Key Trends Driving the Aerospace, Defense, and Government Industries

Luke Schreier
Vice President and General Manager
Aerospace, Defense, and Government Business
Pressures and Dynamics Affecting Aerospace & Defense Test Organizations

INCREASING COMPLEXITY

SCHEDULE AND TIME-TO-MARKET PRESSURE

OPERATIONAL EFFICIENCY
Data Management and Analytics

LabVIEW®  DIAdem  DataFinder Server  SystemLink®

Azure  amazon web services™  Google Cloud
# NI and Cyber Security

## Hardware
- Support for PXEboot
- Secure Boot
- Trusted Platform Module (TPM 2.0)

## Operating Systems
- Security-Enhanced Linux
- Windows 10

## Asset Management
- Secure software deployment
- Secure data publishing
- Secure web interface
- Control over security updates

*SystemLink*
Standardization Best Practices

Begin with the end in mind
- Clear definition of goal
- Focus on requirements, not existing instrumentation

Strike balance between people, process, technology

**PEOPLE**
- Buy-in from leadership
- Cross-functional participation

**PROCESS**
- Phased Approach
- Training

**TECHNOLOGY**
- Flexible, modular test architecture
- Standardized, but not rigid

Consult with an expert
Standardization

THALES

282% ROI 6-month Payback
79% REDUCTION V&V Test Manpower Requirements
92% REDUCTION In Test Time
The Shift Towards More Electric Aircraft (MEA)
Electrification – Challenges for Test

Testing in “Real Time”
- Cannot be accelerated
- Multiple, parallel test beds
- System and data management challenges

Speed of Test
- MHz loop rates (with analog I/O in the loop)
- Traditional processor-based systems inadequate

Simulation and Modeling
- Complex and non-linear
- Limited industry knowledge and IP (but critical mass building)
Trends Affecting Aerospace & Defense

- Digital Transformation
- Cyber Security
- Standardization
- Electrification
Industry Panel

Erik Wolf
Director, Test Engineering
Space and Intelligence Systems
Harris Corporation

Chris Clark
Project Lead Engineer
Corona Division
Naval Surface Warfare Center

Chris Jones
Section Manager
Advanced Integration and Test
Raytheon Space and Airborne Systems

Adriaan Rijllart
Deputy Section Leader
Measurement, Test, and Analysis
CERN

Valery GINESTE
Head of Electrical Power & Engineering Laboratory
Airbus Defense and Space
Trends Affecting Aerospace & Defense

- Digital Transformation
- Cyber Security
- Standardization
- Electrification