IoT @Airbus Helicopters

PTC Forum

Nov. 28th, 2018, Stuttgart

HELICOPTERS

Released by Christine-Anne Chevry

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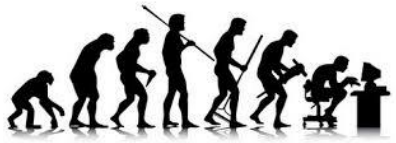
1.0 - Introduction

Airbus Helicopters at a glance

Supporting Customers operating challenging Civil and Military missions

The digital transformation: our path in the coming years



Guillaume Faury mentioned during a Speech " homodigitalus".

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2.0 – Digital Industry - MES

Manufacturing **E**xecution **S**ystem

A transversal solution dedicated to Shop-Floor aiming to:

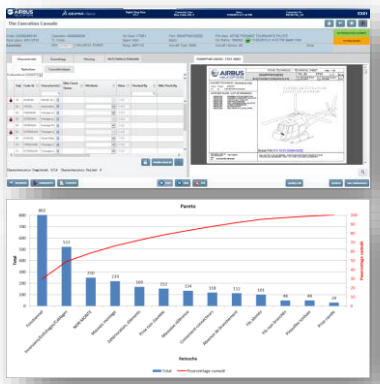
- Optimize Production Costs
- Reduce Lead-Time
- Increase quality level
- Increase tracking capabilities

APRISO

For **All Helicopters** Final Assembly Line and Airframe, Mechanical,& Blades Centers

Jacob's from Gartner highlight that most of the companies having setup a MES notice since the first quarter huge reduction in wasting rates & reworks

- Plan & check condition to start the execution
- Manage Production execution
- Visual Management on progress & performances
- Quality improvement



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2.1 – Digital Industry – **IIoT**

MECA 4.0 Safety First for Mechanical Assemblies

ENGINEERING

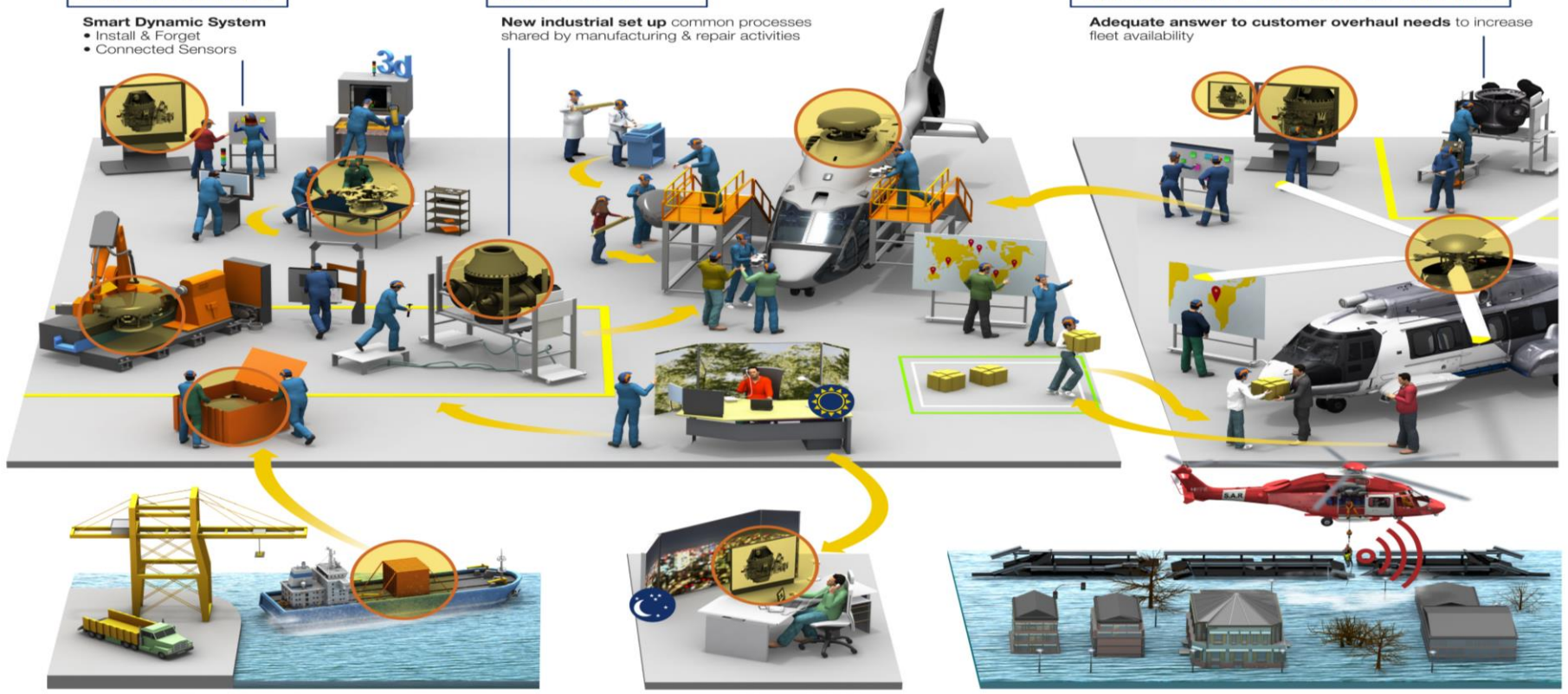
Smart Dynamic System
- Install & Forget
- Connected Sensors

INDUSTRY

New industrial set up common processes shared by manufacturing & repair activities

WORLWIDE REPAIR CENTERS

Adequate answer to customer overhaul needs to increase fleet availability



SUPPLY CHAIN & TRANSPORT

- **Parts & Assemblies** protected with the appropriate requirement level in end to end approach
- **Parts availability** increased for manufacturing and repair activities

SUPPLIERS

Boost collaborative partnerships by capturing market opportunities and family sourcing concepts

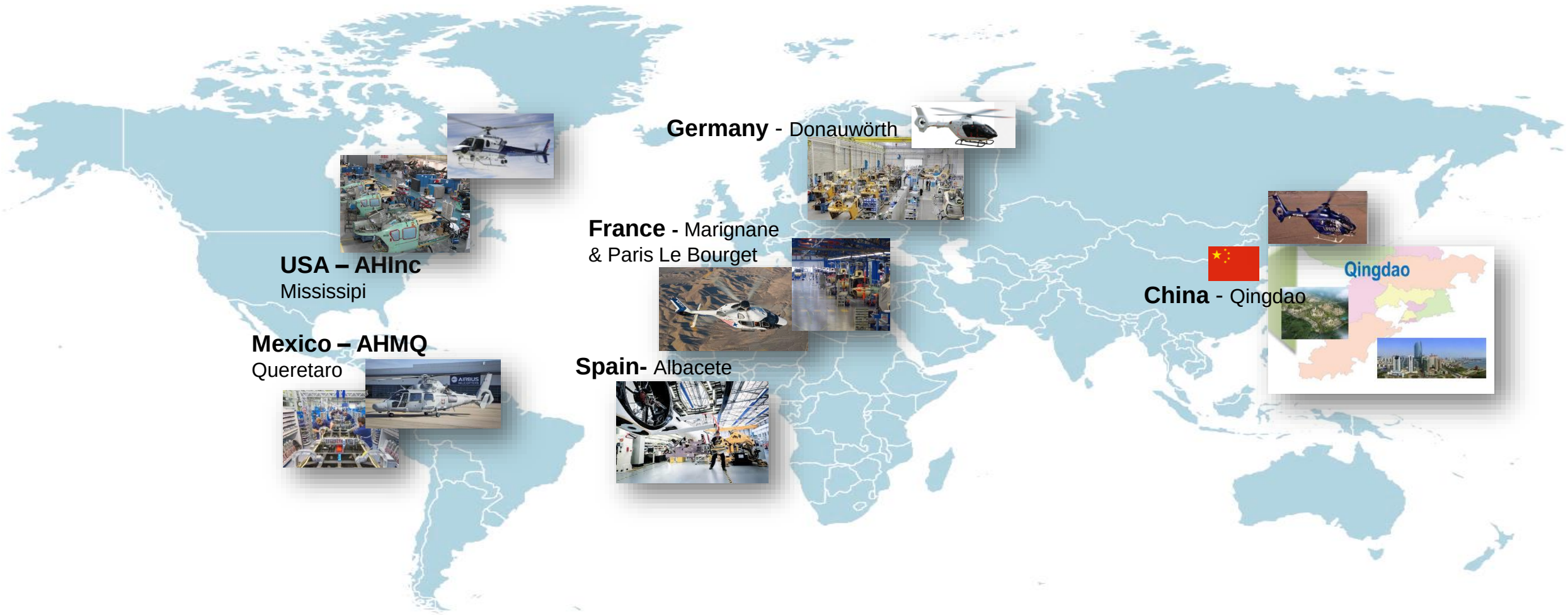
CUSTOMER SATISFACTION

Torque Wrenche

Andon Tower Light

1st Industry Connected Tools FAL LH

2.2 – Digital Industry - Deployment World Wide @Airbus Helicopters



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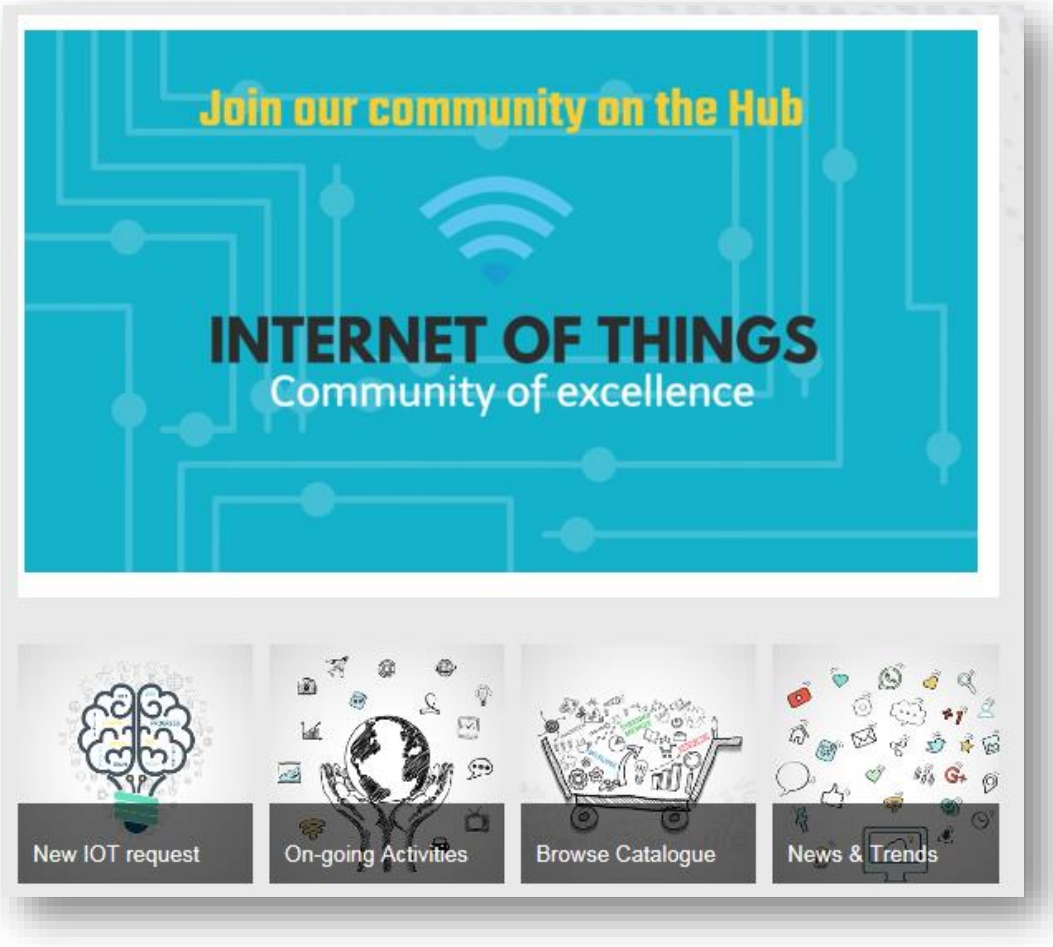
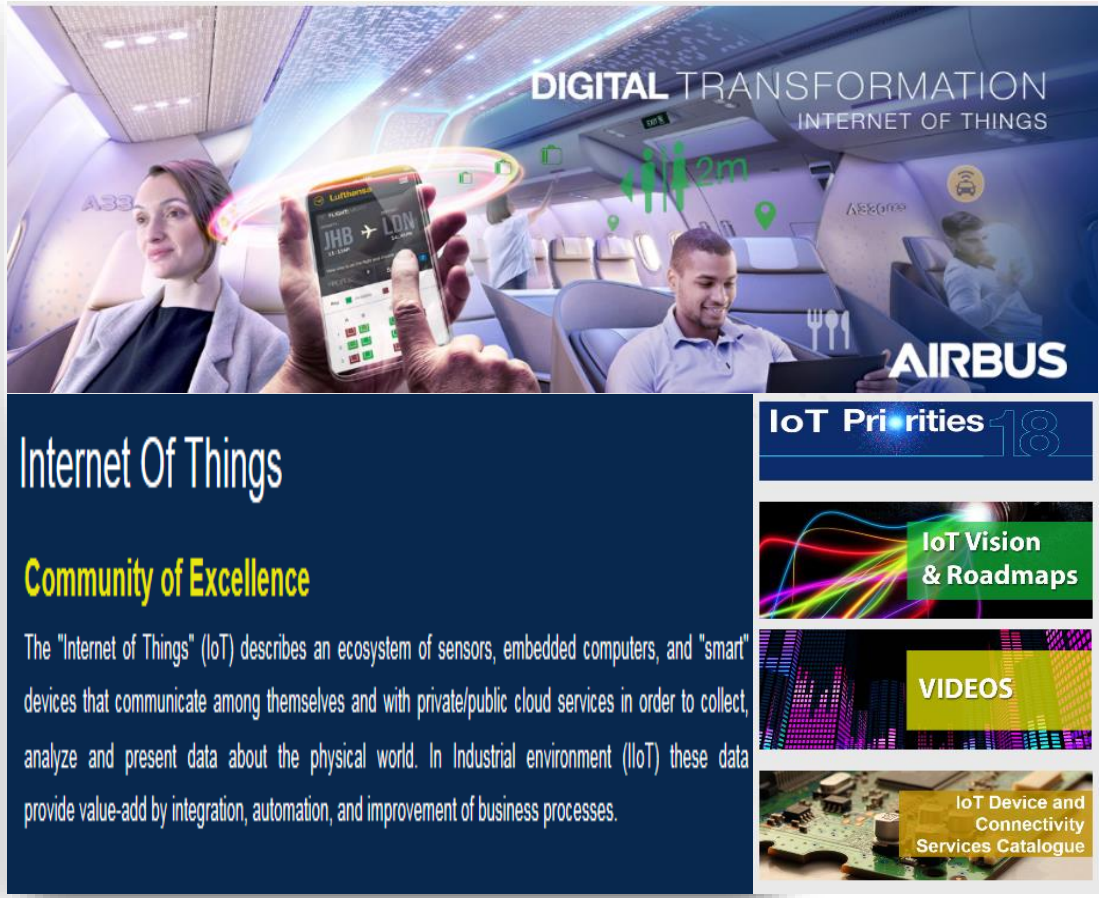
3.0 – IoT Community of Excellence @Airbus Live since 2017





3.1 – Where do we stand @Airbus Helicopters ?

- …

New IoT Requests

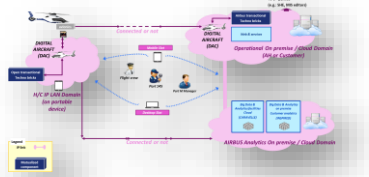
- **30 UseCases**
- Connected Tools
- Asset & Tools Tracking

PoV & PoC

- **10 PoC**
- B_Case as Digital Transfo
- Connected Tools & Tracking

Industrialization

- **10 Projects**
- Connected Tools
- Connected Machines
- Digital Aircraft



Industrialized IoT

- **4 IoT Indus. Solutions**
- RIFD & Tracking Transport
- Connected Tools
- Digital Aircraft

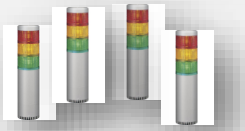
3.2 – How do we scale-up IoT @Airbus Helicopters ?

Technology

- POCs enabling to **validate technology**
- **Scattered Projects** starting to capture value
- Development aimed to deliver **full value to Airbus Helicopters**

People

- Identify and Attract People with **IoT Competences**
- Embrace and cultivate **Agile Ways of Working** and Communication: **SQUAD**
- **Prove and deliver the value of IoT** by embracing open standards, open collaboration and open communication
- **Capability in run mode delivering continuous benefits** in terms of new revenue streams, cost reductions



Partner

- Build appropriate Partnerships to enable POCs
- **PTC Customer Success Plan** has been **a key success factor** for the Industrialization of the IoT Projects

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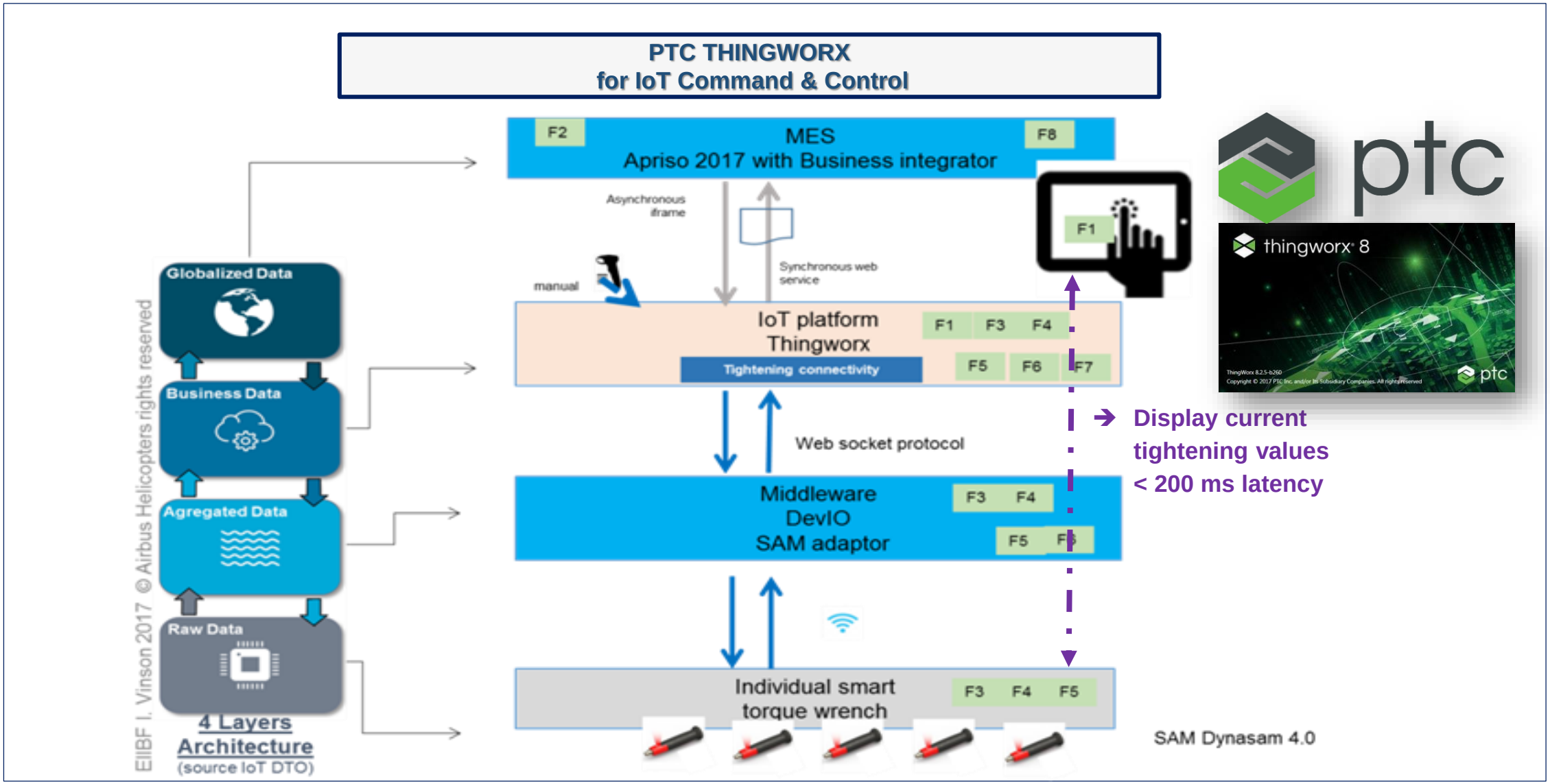
4.0 IoT Architecture Platform for Command & Control



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5.0 IoT Main Milestones 2018-2019

Main decisions, Project Milestones, General Information coordinated with DTO

2018

Jan.16th

IoT community Workshop, MAR

Apr. 9th

Airbus live IoT event Toulouse, TOU

May

MECA 4.0 Steerco
22 families of Smart means to connect

QG1(M3)
MECA 4.0
ANDON Light

Jun-Jul.

MDT measurement meeting (Airbus Catalogue)

QG4(M13)
1st Indus E-Torque

Steerco IoT
DTO / IM

1st AWS / PTC
ANDON & eTorque Prototype checkpoint

Digital Aircraft For Customers Q2-2018

Aug.

QG1
MECA4.0
Dynamic System Shopfloor incl. 10 metrological tools to connect

Sept. 4th

Steerco IoT
DTO / IM

Sept.

GoLive
MECA4.0
ANDON Light

Q4

eTorque Full Industry Deployment

GoLive
MES-Apriso DON
H135/H145 & A350/A380 Doors

2019

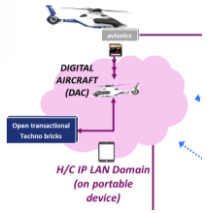
Q1-2019

GoLive
MES-Apriso
H135 China

IoT community Workshop, DON

Q4-2019

Digital Aircraft for Customers Q218-Q419



5.1 - IoT “Command & Control” Roadmap 2019-2021

IoT PSL “Product Service Line”
A multi-functional Team covering E2E the IoT Scope

Platform Setup Function Level I

Platform High Availability

Platform Functions Level II

Platform Functions Level III

2017
- eTorque
- Andon Lights

2018
- Gap Gun
- Smart bonding & ESN
- Hardware distributor

2020
- Storage cabinet (RFID)
- Remote Assistance – RA
- Ground Test Bench

2021
- Control Machine
- Remote Maintenance
- Manufacturing Machine
- AGVs
- Industrial means for Blade polymerization

Thank you

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