

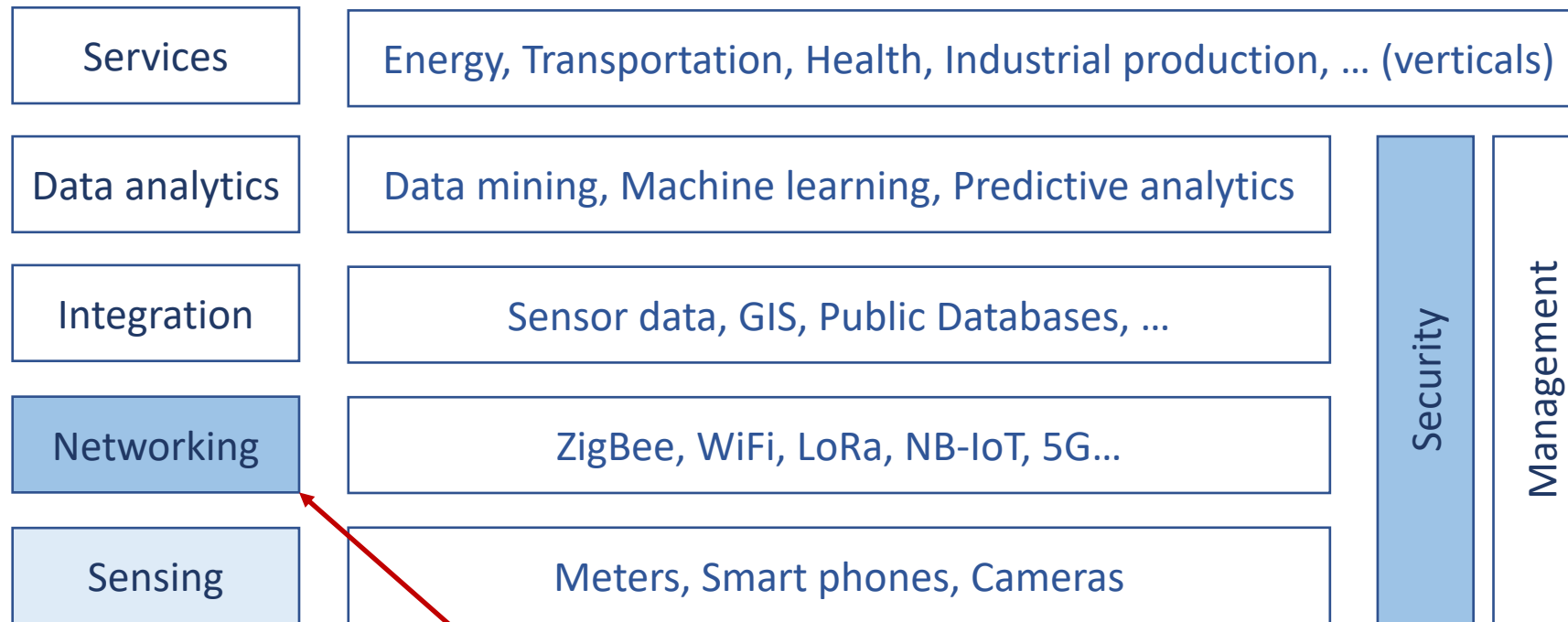
Practical info

- Literature
 - PPTs
 - Papers, book chapters, and similar
 - Will be uploaded regularly before the lectures on moodle
 - Some lectures will require preparation in order to have a discussion at the lecture (will be mentioned explicitly)
- Mini project:
 - **Mandatory!**
 - Options:
 1. Implementation-oriented project
 2. Analytical study of some specific system of your interest
 3. Case study
 - Has to be done during the course of the semester and submitted 2-3 weeks before the exam (15 – 20 pages)
 - 2-3 students in a group
 - There will be a couple of sessions during semester in which you will present the progress on the mini project, followed by a discussion in the class

Practical info

- Examples of potential mini-projects:
 - Arduino/Raspberry Pi projects
 - Integration with sensors (available at CMI) + app
 - Home monitoring system, home automation
 - Theoretical study of some IoT application + critical review of available technologies
 - Sensor networks for container shipping
 - Case studies
 - Integration of blockchain into IoT, Privacy and IoT, Data mining and machine learning in IoT,...
- Exam:
 - Quick presentation of the mini-project (10-15 mins)
 - Questioning session based on the mini-project and literature
 - In total: **20 mins x number of students in the group**

IoT ecosystem



Mini projects can focus on/involve some other aspects, apart from networking and security!

Focus of the lectures

Preliminary course plan

dates	topics
07/02	Introduction: What is IoT, Key features of IoT devices, Overview of IoT networking solutions, IoT traffic generation patterns
21/02	Presentation of ideas for mini projects Cellular IoT: 5G and IoT, IoT use cases
28/02	Personal Area Networks: IEEE 802.15.4, ZigBee, ZWave
07/03	Low Power WANs: LoRa, SigFox
14/03	Network, transport, session layers for IoT
21/03	Mini projects – presentations, discussions
28/03	WSNs RFID / NFC
04/04	IoT security – Introduction, motivation and attacks
11/04	IoT security - 101: defenses, good practices and protocols
25/04	Mini projects – presentations, discussions