6th CSIR conference

Airbus Defence & Space 4.0

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Airbus Defence & Space
Where we come from

“If I had asked to people what they wanted, they would have said faster horses.”

(Henry Ford)

“Heavier-than-air flying machines are impossible.”

(Lord Kelvin, President, Royal Society, 1895)
I was a child of the 80s

My iPhone
My iPod
My Google
My Playstation
My YouTube
My WhatsApp
My eMail
My navigation system
Digitalization changes everything!
From a Classic Product …

… to a service
Digitalization, a definition

Digitalization is the **impact** on companies and organizations, of the fact that **people and things** are inter-connected **anytime, anywhere** for **every need**

A digital company is a company that has:

- Integrated digital technologies (big data, cloud, mobile devices, social networking)
- Evolved at an organizational level to address digitalization
Disruption is taking place in our markets....
Digitalization is already a reality in the Aviation Industry
Digital @ Airbus Group

Some concrete examples

- **Use digital to improve Products or Customer experience**
  - Optimize A/C operations with real time health monitoring

- **Use digital to improve internal Operations**
  - Predict & reduce CNQ with advanced analytics on process parameters

- **Use digital to improve Organisation & Culture**
  - Collaborative robots to support assembly operations
  - Social Network to favour access to expertise & knowledge sharing
Creating value

"Leverage aircraft data to optimize airlines operations & aircraft design"

Built upon Airbus Real-time Health Monitoring and Smarter Fleet experiences
From Data to Accurate Decisions

Airbus Data Collection
Airplane / Fleet / Global Data
- Airman warnings and faults
- Technical log books
- Operational Interruptions
- DAR flight sensors
- Flight schedules
- Technical documentation
- O/S data
- etc

Airbus Smart Analytic Platform
Data integration & Transformation & Analysis
- DataLake (airplane, fleet, global)
- Enhance Data & analyse
- Modelling
- Deep Learning bases on end-user knowledge

Airbus Cloud Solutions
Airline Accurate Decisions
- Fleetwide efficiency gains
- Leading indicators for operational interruptions
- Preventive maintenance engine
- Systemic maintenance task improvements
- Maintenance interval optimization
- Intelligent troubleshooting
- Fleet allocation support
- Sensor anomaly detection
- Route and flight forecasting
- etc
Massive Intelligence - Solution & Business Model

**Sources**
- Signal Intel.
- Image Intel.
- Open Source Intel.
- Cyber Intel.
- Human Intel.
- Environment Intel.
- Surveillance

**Processing**
- Analytics
- Fusion
- Predictive Analysis

**Business Models**
- As a System
  - Turnkey Solution, over private cloud operated by customers
- As a Digital Service
  - Over IDS public cloud

**Customers**
- Defence
- Security
- International organisations
Thank You