How to enhance resilience by monitoring the FoF

- CF#1 Webinar, April 28th 2021
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Monitoring
Current Situation

- Mostly invariant architecture
- Production processes stable
- Leveled Architecture
- Robots and Humans separated

Relatively easy to Monitor, at least in comparison to …

Increasing number of endpoints / interconnections

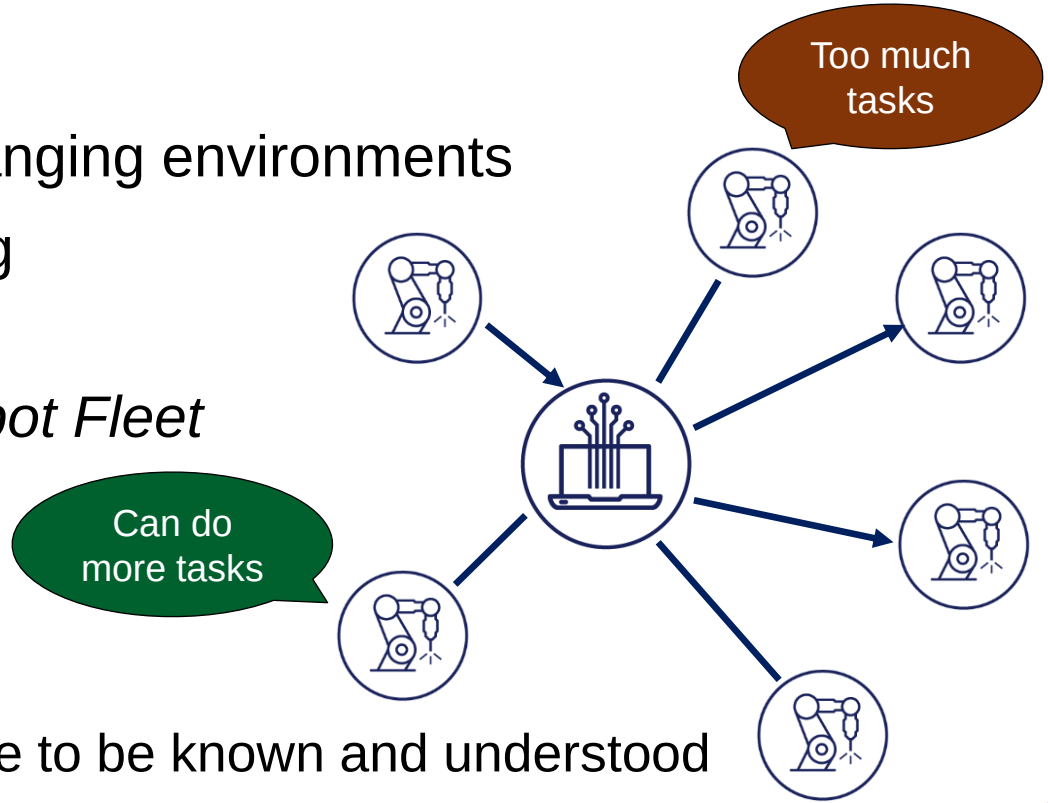
- Intelligent Sensors/Actuators
- Wireless connections
- Connected Tools
- UC within CF#1:
  Airbus D&S - Gap Gun

Impacts on Monitoring

- Increase in complexity
- Significant rise of anomalies
- Anomaly handling within time constraints

Dynamic Systems

- Systems adopting to changing environments
- Self-learning & improving
- UC within CF#1:
  ASTI - Collaborative Robot Fleet



Impacts on Monitoring

- Baseline not static
- Adaptive modifications have to be known and understood

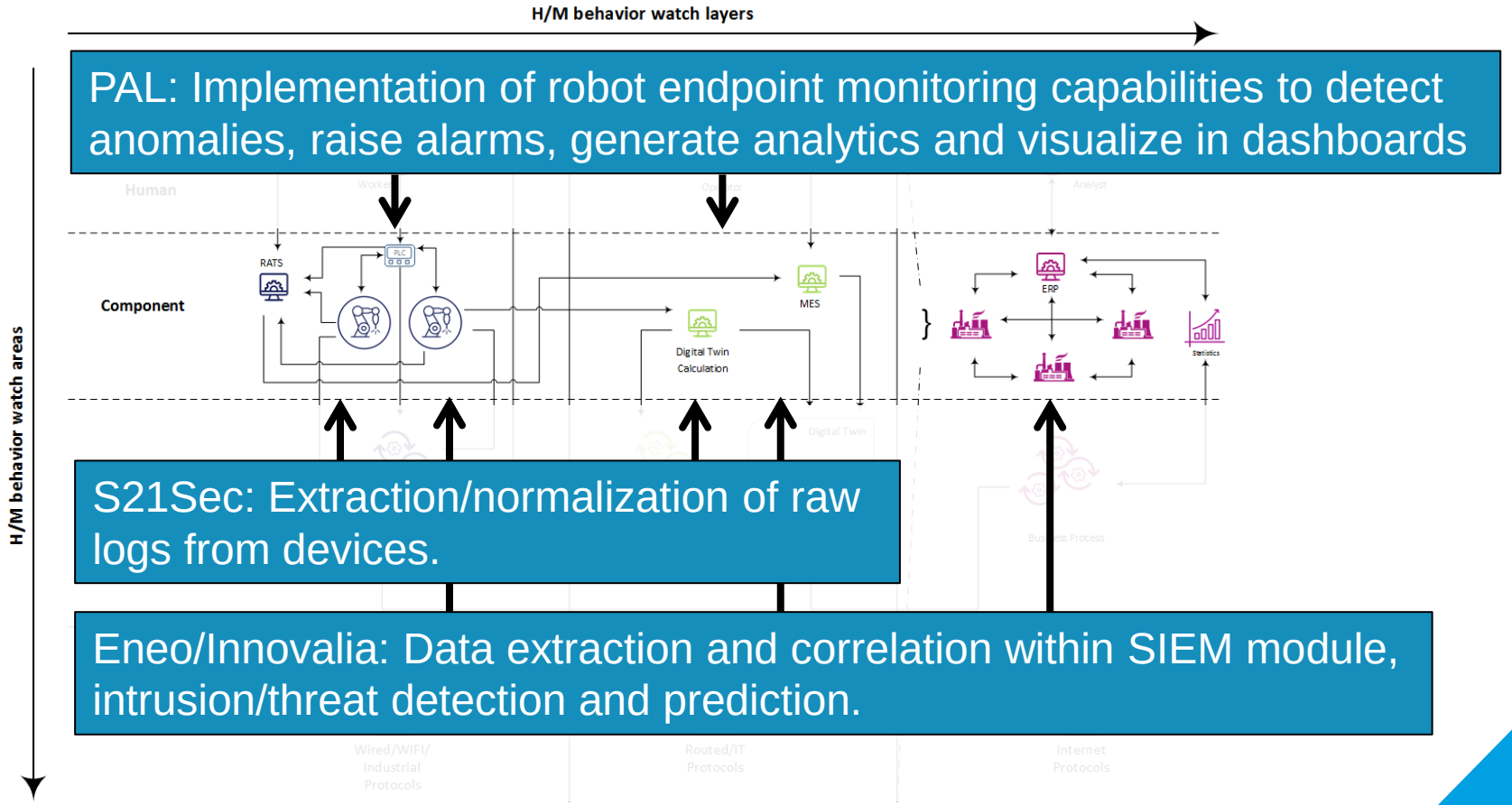
Cobotics

- Humans and workers working together within same area
- Increasing safety concerns
- UC within CF#1:
  S21Sec - CPS-based manufactoring

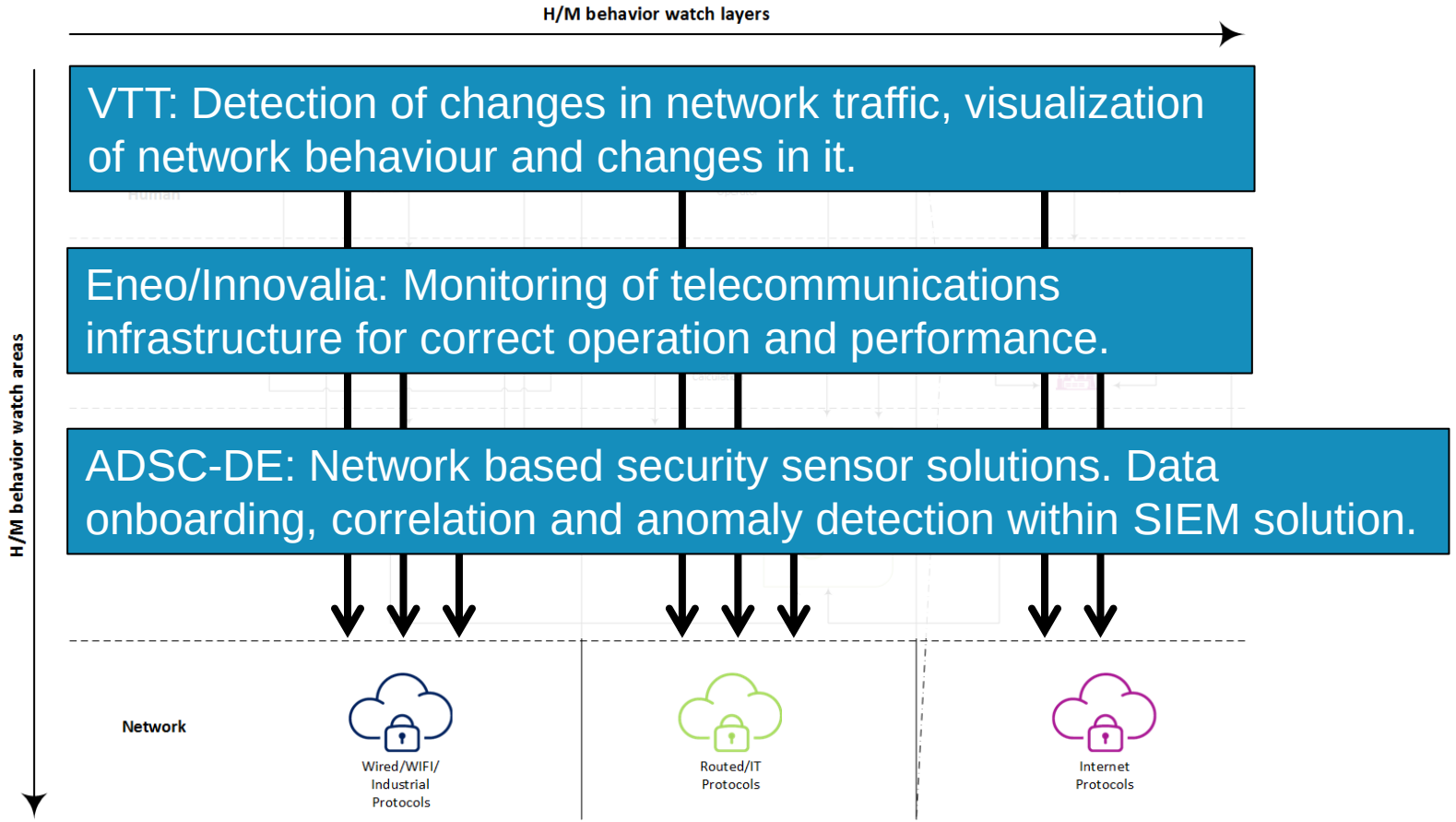
Impacts on Monitoring

- Safety has to be taken further into account, e.g. camera/audio based sensoring on the shop-floor

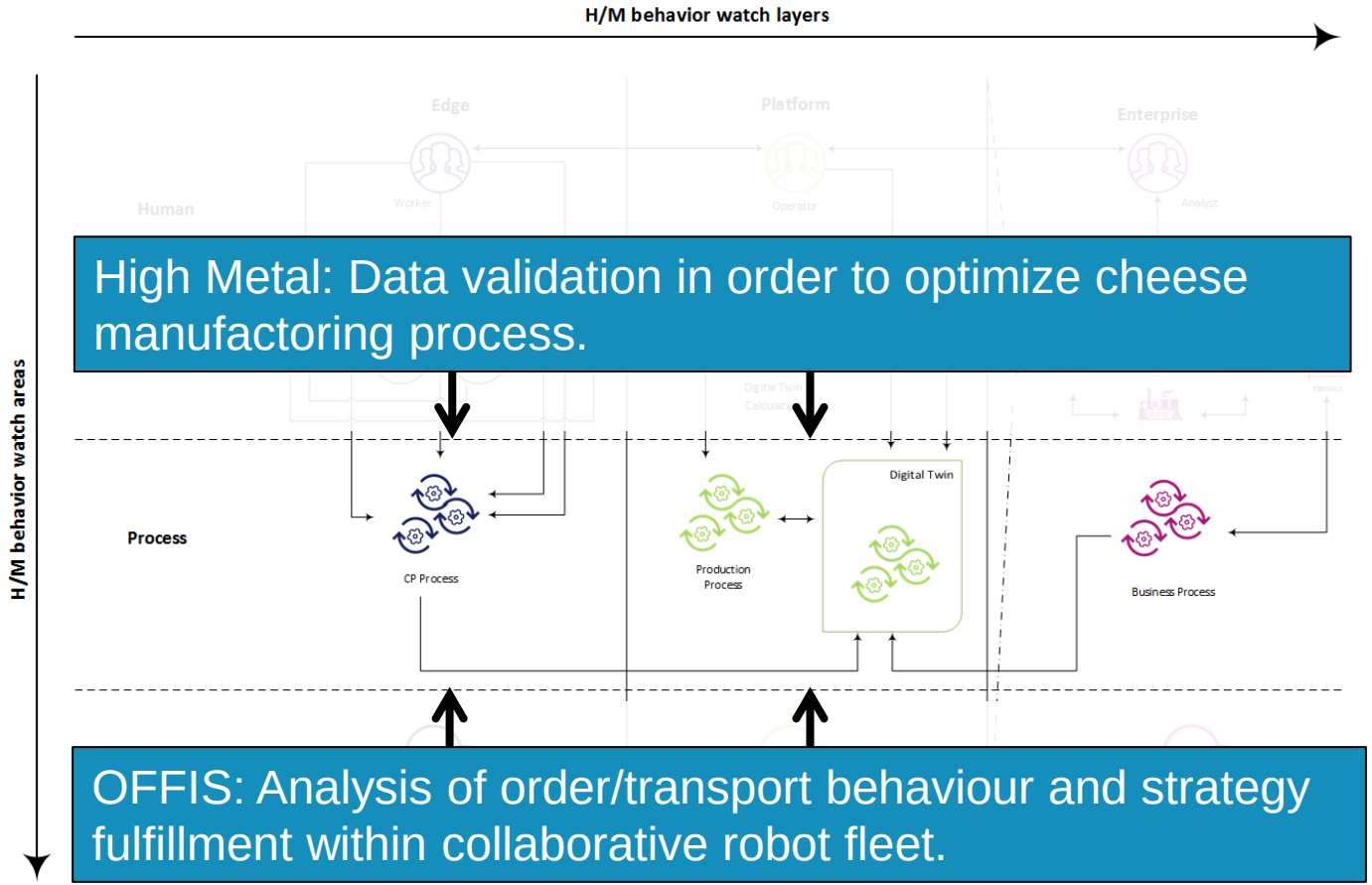
Component Behaviour Watch



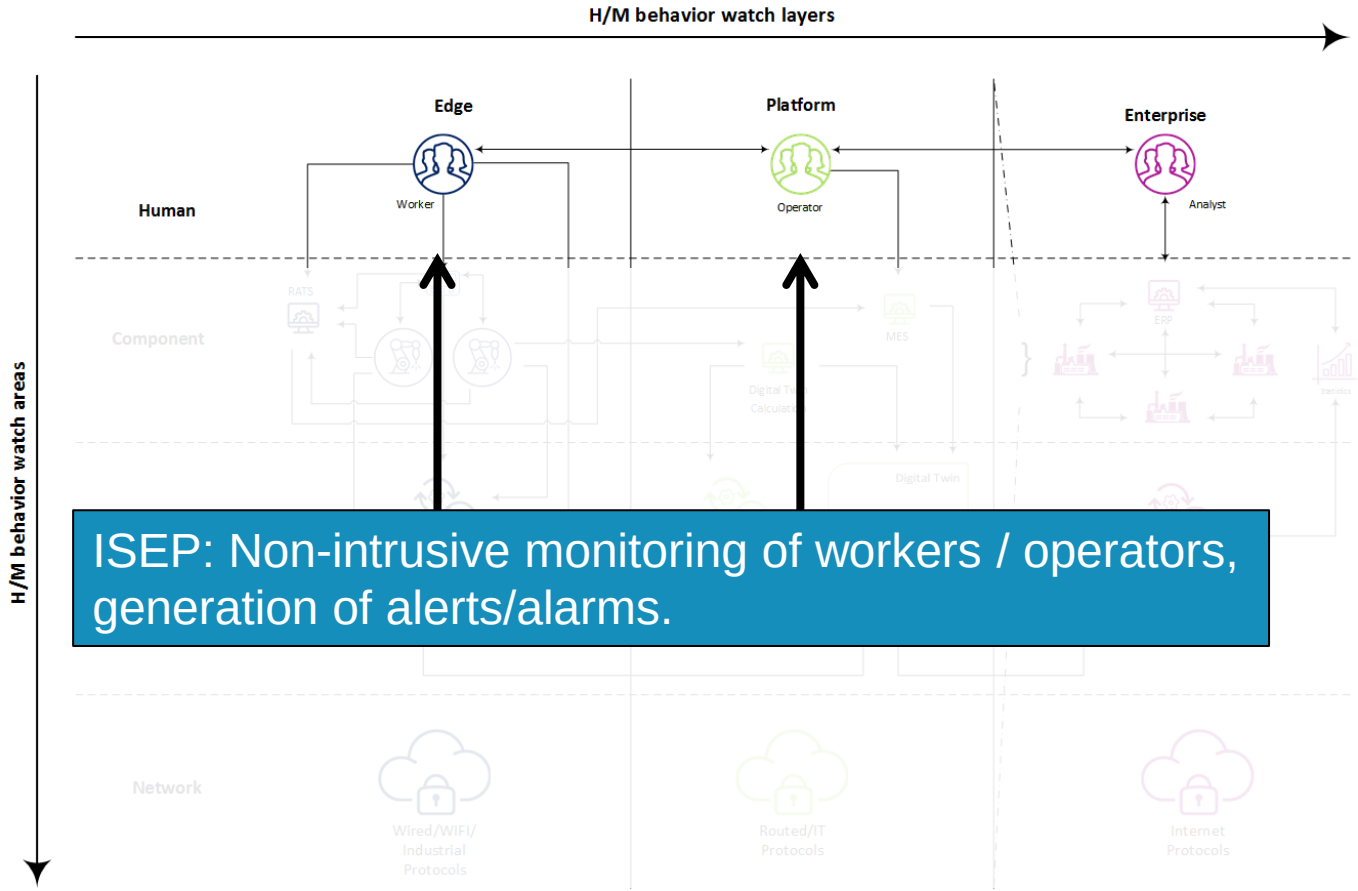
Spotlights
Network Behaviour Watch



Spotlights
Process Behaviour Watch



Human Behaviour Watch



Thanks for your interest

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