6th CSIR conference
Airbus Defence & Space 4.0

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Airbus Defence & Space
“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

- **Big Data & Advanced analytics**
  - Optimize A/C operations with real time health monitoring

- **Internet of Things**
  - Predict & reduce CNQ with advanced analytics on process parameters

- **3D everywhere**
  - Collaborative robots to support assembly operations

- **Augmented Humans & Robots**
  - Social Network to favour access to expertise & knowledge sharing

- **Social & Collaboration**
  - Consolidate market understanding with a marketing collaborative platform

**Use digital to improve Products or Customer experience**

**Use digital to improve internal Operations**

**Use digital to improve Organisation & Culture**
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 Smart Analytic Platform

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 Analytics
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
Intelligently 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