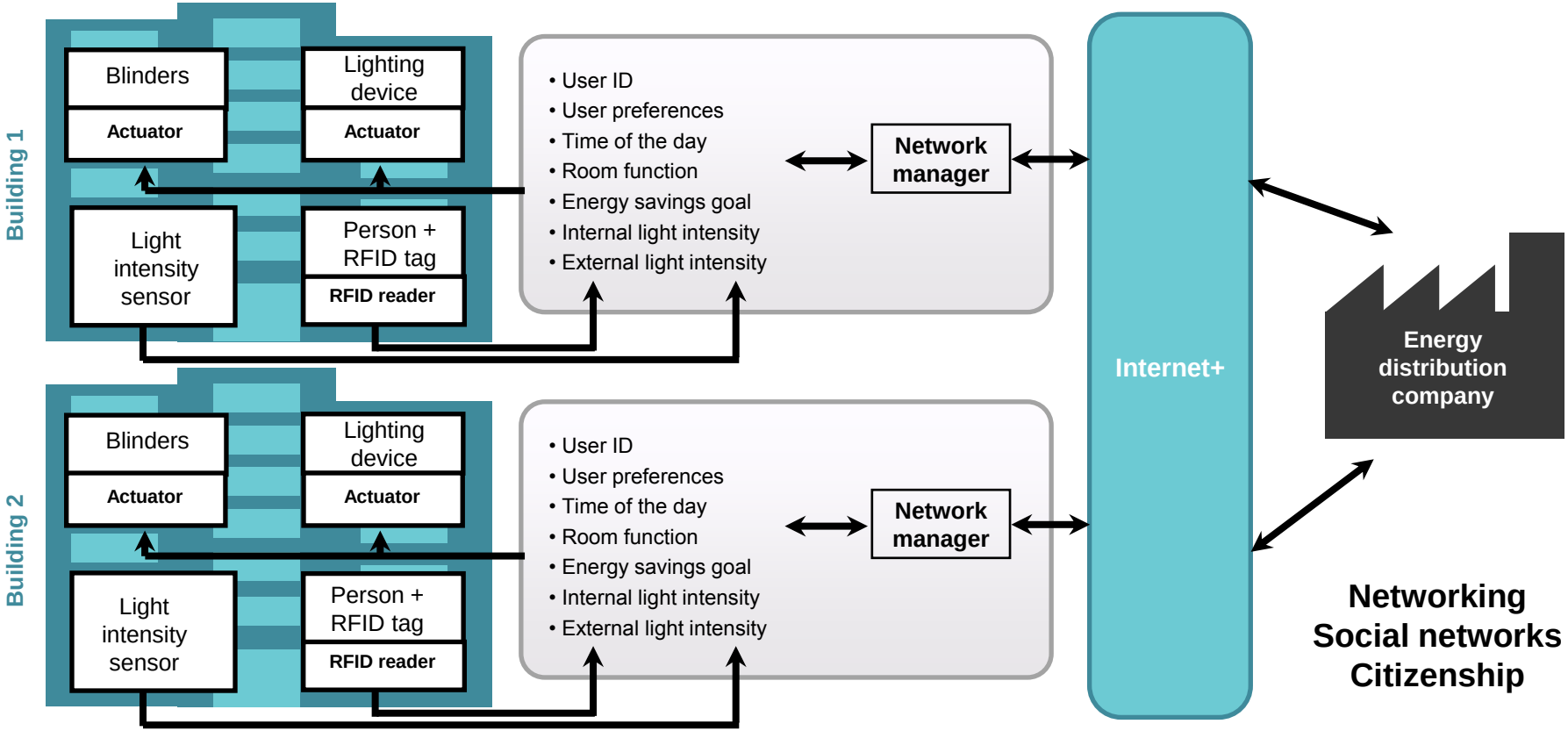
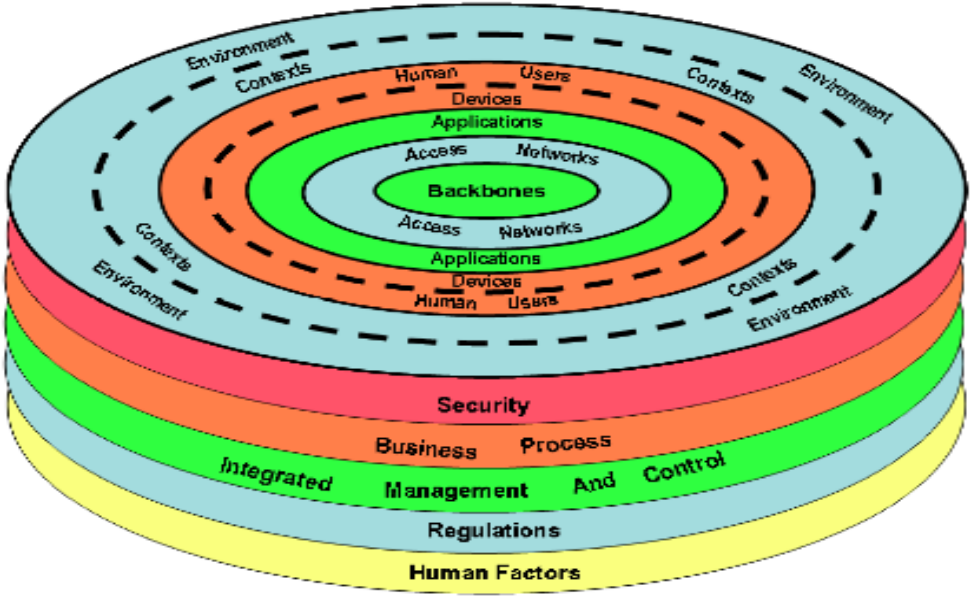


Energy Efficiency in the Internet of Things: Ubiquitous Energy Awareness (manufacturing)



Building blocks of Research for the Internet-Connected objectS

BRICS



Harmonized and Integrated Architectural Framework leading towards realistic Roadmaps

Thank you!

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