

RESEARCH AND INNOVATION AS YOUR SERVICE

Aircraft system and assembly applications research capability



ABOUT US

Company profile

REDAM derives from REsearch and Development in AppliedMechanics and was founded in 2001 with the aim of bridging the gap between industrial application and scientific knowledge. REDAM's activities are focused on the aeronautical system and on assembly applications (military, commercial, commercial and VLA); furthermore tools, machines, drilling masks and equipment for the maintenance and maintenance of the cell are used. Finally REDAM is growing very rapidly in the design of machines and special devices, not only for aerospace systems but also for the automotive industry.

Certifications

In order to achieve our strategic goals, we rely on quality and environmental management systems certified in compliance with EN 9100 and EASA DOA P610.21J.

Our certifications demonstrate our experience and commitment to excellence.



PARTNERSHIP

The role of collaborations is a crucial factor in our research projects. The ability to add value in a complementary way is the basis of our key drivers of innovation



We collaborate with several research centers and universities: Material and Processing Department (University of Naples – Federico II), Industrial Design Department (University of Naples – Vanvitelli), Center of Turbulence Research (Stanford, Ca), LABMEC University of Calabria, CREATE, EPFL (Lausanne, CH) We work with a network of multidisciplinary companies: Officine Meccaniche Irpine O.M.I Srl, HPD Srl, LFI Srl, Caltec Constortium



OUR CAPABILITIES

STRUCTURAL ANALISYS AND DESIGN

Simulation Analisys S/W Development

DIGITAL PRODUCT DEFINITION

CAD CAM Concurrent Engineering

SYSTEM DESIGN

Multiphysics CFD/FEM Coupling

TECNOLOGY DEVELOPMENT

Composite Cure High Speed Machining Software distribution



REFERENCE MARKET

Aerospace Design, Analysis and Testing

Small Aircraft Design Unmanned Aircraft Design Large Airplane Design Part21, Certification Support, STC, Modification

Applied Mechanics

Special Machines Process Development Testing Devices

Renewables

Wind Technologies Hydrogen Technologies

REDAM Staff is Member of JARUS WG-3 for CS-UAS Regulation for Unmanned Aerial Systems <u>www.jarus-rpas.org</u>



Some R&D Projects

- C27J Aft Fuselage Re-Engineenrig
- ALCAS Project (Advanced Low Cost Airframe Strucures) LEONARDO, SAAB, DASSAULT
- B787 -8/-9 H/STAB (*)
- TECNAM P2002, P2004, P2006Twin, P2008 and P2010 Carbon Fiber, P2012
- A380 Cargo Floor Grid
- C-SERIES H/Stab LE, V/Stab TE and Fairings
- E-Pteron (Italian MoD) Unmanned Tilt Rotor
- SARISTU (Airbus) Regional Jet Wing
- GRETEL (LEONARDO CleanSky 2) Wind Tunnel Model
- WINSIC4P (ECSEL H2020) Advanced Avionics

* EXPORT LICENCE D361185 (LEONARDO– U.S. Dept. of Commerce, Bureau of Industry and Security)



Customers And Market Positioning

- LEONARDO (Airframe and Aicrafts)
- ALITALIA (Airlines)
- CAMOZZI (Pneumatics)
- Europea Microfusioni Aerospaziali (Rolls-Royce)
- FIART MARE (Yachting)
- INNSE-BERARDI (Machine Tools for Aerospace)
- TECNAM (Aircraft)
- MAGNAGHI Aerospace
- VULCANAIR (Aircraft)
- K4A (Helicopters)

Strategical Projects

- CFD Interface for MSC.Nastran (Using PaMS or IB)
- Finite Volume Non Linear Stress (LEOANRDO)
- Parallel Computing for Non Linear Stress Analysis



Research **Programs**

- ALCAS Advanced Low Cost Airframe Strucures EU Partnership with LEONARDO, SAAB, AIRBUS, SONACA
- FSW Friction Stir Welding

Partnership with LEONARDO, University of Naples, University of Palermo

- Finite Volume Stress Analisys Theory and Model

- C27J Aft Fuse Panel, Automatic Welding Machine, Position and Force Control

 COMFORT Multifunctional CF Panels Partnership with IMAST (CNR), LEONARDO, University of Naples, Boeing

- CESPERT Thermoplastic CF Structures Partnership with LEONARDO, CETMA, IMAST(CNR)
- HPRO Hydrogen Technologies Partnership with EPFL and GRANIT (CH)
- SARISTU New Technologies for Morphing Wing EU Partnership with LEONARDO, AIRBUS, University of Naples, EADS, DLR, Bombardier, SAAB, FCC
- GRETEL Morphing Wing Tunnel Test Model Partneship with DLR, Altran, University of Patras, LEONARDO, Invent

• WINSIC4AP Advance Microelectronics for UAV Powertrain Partneship with ST Microelectronics, Siemens, CNR, Micro-Nano Technologies District

