Engineering Services

Expertise Overview

Strategic partner providing end-to-end engineering solutions

February 2018
SONACA Group key figures

848 M$  
2016 Revenue*

5  
Business Lines

Top 10  
Aerostructure player

~70 M$  
investment per year: CAPEX, R&T, Product Dvp

4.345  
employees*

* Sonaca & LMI Aerospace consolidated

10  
countries
28  
Aerostructure facilities
6  
Engineering offices

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November 2017
SONACA Group has established a global footprint

SONACA Montreal
- Long Bed Machining
- Stringer Milling & Forming
- Manpower: 320

SONACA Group Headquarters
- Engineering - R&D Centre
- Advanced Composite Process
- Machining
- Sheet forming
- Additive Manufacturing (FMAS)
- Complex Assembly
- Manpower: 1650

SONACA Transilvania
- HLU Composite
- Assembly
- Manpower: 50

LMI Aerospace
- Sheet forming
- Manpower: 70

SONACA Aircraft
- JV with TAF
- General Aviation
- 2 seats S200 AC

Sobraer
- Engineering
- Assembly
- Manpower: 260

Sinelson
- Assembly
- Manpower: 60

LMI Aerospace
- Engineering
- Manpower: 5

Sopeçaero
- Sheet Forming
- Manpower: 85

Pesola
- Machining
- Manpower: 50

SONACA Space
- Thermal Engineering
- CFD
- Manpower: 25

LMI Aerospace
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- CFD
- Manpower: 25
With high-level expertise on Design & Build Packages for all kind of structures (Composite & Metallic)

- **Flap Mechanism & Fairings** of EMBRAER FRJ175/195 E2
- **Flap Box** of:
  - EMBRAER Legacy 500
  - EMBRAER ERJ175/195 E2

- **Nose Upper Shell** of AIRBUS A380
- **Bird shield** of:
  - Airbus A380
  - Airbus A350
  - Airbus A400M

- **Main Landing Gear Doors** of AIRBUS A400M
- **Wing Fixed Leading Edges** of:
  - AIRBUS A400M
  - EMBRAER ERJ145
  - BOMBARDIER C-Series
  - DASSAULT F7X / F8X
  - LEARJET 85
  - PILATUS PC24

- **Center Fuselage I with doors** of EMBRAER ERJ145
- **Rear Fuselage with doors** of:
  - EMBRAER Legacy 500
  - EMBRAER ERJ145
  - MITSUBISHI MRJ Tail Cone

- **Wing Slats and Mechanisms** of:
  - All AIRBUS from A310 to A350
  - EMBRAER ERJ170/190; 175/195 E2 + KC390 (LMI)
  - BOMBARDIER C-Series
  - DASSAULT F7X / F8X

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November 2017
**Engineering Services**

A broad range of expertise for a unique & optimized solution to your challenge

<table>
<thead>
<tr>
<th>Key Service Lines</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advanced Structures &amp; System</td>
<td>Sonaca</td>
</tr>
<tr>
<td>2. Material &amp; Process Expertise</td>
<td>LMI Aerospace</td>
</tr>
<tr>
<td>3. Prototypes &amp; Tests Center</td>
<td>Sobraer</td>
</tr>
<tr>
<td>4. Tooling &amp; Manufacture Engineering</td>
<td>LMI Aerospace</td>
</tr>
<tr>
<td>5. Program management</td>
<td>Sonaca Space</td>
</tr>
<tr>
<td>6. Product support &amp; aftermarket</td>
<td>LMI Aerospace</td>
</tr>
<tr>
<td>7. Digital Enterprise Transformation</td>
<td></td>
</tr>
</tbody>
</table>

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With an experimented team to serve you

More than 450 Engineers from 6 Locations:

- **Sonaca Belgium (Gosselies)**
  => Near to 300 Engineers

- **LMI Aerospace US (Everett, San Diego & Hurst)**
  => 120 Engineers

- **LMI Aerospace UK (London)**:
  => DOA, 5 Engineers

- **LMI Aerospace Sri Lanka**:
  => 20 Engineers

- **Sonaca Space in Germany (Berlin)**
  => Thermal Engineering (25 eng.)

- **Sao Jose dos Campos in Brazil**
  => Design, Stress & Indus (30 eng.)

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<table>
<thead>
<tr>
<th>Man Power</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>1. Project</td>
<td>14</td>
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<tr>
<td>2. Design &amp; Analysis</td>
<td>144</td>
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<tr>
<td>2.1 Design</td>
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<tr>
<td>2.1 Configuration</td>
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<td>2.2 Stress</td>
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<td>2.3 System</td>
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<td>3. Support engineering</td>
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<td>4. Test Center &amp; MRC (Proto)</td>
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<tr>
<td>4.1 Test Center</td>
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<tr>
<td>4.2 MRC (Proto Manuf.)</td>
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<tr>
<td>5. Industrialization</td>
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<tr>
<td>5.1 Tooling engineering</td>
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<tr>
<td>5.2 NC Programming</td>
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<td>5.3 Manufacturing engineering</td>
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<td>6. Supply Chain</td>
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<td><strong>TOTAL</strong></td>
<td><strong>227</strong></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>286</strong></td>
</tr>
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</table>

(as of July 2016)

Average experience of Engineering Team = 12 years

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November 2017
How do we meet your needs?

Solution Oriented
We deliver *End-to-end engineering solutions* with full responsibility => *commitment on Results* on a *Fixed Priced Package*

Reliable & Efficient
With more than *80 years* of airframe «Design & Build» experience and *more than 450 engineers*, we deliver *high-quality, reliable and cost-efficient* industrial solutions.

Customer Focused
We work closely with our *customers* to understand their needs & business *goals* in order to develop the *optimal engineering solution*.

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