

Giornata di studio ANIPLA - Il futuro della comunicazione industriale dal TSN al 5G
Milano, 29.10.2019

L'esperienza di Vodafone, Smart Robots e ABB

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Politecnico di Milano & Smart Robots s.r.l.



POLITECNICO
MILANO 1863



**SMART
ROBOTS**

con la collaborazione di



Flexibility

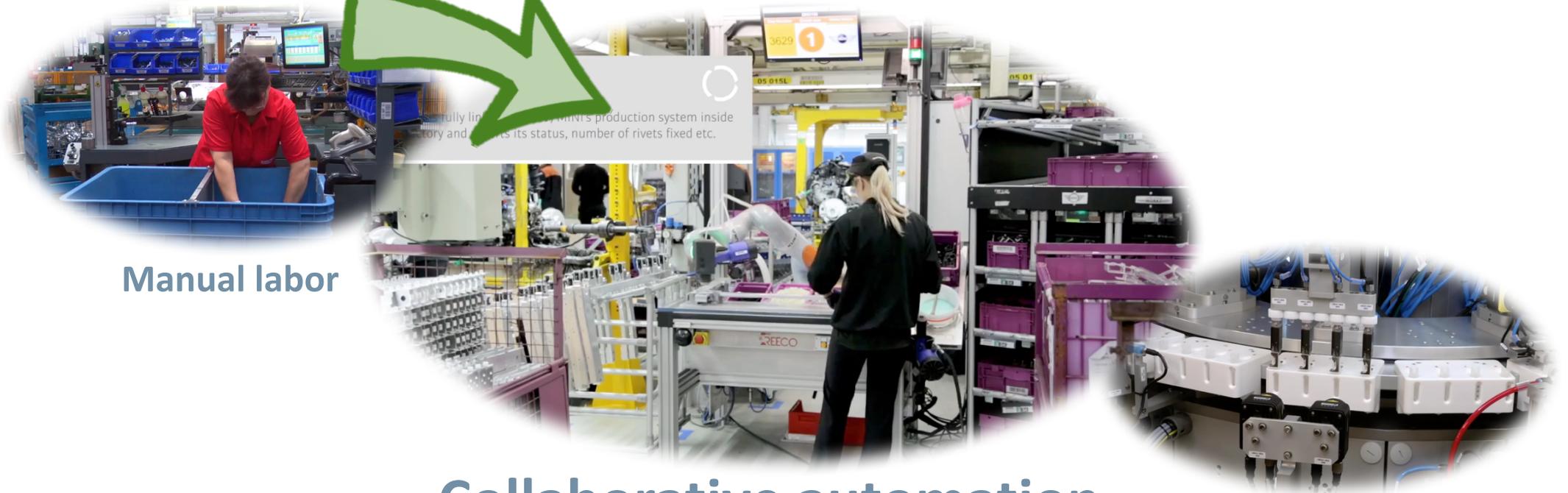
Manual labor

+ robot

Collaborative automation

Hard automation

Productivity/Investment



fully line... MVI's production system inside
tory and... its status, number of rivets fixed etc.

Manufacturing activities have 60% of automation potential
(McKinsey)

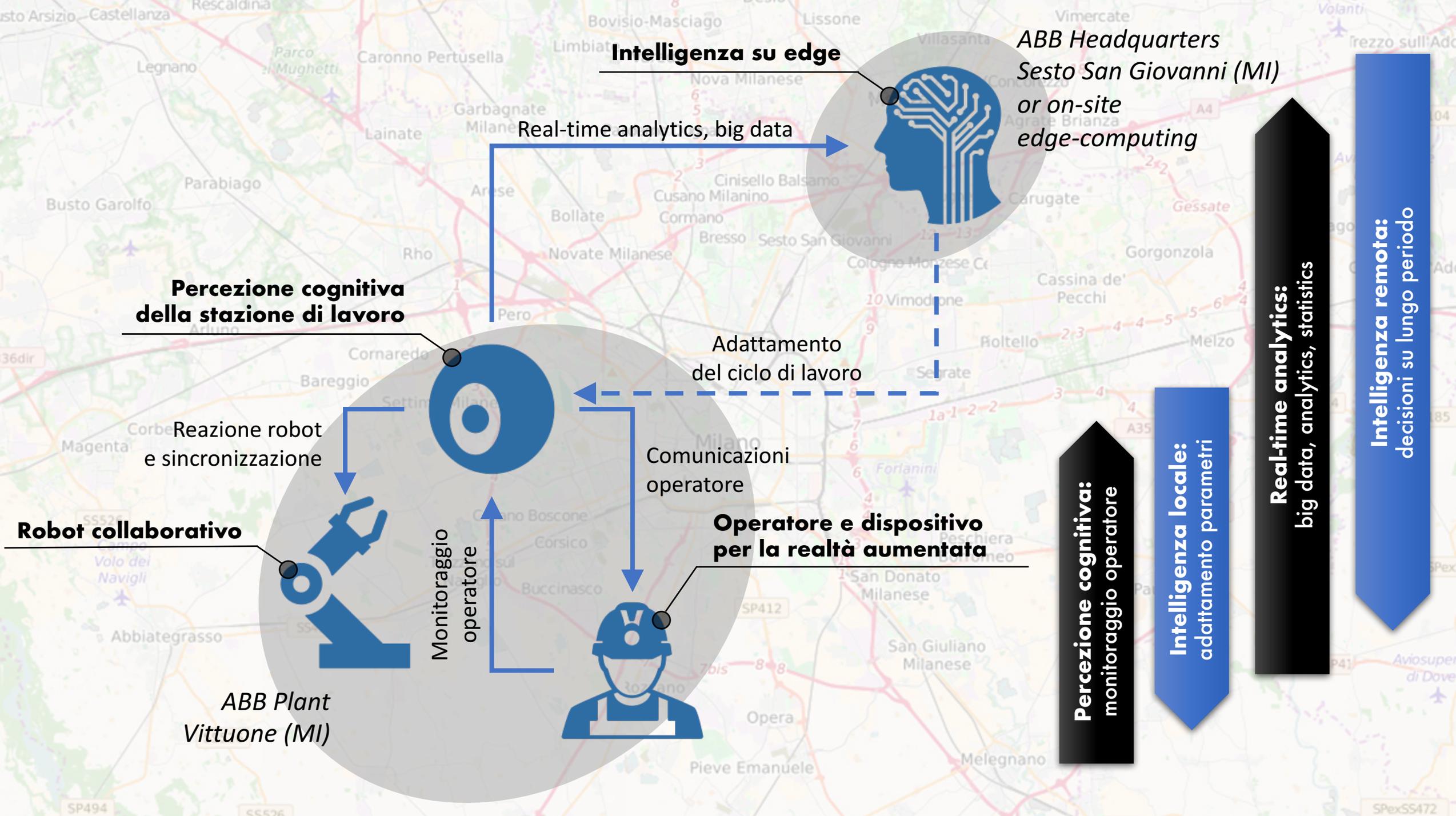




Synchronization lost



Operation took longer than expected





S1

COND_12 & !COND_03

!COND_12 | COND_03

MotorOFF (P)

S2

S3

PumpON (P)

COND_15





S1

INTELLIGENT

LOGIC CONTROLLER

MotorOFF (P)

S2

S3

PumpON (P)

COND_15

COND_12

COND_01

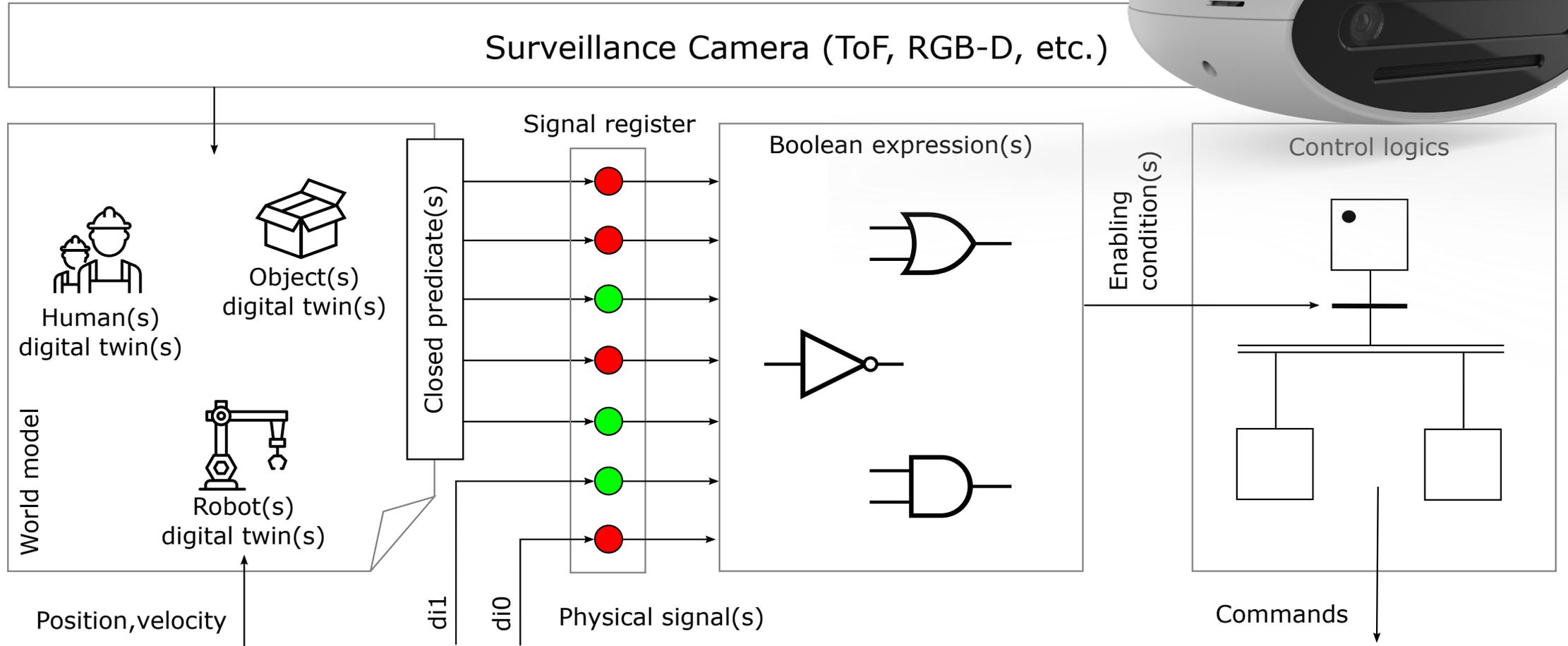
COND_02

COND_04

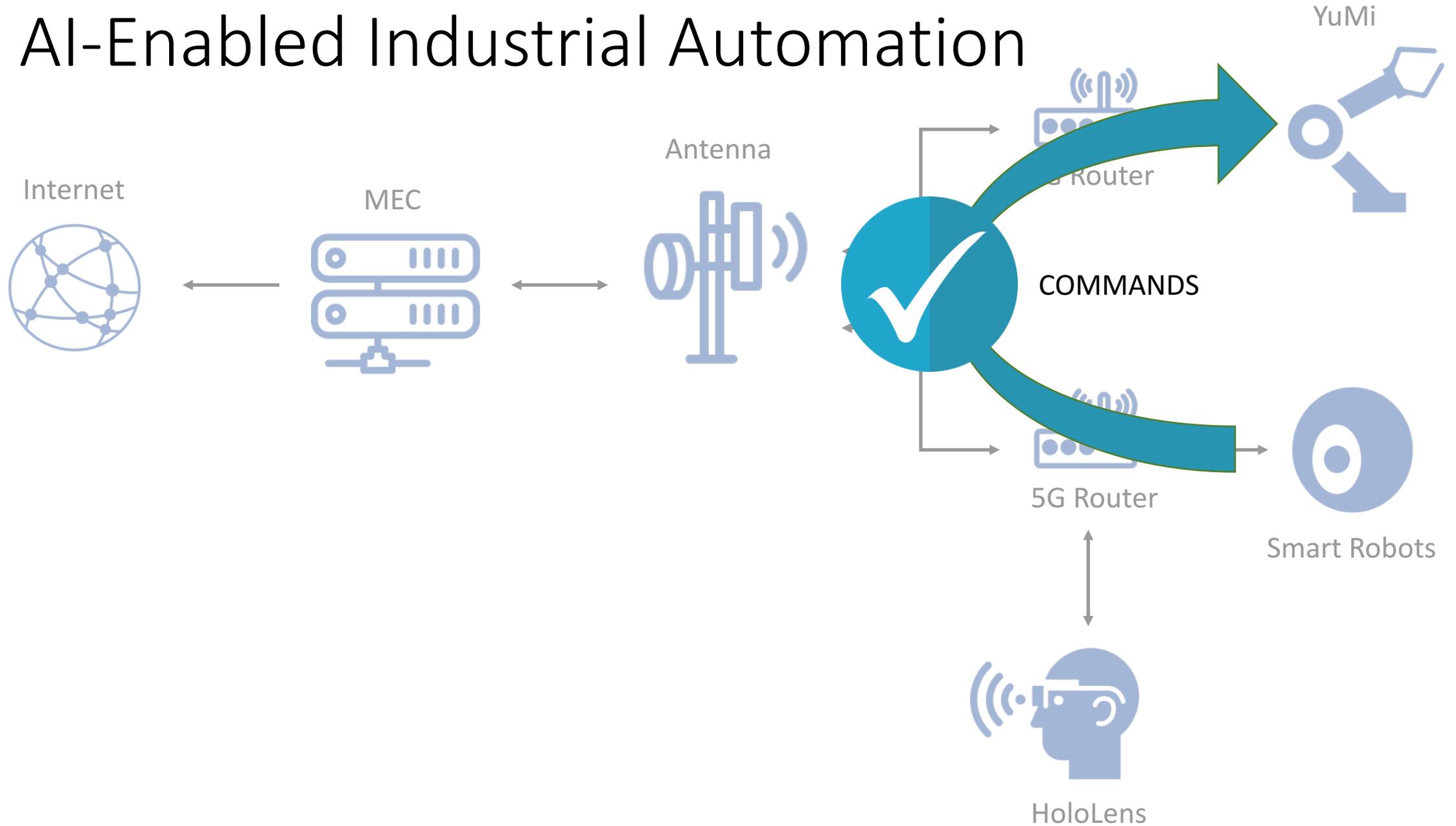
COND_05

COND_03

AI-Enabled Industrial Automation



AI-Enabled Industrial Automation





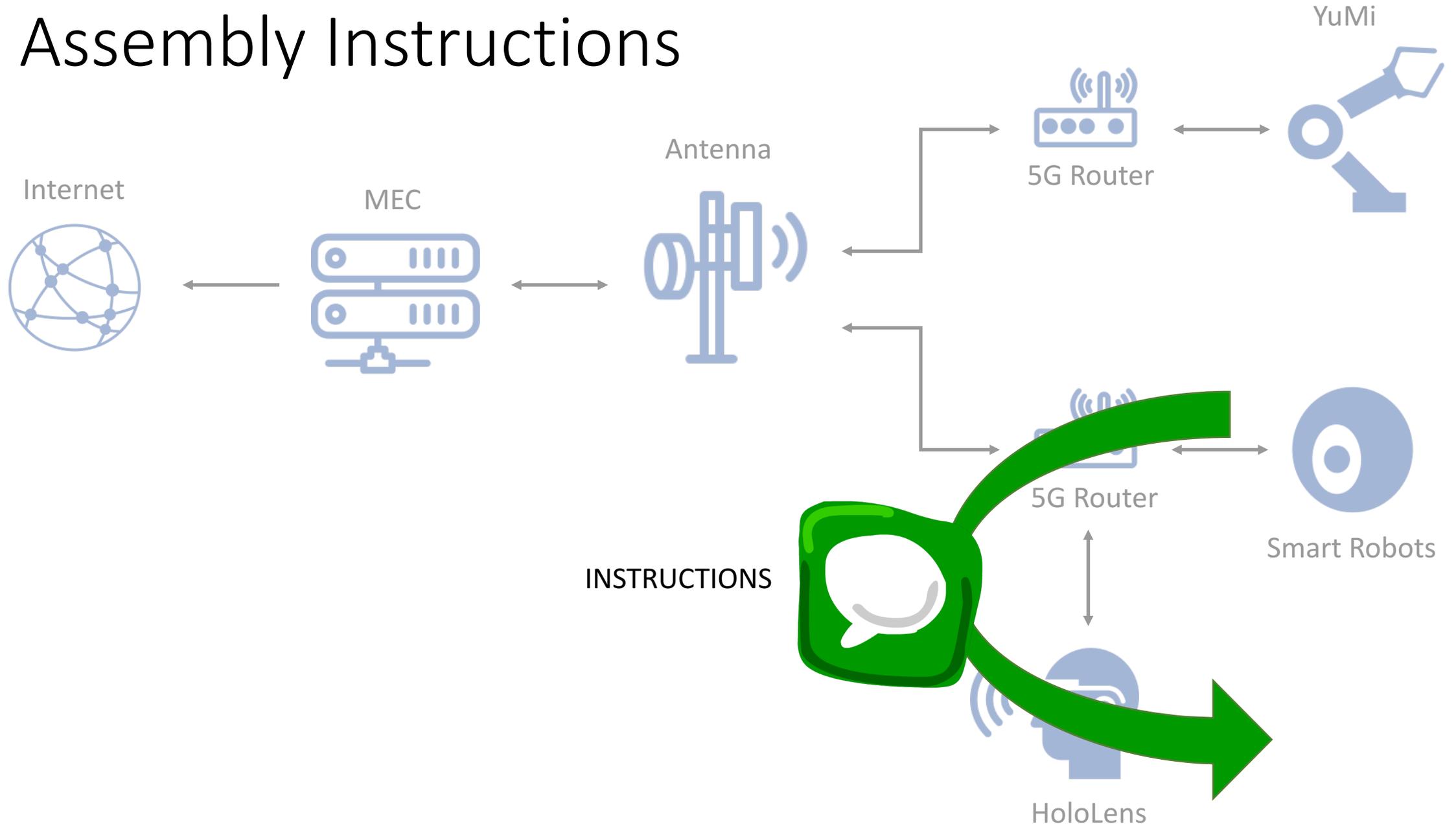
Intelligente

Percezione operatore e adattamento ciclo

ASSEMBLY INSTRUCTIONS?



Assembly Instructions





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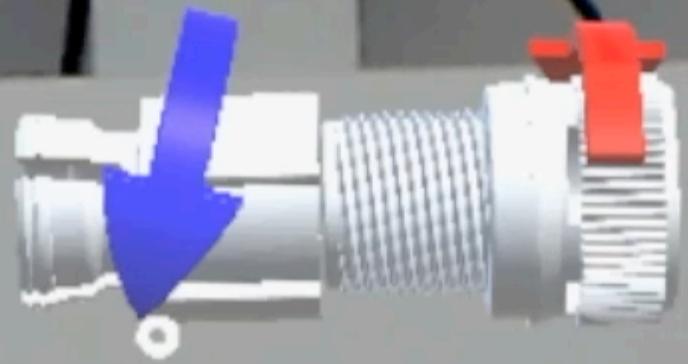
Ferrule

ABB

Screw

e-novia

Spring



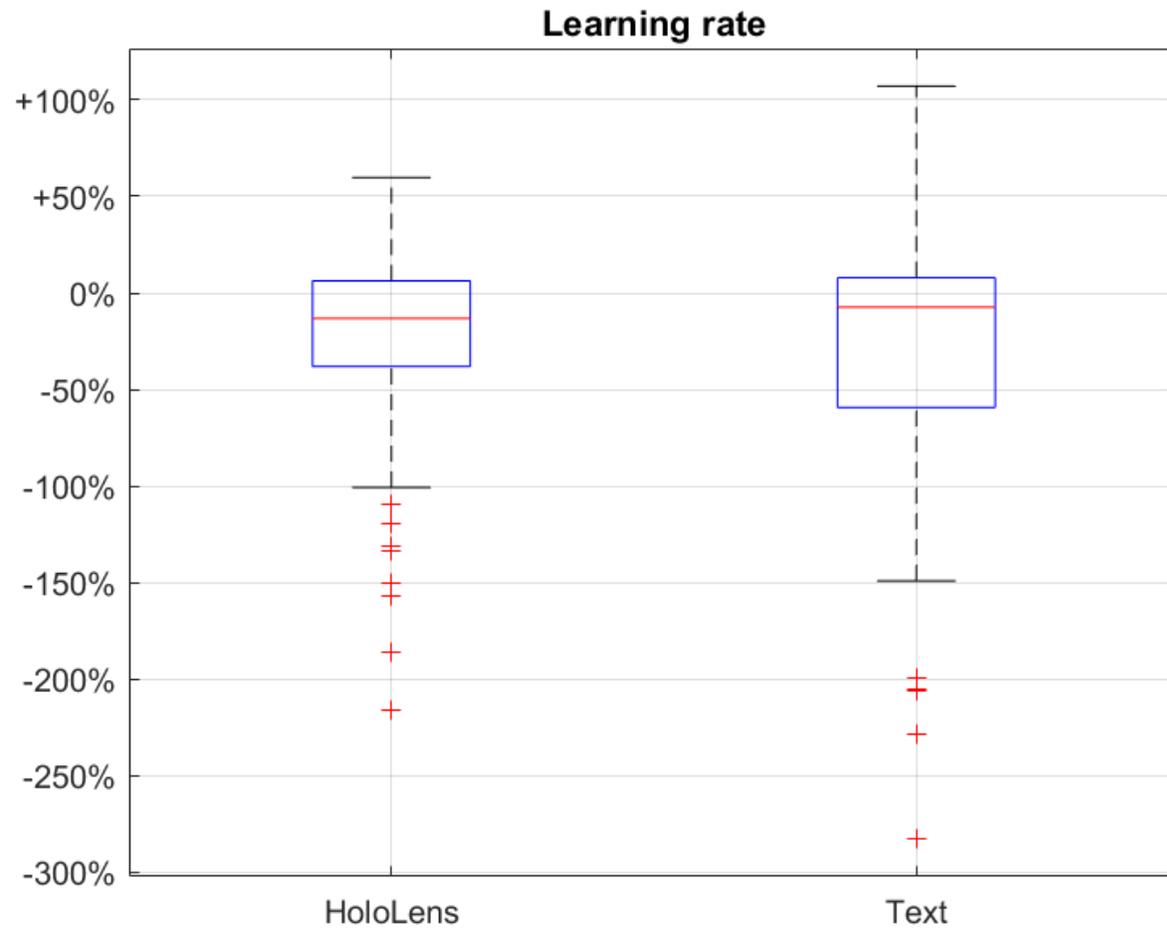
ABB

Interactive instructions

Assembly instructions are shown to help inexperienced workers



**HOLOGRAPHIC
INSTRUCTIONS**



TEXTUAL INSTRUCTIONS