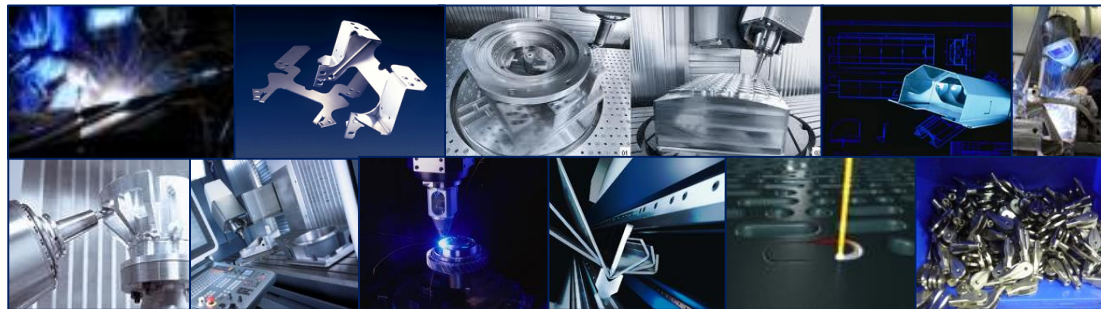






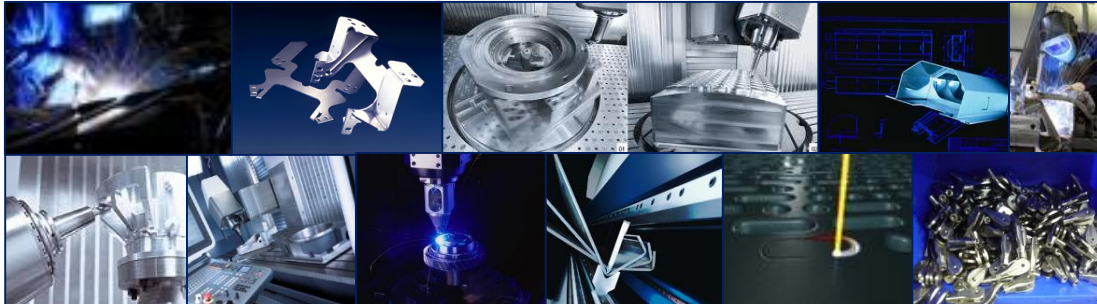
PRESENTATION OF THE LGF GROUP



Contents

1. Presentation of the composition of the LGF Group and its plants (*département* 31 - Toulouse area).
2. LGF Group business units.
3. The Group's commitments to quality and the environment.

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LGF Group

The **LGF** Group is located in the aeronautics basin around Toulouse .

Its subsidiaries **CIM** and **DULAC & NOZIERES** have over 40 years' experience specializing in short and medium run design and manufactures. They use high performance, state-of-the-art production resources in:

Light boilermaking and forming

Precision sheet metalwork

Machining (*CNC Turning Milling*)

Welding *TIG (Linear/Circular) MIG, Spot, Seam.*

Assembly and fitting (*Riveting, Bonding...*).

Bending, Crimping (*Tightness tests*)

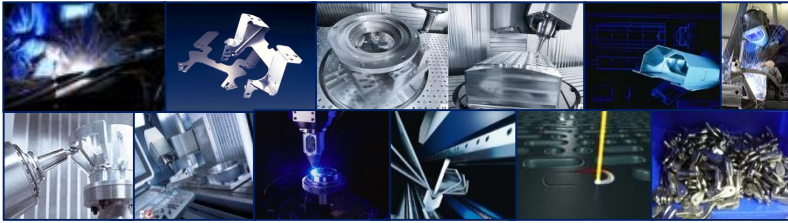
Heat treatment (*Aluminium*)

The **LGF** Group is made up of experienced and highly qualified teams capable of assisting and advising you.

Over 40 years' experience specializing in short and medium run design and manufactures.



Location of LGF Group sites



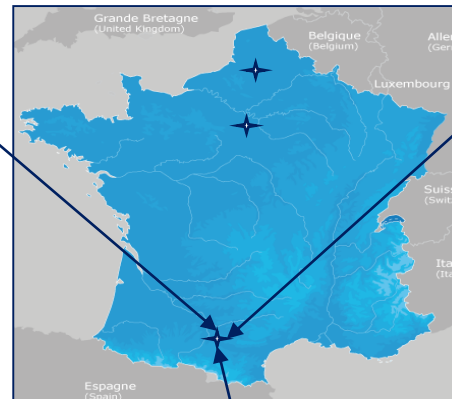
Cornebarrieu (31):
Dulac & Nozières



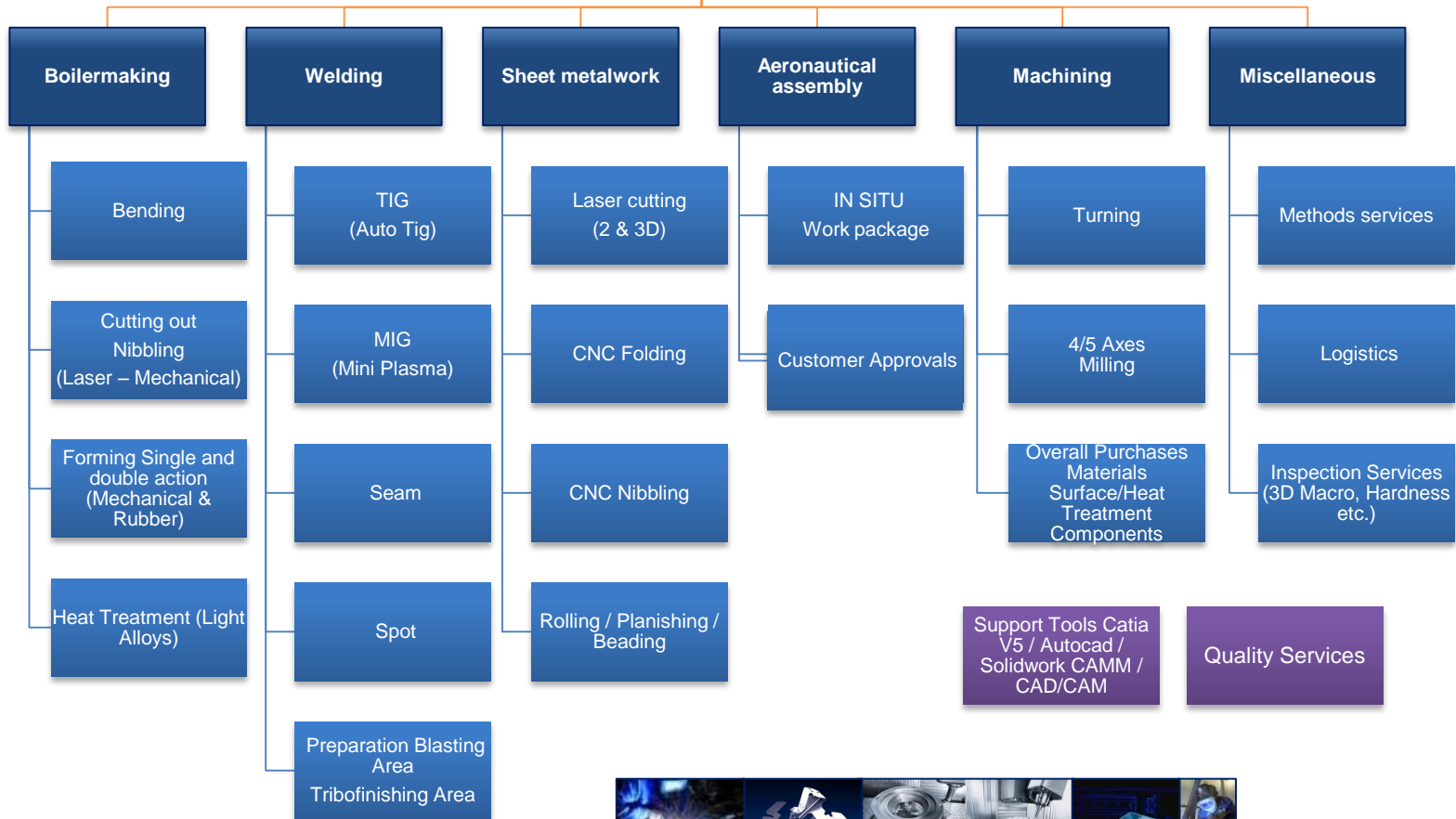
Cornebarrieu (31) :
LGF Industries



Cornebarrieu (31):
CIM



LGF Group business units



Boilermaking / Sheet metalwork

As a **partner** in the development of the Aeronautical industry, the LGF Group is structured in such a way as to design and integrate solutions that meet **specific requirements**.

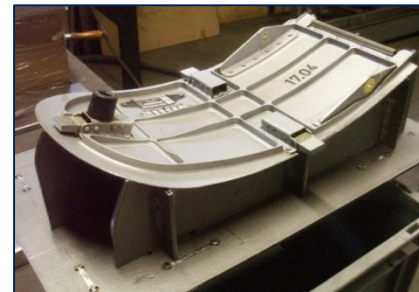
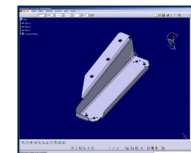
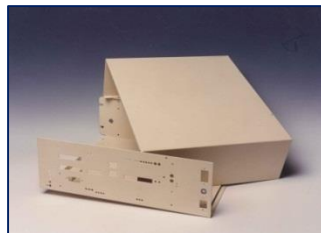
Our teams have the expertise and the knowhow regarding some of your processes. From the auditing to the design stage up to and including the final assembly of your projects.

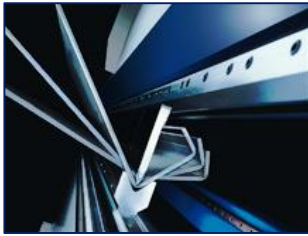
Study and design of mechanically welded aeronautical products.

LGF (CIM) ensures the manufacture of boilermade parts, special piping, the assembly of assorted sub-assemblies and assemblies along with Workpackage management.

Through its resources in terms of capacity and technology, its mastery of light alloys, stainless steel, titaniums, steels, and the complementarity of its areas of expertise, it is positioned as a global partner of the main contractors in the civil and military aeronautics industry.

The assembly of Aerostructure sub-assemblies, from the simplest to the most complex, integrating configuration management, is a key area of CIM's expertise. Riveting, metallization, bonding, placing of mastics and fixing etc., are all processes that are fully controlled, and CIM has qualifications from the aeronautical contractors...





Our resources:

Laser cutting out 2D & 3D

5 axis laser, 2400W power rating, make: TRUMPF

Capacity 3000 x 1500x 500 mm thickness 4 mm for Light alloys and 6 mm for Stainless steel, Inconel...

•Cutting out on NC Nibbling Centre

Capacity 4000 x 2000 thickness 6 mm for Light alloys and 4 mm for Stainless steel, Titanium, Inconel...

•Forming on Hydraulic Press (Drawing)

•Single action: 1000 tonnes, table dimensions: 1440x1200

•Dimensions between uprights: 1500x1100

•Max rubber forming container format: 900x600

•Double action: power 400 tonnes and 20 tonnes on blank holder, table dimensions: 1850x1850

•Dimensions between uprights: 1220x1220

•Planishing

•capacity: 1600 mm, thickness 3 Aluminium

•NC folding

•max. capacity 3000 mm, max. power:100 tonnes

•Bending

•Tube:

•NC 5 axis bending machine: external diameter 4 mm to 25.4 mm; max. 24 curves; tube length: 6m

•Semi-automatic bending machine: diameter 20 to 63 mm

•Profile:

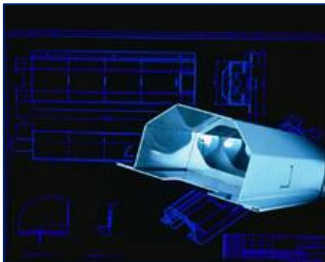
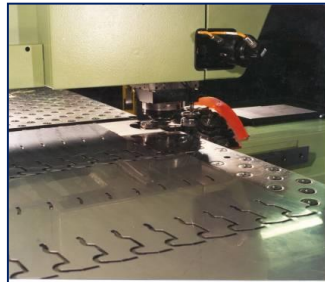
•capacity: angle 80 x 80 x 8, U 140 or Tube diam. 80

•Moulder

•Rolling

•capacity: length 1000 mm, min. diameter 80 mm

•capacity: length 480 mm, min. diameter 20 mm



Welding

As a **partner** in the development of the Aeronautical industry, the LGF Group is structured in such a way as to design and integrate solutions that meet **specific requirements**.

Our teams have the expertise and the knowhow regarding some of your processes. From the auditing to the design stage up to and including the final assembly of your projects.



Specialists in working all metals in fine thicknesses.

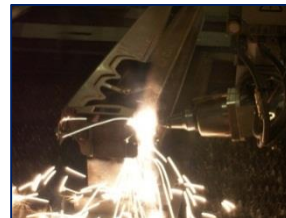
From flat sheet metal or tubing up to the final product a dynamic structure adapted to the broad range of processes,

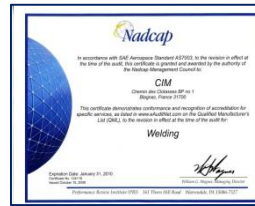
CIM looks after the management of operations that go along with welding, including logistical packaging, heat and surface treatments, second machining operation, always with the same concern for quality.

From prototype development to larger turnkey production volumes, we are a contracting subcontractor and manufacturer, and are able to respond to our customer's specifications and requirements on a day-to-day basis. Our engineers, our technicians and quality managers guarantee you the benefit of our experience, and the long-term reliability of our production.



CIM fully masters Tig and microplasma welding. We meet increasingly greater demands for quality, production constraints and development of new products. For many years, our expertise has been consolidated through our partnership with well-known customers.





Our resources:

TIG

Automatic TIG

- Linear: weld length 1400 mm
- Circular: diameter approx. 500 mm

MIG

Mini Plasma

- stainless steel thickness: min. 0.05 mm

Spot

- steel capacity: 5 + 5 mm
- standard AIR 3383 Class I qualification on stainless steel
- from 0.4 to mm

Seam

- steel capacity: 3 + 3 mm
- standard AIR 3383 Class I qualification on stainless steel
- from 0.4 to 1.2 mm

- Light Alloys heat treatments
- Max. operating area: 1600x900x900**
Max. temperature: 600°C
Aeronautical approval

Machining *(Turning / Milling)*

A supplier for over 40 years to the great names in the aeronautical and space industry, Dulac & Nozières with LGF manufactures mechanical and structural parts, sub-assemblies and assemblies.

*With a pool of CNC machines and special process facilities at its disposal, LGF's skilled personnel integrate specialist tasks of precision machining, and mechanical and hydraulic assembly in order to deliver complete units.
(External control of surface treatment).*

Precision mechanical machining

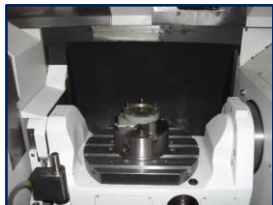
Turning, C axis, Y axis

Dimensional inspection – non-destructive inspection – Tests

- Aluminium
- Ordinary and heavily alloyed steels
- Stainless steel
- Titanium
- Inconel
- Exotic materials
- Plastics



Prototype development and fine-tuning and mass production



Parts carved from solid or from the raw (structure, engine parts, fittings, etc.)



Simultaneous 5 axis machining



The added value from our services lies in our teams' tried and tested expertise and in the specific features of our technological resources for mechanical machining.

Our Experience at Your Service



Our resources:

Milling machines:

- 1 MAZAK Centre 5 axis (Palletized)
- 1 DMG Centre 5 axis (Palletized)
- 1 DMF Centre 5 axis (1800x900x900)
- 2 HAAS Machining centres
- 1 CINCINNATI Machining centre
- 1 MIKRON Machining centre



Lathe / Milling machines:

- 3 MAZAK Centres MY
- 1 MAZAK Centre MY
- 1 MAZAK Centre MSY



Lathes:

- 2 MAZAK QT15
- 1 MAZAK QT8
- 1 MAZAK QT6

Additional resources:

- 1 CAZENEUVE HB500 parallel lathe + display console
- 1 TRAK MX3 semi-automatic milling machine
- 3 CK electronic tapping machines 0.6 to 4.6 mm
- 4 pillar drilling machines
- 3 band saws.

Data processing

- CAM Esprit 3D 5 axis
- CATIA Version 5 station

CAMM



Assembly Fitting

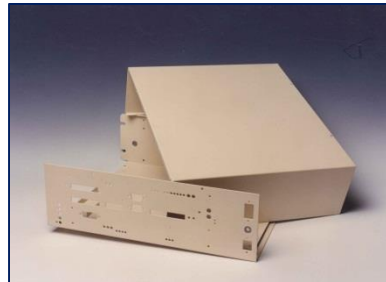
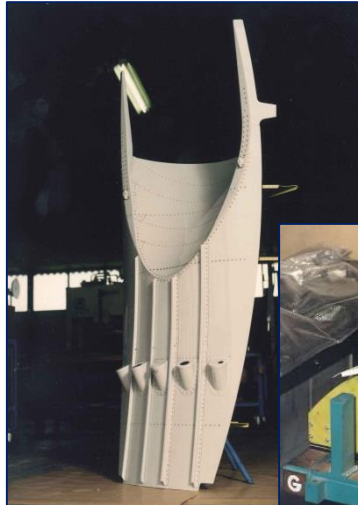
The LGF Group offer is from a player in the aeronautical sub-assembly construction industry.

It offers its customers overall **EX SITU** (WORK PACKAGE) solutions.

By having personnel qualified in the customers' processes, the LGF Group is in a position to implement **FULL SOLUTIONS** through the following business units :

- Preparation, methods, Tooling
- Internal production of components (**machined and boiler or sheet metal components**)
- Control of component Purchases and external services (Heat & surface treatment, paintwork)
- Technical and logistical support
- Quality inspection
- Special processes

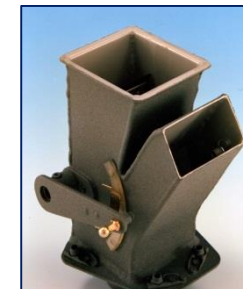
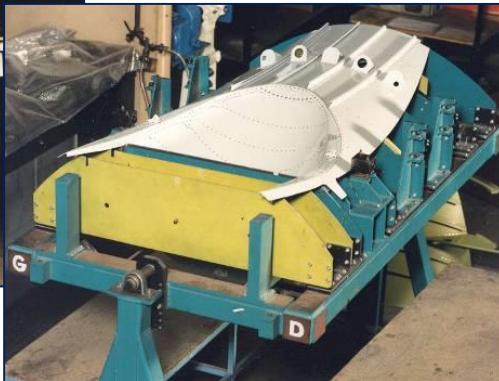
*Ex situ service: Chisel grooving
Assembly and inspection*



*Full service: Onboard fittings
(Assembly and inspection)*

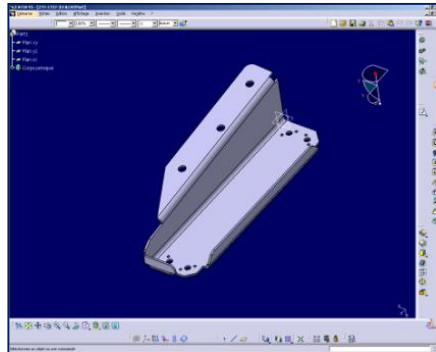


*Ex situ service: Door (Spare part)
Assembly and inspection*



*Ex situ service: Various sub-assemblies (Mechanical:
boilermaking / Kitting / Machined parts / Assembly with
special processes ...)*

Quality control



*Air conditioned premises
3D inspection machinery (capacities 1500*1000*500)
Measuring columns
Helium test tightness check
Pressure test bench
Kiln pyrometric control
Hardness tests
Pulling machines
Electrical resistivity testing
Macrography.*

DATA PROCESSING

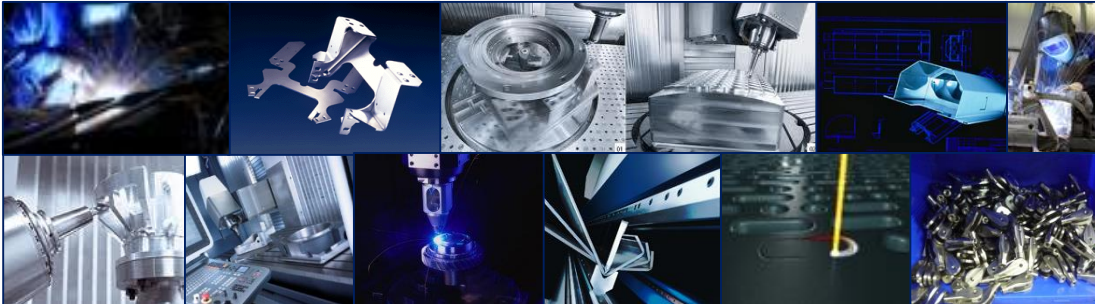
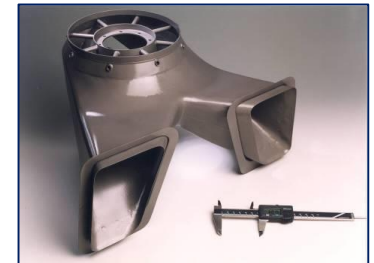
CAD/CAM

CATIA Version 5 stations

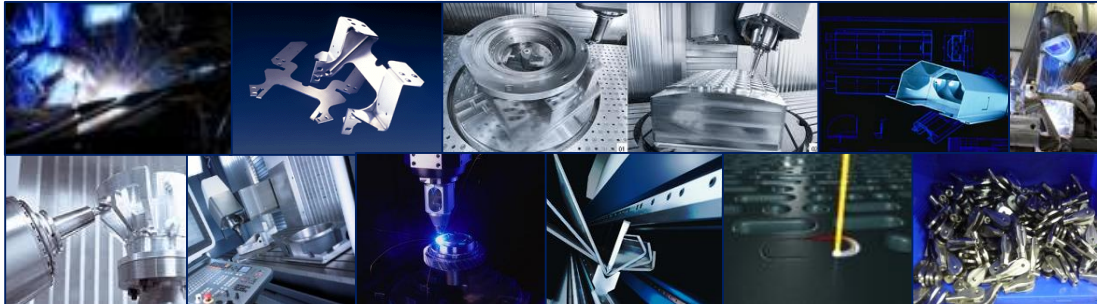
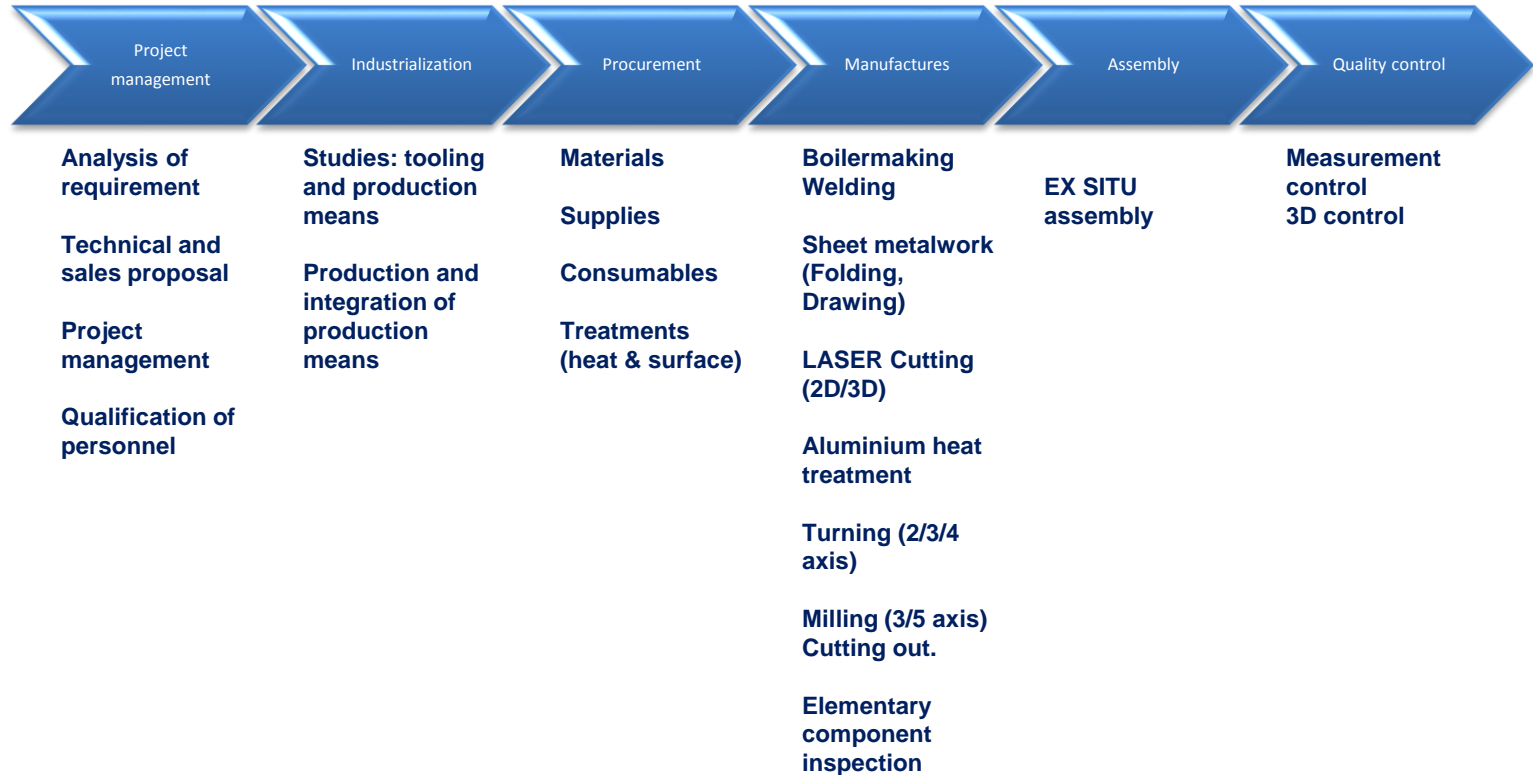
AUTOCAD stations

SOLIDWORK stations

CAMM / CAM



Dovetailing our skills



Our Experience at Your Service

Our Quality Approvals



EN 9100 (CIM & D&N)



ISO 9001 (CIM & D&N)



NADCAP (Welding CIM)

+ Customer Aerostructure assembly qualifications
(riveting, fitting, crimping, rolling, PR tightness, metallizing, inspection etc.)

Our Customers



