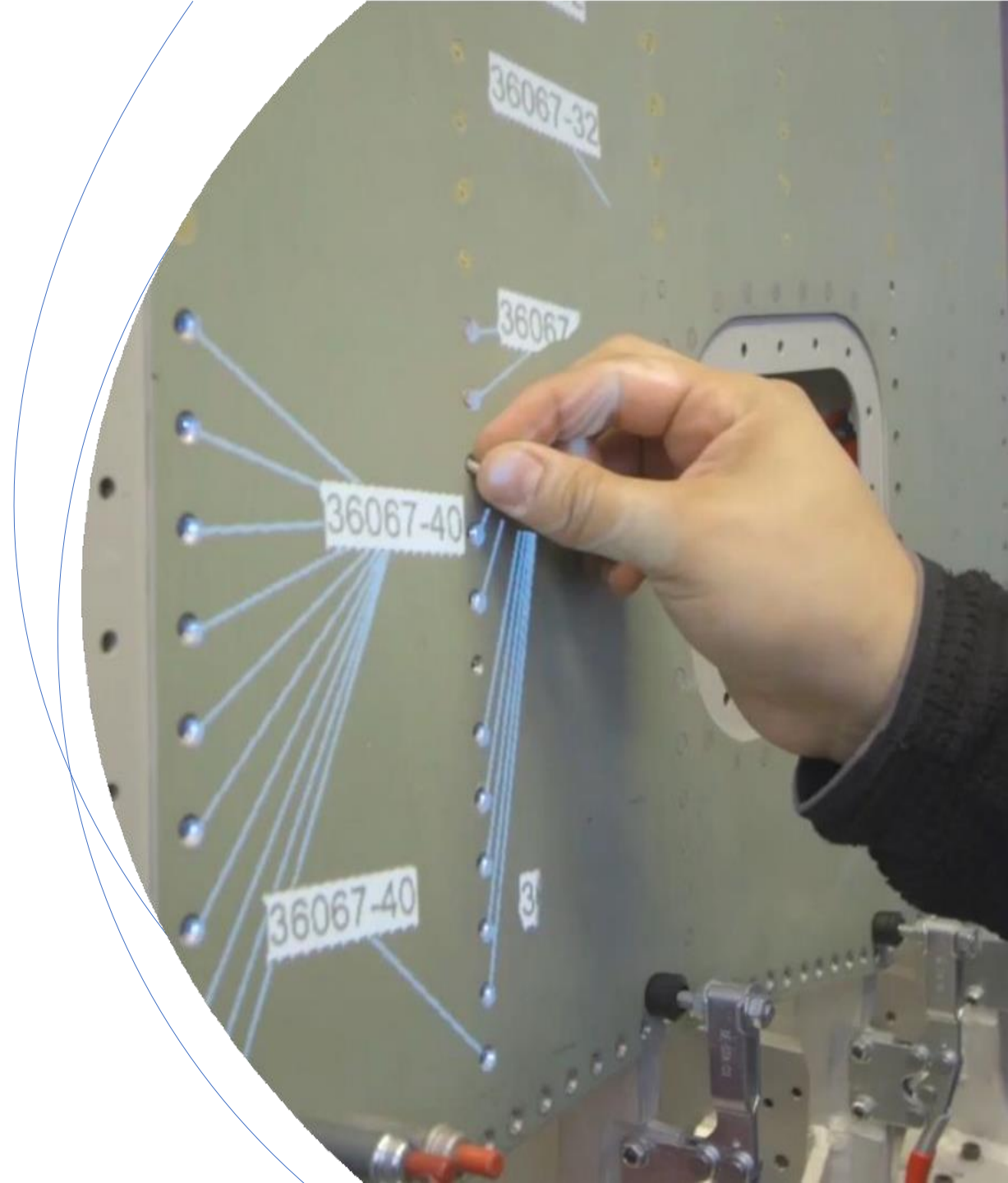


AUGMENTED REALITY IN THE PRODUCTION

Ramping up production and face workforce issues



3DEXPERIENCE®



DASSAULT SYSTÈMES MANUFACTURING TEAM

Germany – Stuttgart



Samuel MARIANNE
Augmented Reality Expert

Samuel.MARIANNE@3DS.com

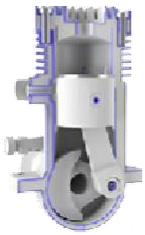


Victor STADLER
Manufacturing Consultant

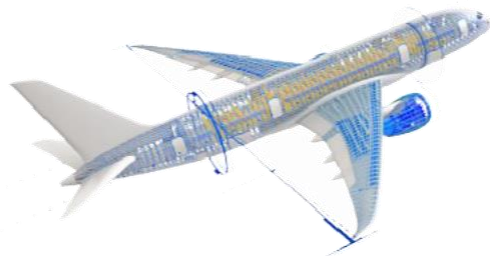
Victor.STADLER@3DS.com

OUR LEGACY

From part design to modeling the human body



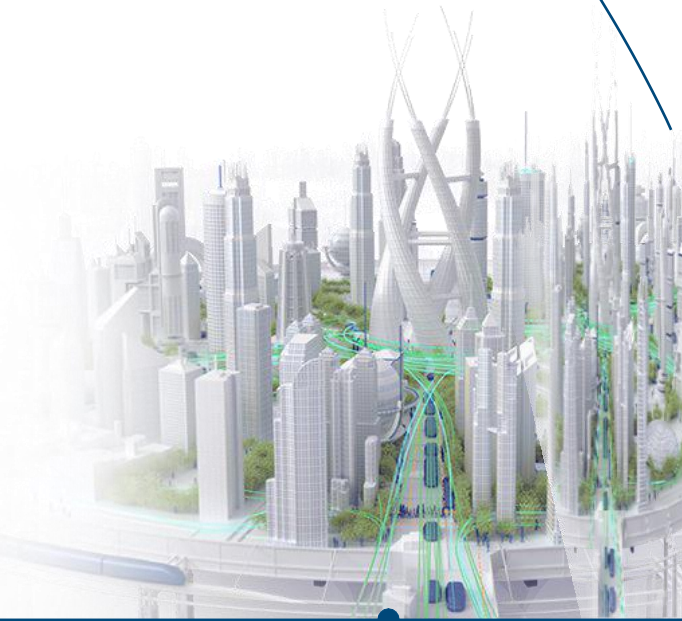
1981
**3D
Design**



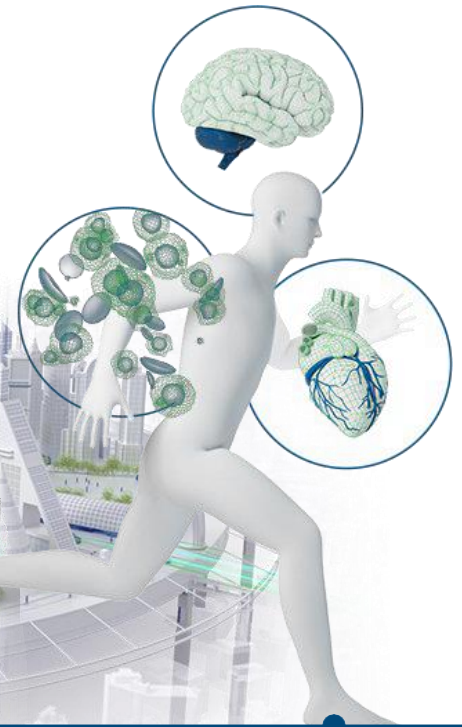
1989
3D DMU
Digital
Mock-up



1999
3D PLM
Product Lifecycle
Management



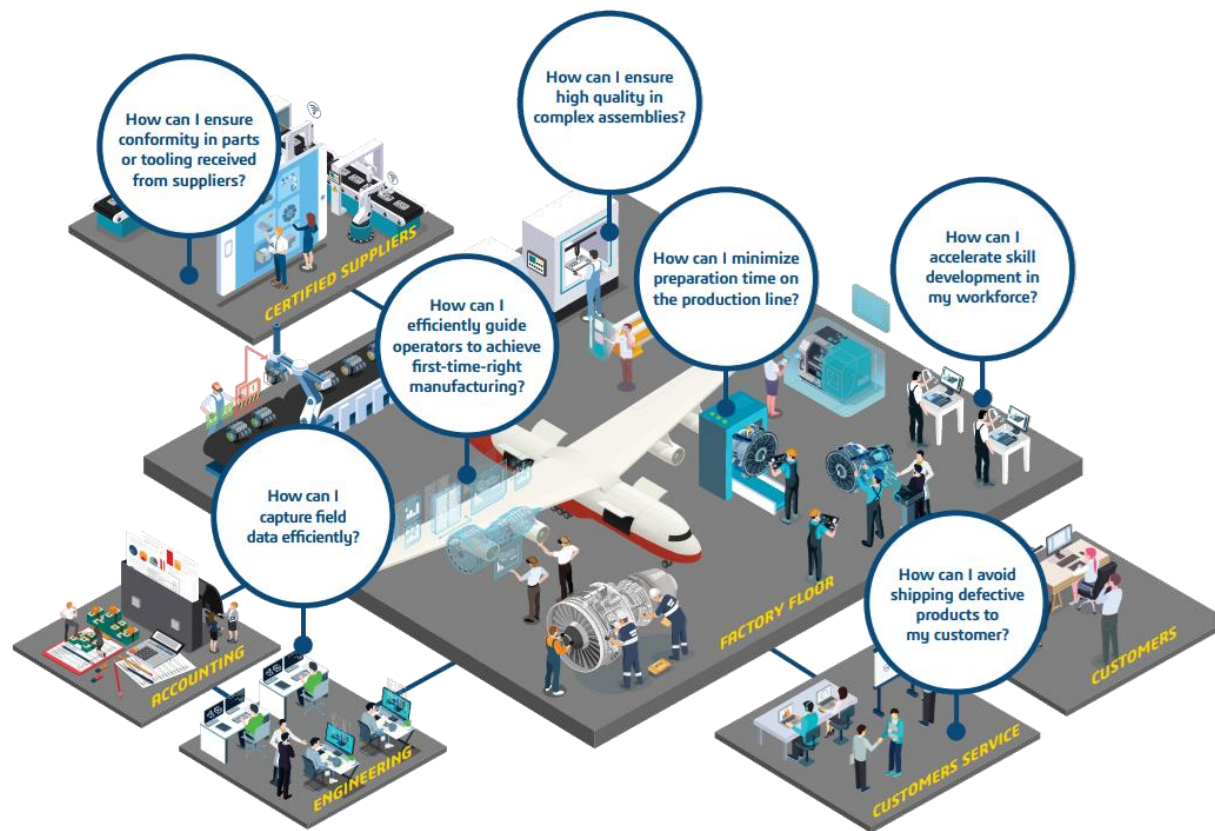
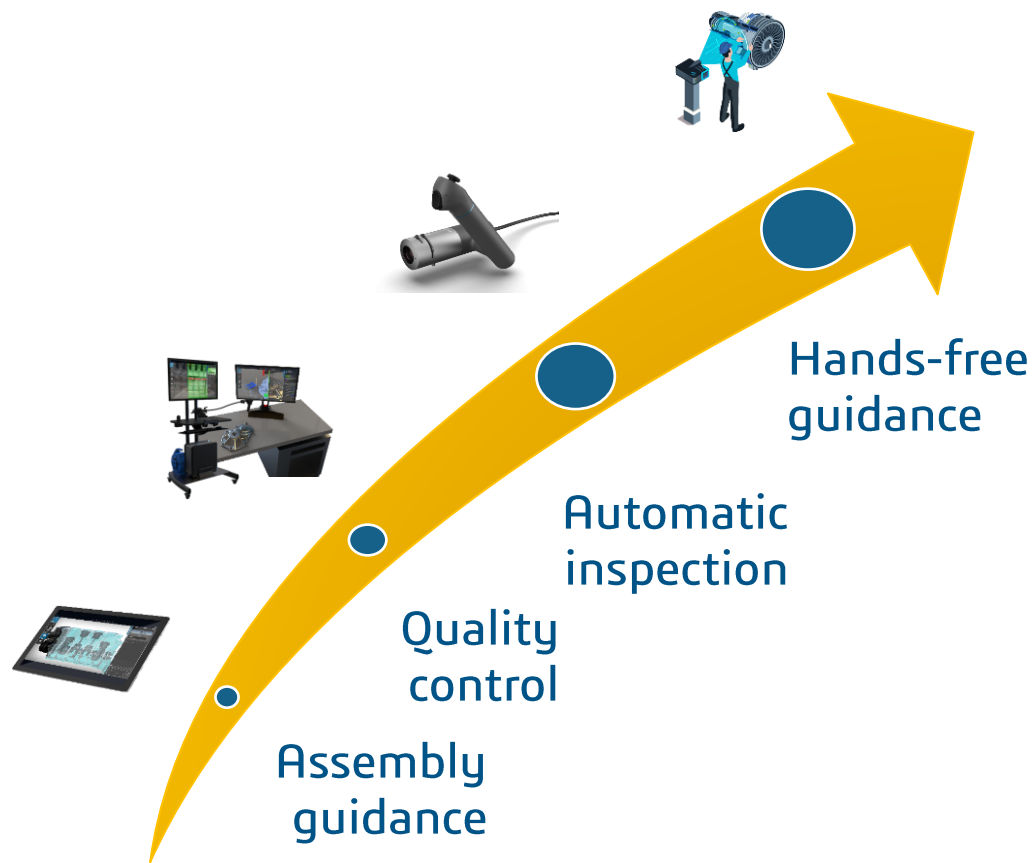
2012
**3DEXPERIENCE®
platform**



2020
**Virtual Twin
Experience
of Humans**

RAMPING UP PRODUCTION WITH AR

Compare the virtual with the real



ASSEMBLY GUIDANCE DETAILS

Objective

Guide operators during preparation, assembly or machining procedures on complex equipment to reach right first time.

Expected benefits & results

- Reduced preparation time
- Reduced **error rate**
- Increased production rate
- **Faster skill ramp-up**

Up to 99%*
of potential anomalies
detected during
production

Production rate
**increased up to
30%***

Skill ramp-up rate
50% faster*

* Customer source



CASE STUDIES / KEY CUSTOMER REFERENCES



Assistance with
mounting/assembly operations on
Rafale wings at Dassault Aviation



Assembly assistance with LEAP
engine at Safran Aircraft Engines

BAE SYSTEMS

Assistance with assembly of
aerostructures for the Eurofighter
at BAE Systems

QUALITY CONTROL DETAILS

Objective

Control and identify anomalies in a reliable and accurate manner at each step of the manufacturing process to guarantee full compliance with quality standards. From raw parts to final equipment, prevent defective products from reaching customers.

Expected benefits & results

- **Increased quality**
- **Faster** inspections & reporting time
- **Reduced cost** of wasted parts and late reworks
- Improved **traceability**



Error risk in locating/
interpreting defects
reduced up to 90%*



- Inspection time up to **40%* faster**
- Skill ramp-up rate **50% faster***

** Customer source*



CASE STUDIES / KEY CUSTOMER REFERENCES

LATÉCOÈRE

Control of fixing elements
(brackets) at Latécoère



Company inspects bolts during
car body construction

NAVAL GROUP

Quality control of pipes at
Naval Group







BUSINESS BENEFITS & ROI MEASURED BY OUR CUSTOMERS

Enhancing Business Value

90%

Improved quality process

Error risk in locating/
interpreting defects **reduced
up to 90%***

40%

Time & cost savings

Inspection time
up to 40%* faster

99%

Right First Time

**Up to 99%* of potential
anomalies** detected during
production

80%

Increased Productivity

Cycle time reduced
between 20 and 80%*

50%

Right Skill ramp-up

Skill ramp-up rate **up to 50%
faster***

* Customer source



Productivity

- Optimization of cycle times and faster skill ramp-up
- Reduction of costs incurred due to delays



Quality

- "Right the first time"
- Reduction of costs incurred due to exported non-conformities



Traceability

- Improved visibility into products and processes
- Reduction of costs incurred due to uninformed decision making



Interoperability

- Integration with existing IT systems
- Digital continuity and back-office <-> field data exchange

