Technology Innovation & TXT Development in Aerospace & Aviation

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Milan, April 19th 2018
TXT e-solutions is an international, specialized provider of engineering software solutions supporting customers in high-tech markets in their mission- and business-critical core processes and throughout their product lifecycles.

**Aerospace & Aviation**
Product development, customer engineering, manufacturing and aircraft operations

**Automotive & Transport**
On-board software and systems

**Banking & Finance**
Independent testing, verification and validation of core applications and software quality services
Specialization in **multiple high-value areas** across our target industries value chain, and ability to serve customers locally, yet on a global scale.
Deep Engineering Knowledge Across The Aircraft Lifecycle & Value Chain

• **Breadth** and **Depth**: focus on high-value niches, but understand the whole picture
• **Industry** and **Technology** expertise: **Engineering Services**, backed by **Software Assets**
• **Flexible** engagements models, with **turn-key engagements** weighting ¾ of total
Virtual & Augmented Reality in Aerospace & Aviation

From advanced training applications to innovation in aircraft’s cabin configuration

**Pacelab WEAVR**

**New Platform** for rapid development & deployment of **Virtual Training** and **Operations Support** applications

**Pacelab Cabin**

**Evolution** of existing **product capabilities** with real-time Augmented Reality visualization
Virtual Training and Operation Support
DIGITAL TRANSFORMATION
From training manuals to interactive learning environments

"... a trusted and highly knowledgeable partner in the software development for training systems."

ALBERTO CERIOTTI
Former Head of Training and Helicopter Support Systems, AgustaWestland
PACELAB WEAVR, THE DIGITAL TRANSFORMERS

Designed according to EASA standards for Maintenance Training & Maintenance Operations

(Part 147 & Part 145)

EASA - NPA 2014-22

“... it appears that any of the following training tools, or any combination of them, may be used: [...] virtual reality; augmented reality; [...]”
Riding the **DIGITAL TRANSFORMATION** of Aerospace: get the most out of your most valuable assets and turn your **technical** and **procedural** knowledge into state-of-the-art **virtual training** and **operations support solutions**.

**DIGITAL TRANSFORMATION**

VR & AR solutions
Training real-world scenarios in zero-risk environments

AR & VR solutions
On-the-spot, on-the-job support for technicians

- 3D models
- Technical publications
- Troubleshooting procedures
- Systems descriptions
Pacelab WEAVR

Write once, **LEARN** everywhere

Virtual Learning (PCs, Tablets, Smartphones)

Immersive “Learn by doing” (VR wearable devices)

Training on the job and Operations support (AR-enabled Tablets & Smartphones; wearable devices)

Running on **unity**
From Virtual Learning, to Training on the Job, to Operations Support

PC/Tablet Computer-based Training: non-immersive Virtual Training

Immersive Virtual Reality

Training on the Job & Operations Support with Augmented (Mixed) Reality
Leveraging Hololens & Mixed Reality in Aircraft Cabin Configuration
The Airbus and Boeing Use Cases
Customer Base & References of TXT’s Pacelab Cabin

AIRCRAFT OEMs

AIRLINES

CONSULTANTS
Introduction to Pacelab Cabin

- Support catalog-based selection
- Instant access to key statistics & KPIs
- Visual support for selecting options
- LOPA optimization & drawing generation
- Rules engine based check & validation
Installed in the **A350 XWB Customer Definition Centre** in Hamburg for a life-size display of the cabin
Pacelab Cabin | Innovation in Aircraft Configuration using Mixed Reality
Pacelab Cabin | Mixed Reality Aircraft Configuration & Collaboration

1. VIRTUAL INTERACTIVE ELEMENT (LUGGAGE COMPARTMENTS)
2. PHYSICAL MOCK-UP
3. VIRTUAL INTERACTIVE ELEMENT (PASSENGER SEATS)

REALTIME UPDATE FROM PACELAB CABIN

Mixed Reality Collaboration
**HoloLens | Examples of Virtual Interactions**

### Boeing Use Case

### Airbus Use Case

- Hamburg, Germany
- April 10-12

- Hamburg, Germany
- April 13
Company Vision – Where We Are Headed

GLOBAL SCALE

TXT today

Organic int’l growth

TXT tomorrow

M & A

Local / niche players

AREAS OF SPECIALIZATION