Head of Emerging Technologies & Concepts
Peter Sander

Airbus Innovation Days 2016

The Future of ALM – “3D-Printing”

*Additive Layer Manufacturing
Additive Layer Manufacturing (ALM): Airbus leading in metal “3D printing”

First bionic cabin bracket „printed“ from titanium powder

June 20th, 2014: First flight of bionic cabin bracket
Additive Layer Manufacturing: In service for Spare Parts

Spare Parts

- First „printed“ Spare Part in service with Air Transat since February 2014

- Topology optimized and printed Safety Collars

→ improved maintenance handling enabled by Bionic Design
Bionic design: understanding & copying nature’s solutions

Improving aviation’s environmental footprint

Giant water lily at the University of Kiel
ALM + bionic design: up to 55% less weight

Enormous potential to revolutionise aircraft design & manufacturing

➔ flyable on Airbus test aircraft approx. Q4 2018
Re-thinking today’s product design

“Algorithms are the new star-designers” - Carl Bass, CEO AUTODESK, 2014
Bionic Partition: 50% weight reduction is possible & demonstrated

First bionic cabin partition „printed“ from Aluminium powder

➔ flyable on Airbus test aircraft approx. Q4 2016
Future fast track product development by using ALM (1/2)

Wind tunnel tests

- Polyamide-Alumide materials
- 90% lead time reduction
- 75% cost reduction
- Rapid analysis of future aircraft components
Future fast track product development by using ALM (2/2)

THOR

- THOR - Test of High-tech Objectives in Reality
- Flyable platform 4 x 4 m
- 25 kg
- 4 weeks for 1 Aircraft
- 18 missions planned for 2016
Europe-wide ALM Platform

- Material & process development
- New bionic design methods and design software
- ALM trainings and
- Industrial ramp-up

→ Established 2014