

# Additive Repair @ Avio Aero

A GE Aviation Business



Manuela Perrone - [manuela.perrone@avioero.it](mailto:manuela.perrone@avioero.it)

#### Avio Aero Proprietary Information

The information contained in this document is GE Avio S.r.l. and its subsidiaries (hereinafter collectively referred to as "Avio Aero") proprietary information and is disclosed in confidence. It is the property of Avio Aero and shall not be used, disclosed to others or reproduced without the express written consent of Avio Aero, including, but without limitation, it is not to be used in the creation, manufacture, development, or derivation of any repairs, modifications, spare parts, designs, or configuration changes or to obtain EASA, FAA or any other government or regulatory approval to do so. If consent is given for reproduction in whole or in part, this notice and the notice set forth on each page of this document shall appear in any such reproduction in whole or in part.

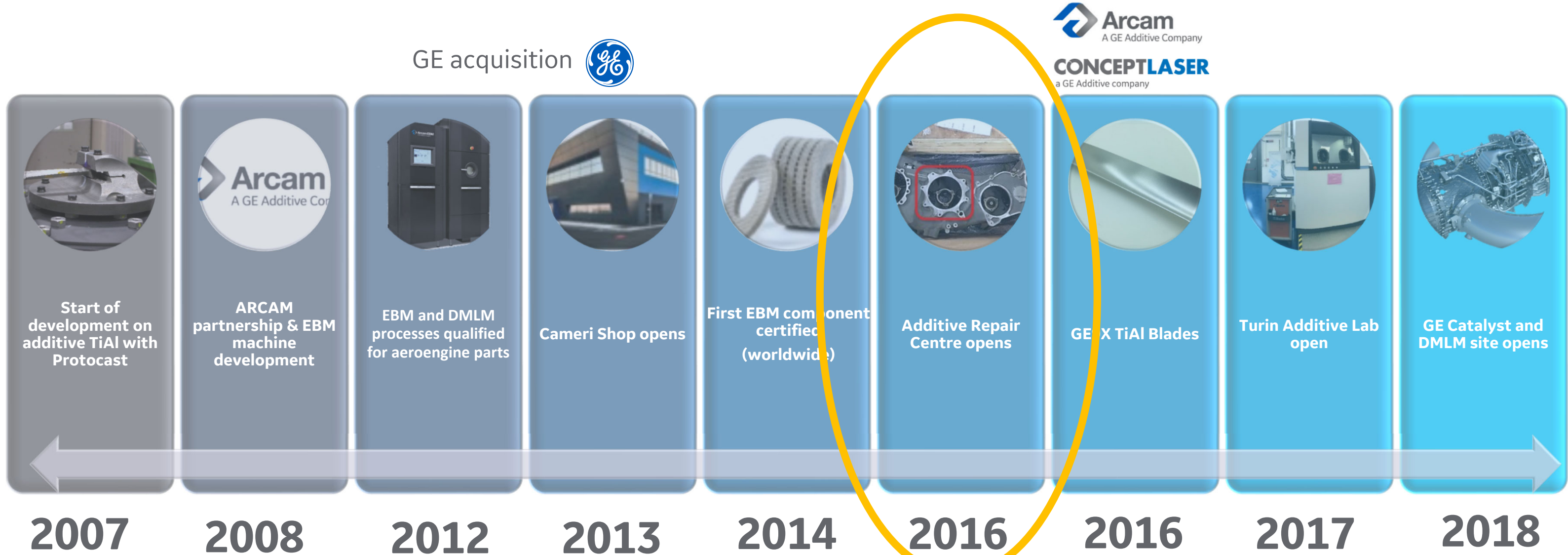
**NO TECHNICAL DATA** This document is considered to contain No Technical Data

# Avio Aero Additive Technologies journey

- **Pioneering additive...**



80% of aeroengines in the world are flying with our components



- **What's next... Keep investing to fully exploit technologies opportunities:**

- next gen powder bed machine (Mline, Spectra and Atlas)
- other modalities (DED, Binder-jet)



Confidential. Not to be copied, distributed, or reproduced without prior approval.



# Apulia Repair Development Centre: Mission & Organization



- @ POLYTECHNIC OF BARI CAMPUS
- 3200 sqft
- 2 MACHINES
- 2 LABS (PoliBa)
- 4 AVIO AERO ENGINEERS
- 5 UNIVERSITY ENGINEERS +1 TECHNICIAN
- 7 CONSULTING PROFESSORS



## MISSION

- ☐ DEVELOP ADVANCED ADDITIVE REPAIR TECHNOLOGIES
- ☐ DEVELOP «BUSINESS DRIVEN» REPAIR SOLUTIONS FOR GE AVIATION PRODUCTS



## NETWORK

- ☐ GE RESEARCH NETWORK; AVIO AERO E-TD COMMUNITY
- ☐ CONNECTION WITH AVIO AERO AND GE REPAIR STATIONS

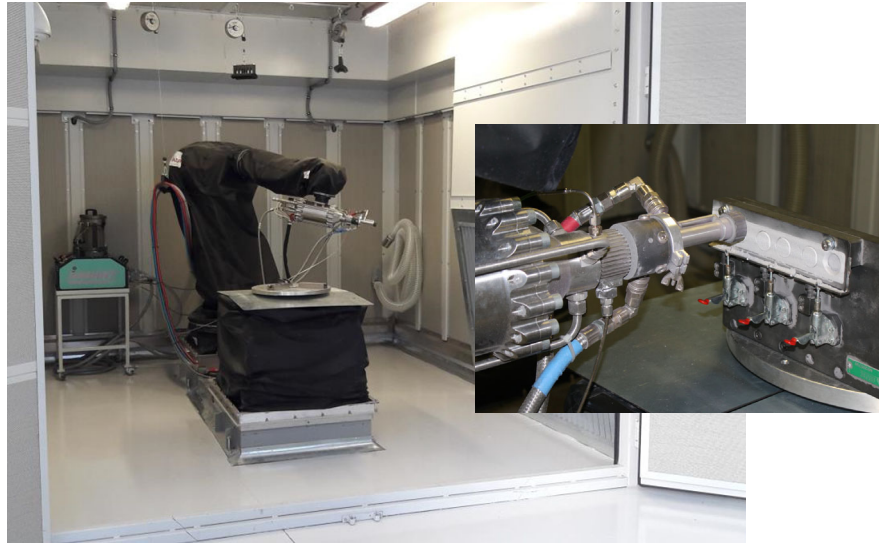
...Building Next Generation Repair Expertise and Capabilities  
...Creating Business opportunities for Avio Aero Repair Stations



# Apulia Repair Development Centre: Technologies

## COLD SPRAY

- EXTEND ADT & PGB HSG'sS REPAIR
- ENABLES COMPLEX GEOMETRIES REPAIR

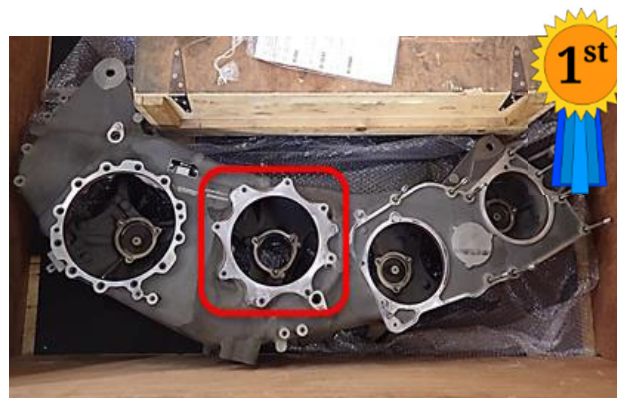


**Adapter  
out of flatness**



## TURN-KEY SOLUTIONS

AGB HOUSING WEAR



**1st Cold Spray  
repair on  
GE Aviation  
component**

## LASER DEPOSITION

- UNIQUE TiAl REPAIR CAPABILITY
- EXTEND NI ALLOYS REPARABILITY
- SUPERIOR QUALITY & PRODUCTIVITY VS TIG



## TiAl BLADES BUILD-UP

- TiAl laser deposit, same as EBM parent material





# Repair Development and Readiness







At GE Aviation, we invent the  
future of flight, lift people up and  
bring them home safely.

OUR PURPOSE

**Avio Aero**   
A GE Aviation Business

