

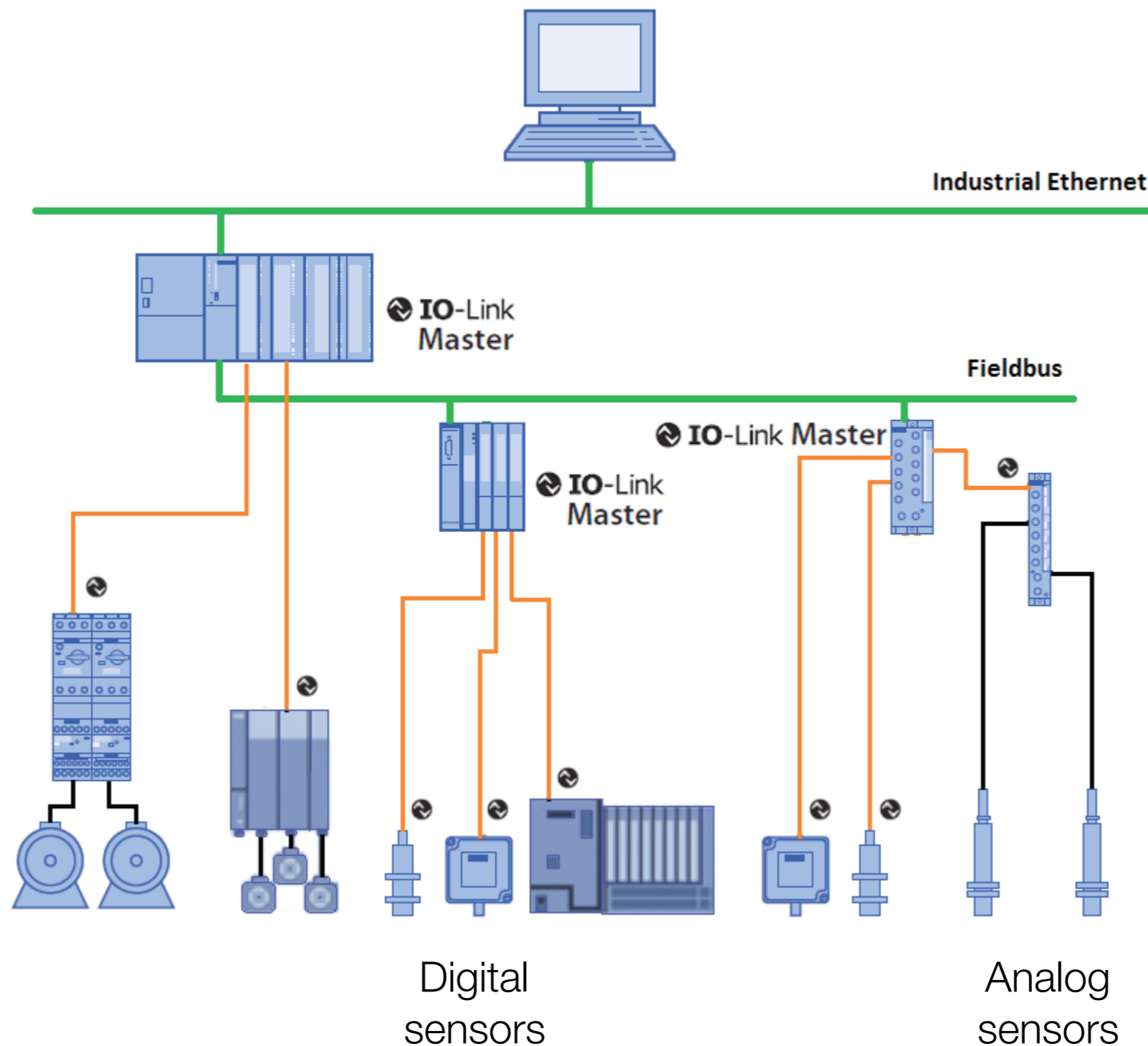
Wireless communication network for big data capture and predictive maintenance in the context of Industry 4.0

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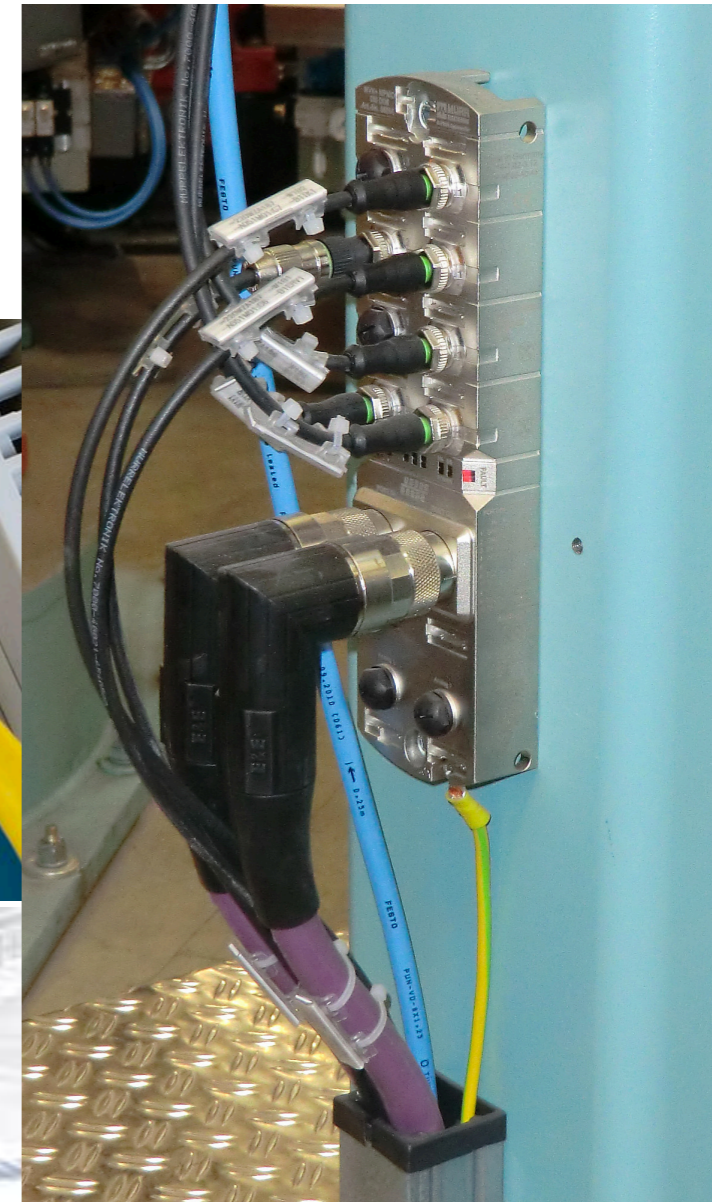
Our goals

- Perform condition monitoring and predictive maintenance using advanced analytics and Machine Learning in the cloud.
- Get useful and reliable data to the cloud from the factory floor -> how?

It's complicated !



And costly



Challenges

- Usable data for analytics -> Event synchronization
- Big data -> Large bandwidth
 - Data must be compressed
 - Or data must be processed before transmission
- Wireless -> Battery powered & Low power
 - Custom design
 - Best in class components

Existing solutions ?

Problem

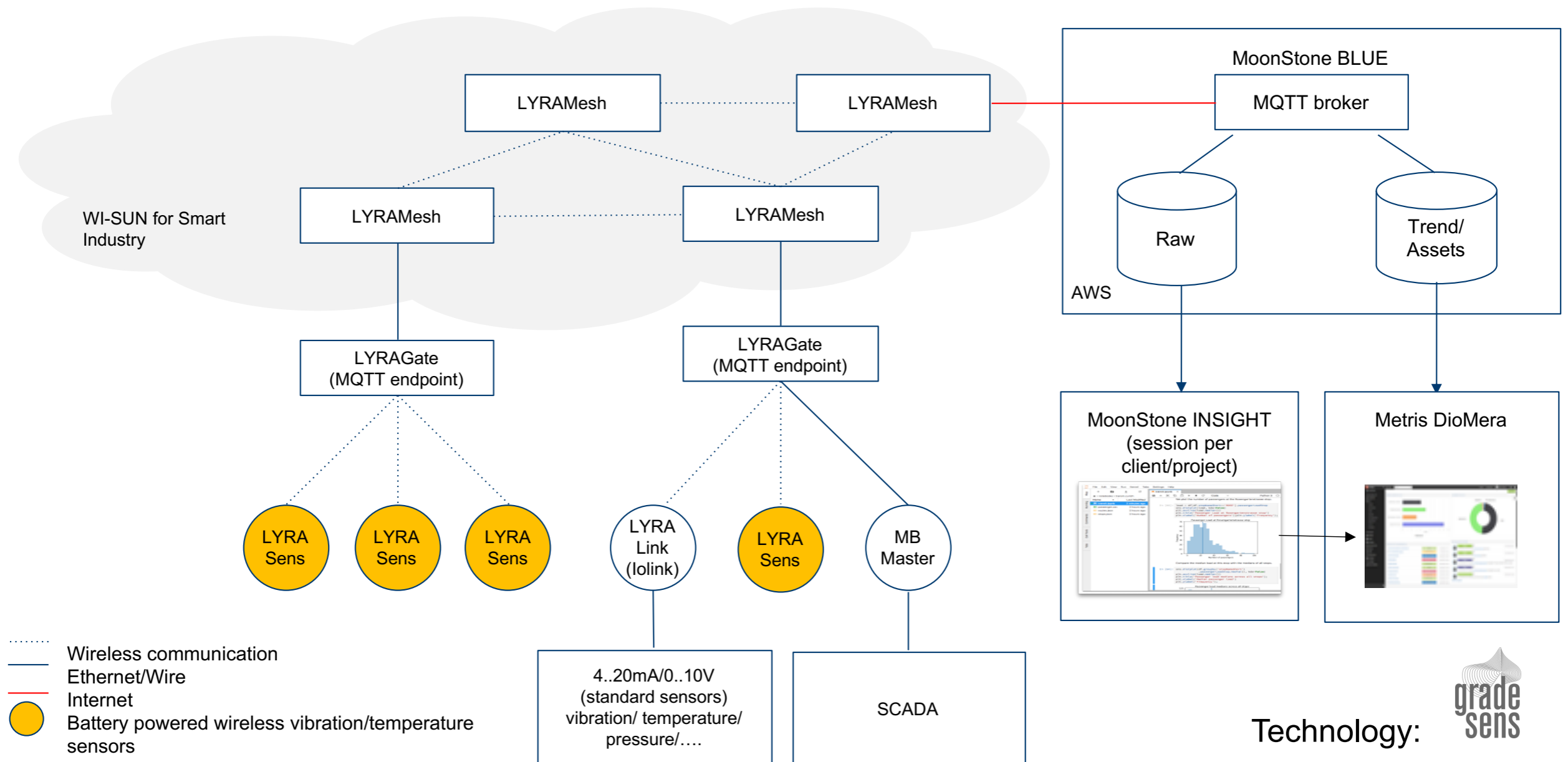
- Some machines require many sensors
- A floor can have many machines
- Carrier robots implies mobility

Requirements

- up to 100 sensors per machine
- Communication between machines
- Synchronized measurements
- Thousands measures/sec. per sensor
- 200 ms max. to transfer one sample
- Battery must last months or years



Solution: LyraMesh

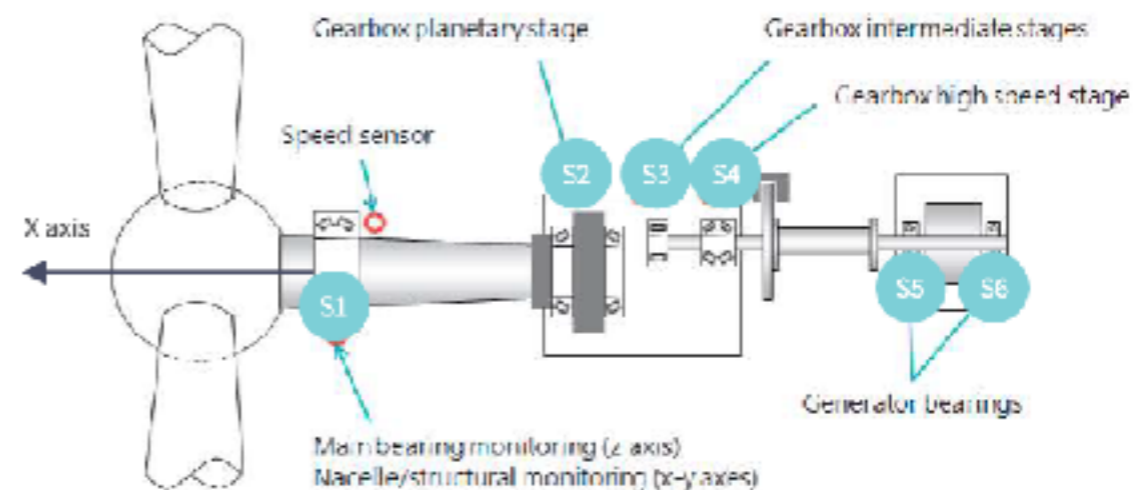


Technology: 

Example: LyraSens in windmills

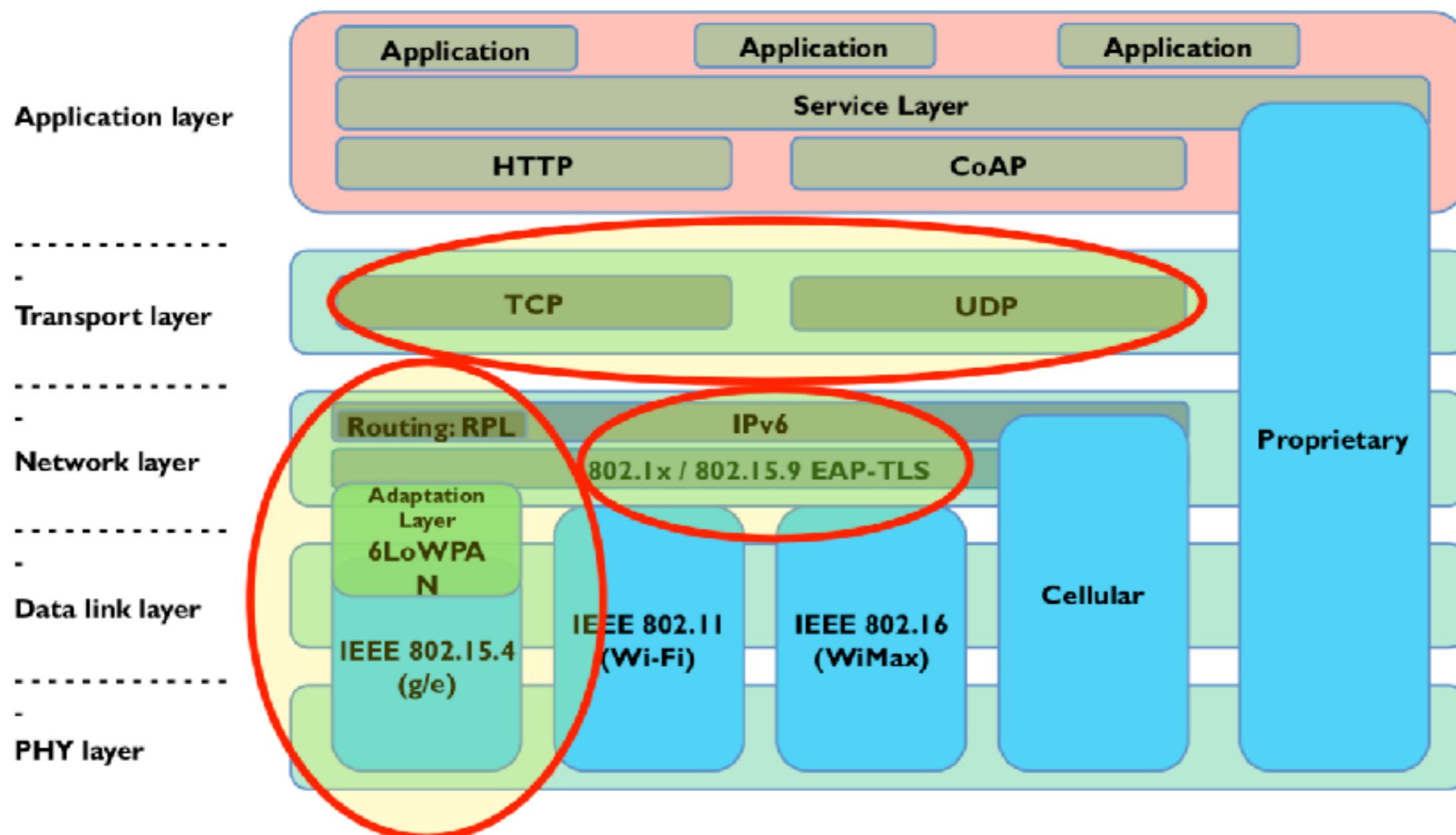


Set-up time:
10'



Next step: Interoperability with WiSun

- Full standard compliance with FAN 1.0 & 1.1



Ecosystem partners

- Gradesens: Smart industry networking & Analytics



- Betech: Radio technology



- Novaccess: Smartcity networking & management



novaccess

- Wifx: Outdoor base stations



- Contrinex: Sensors and legacy interfaces



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