



HECHO RELEVANTE

CARBURES EUROPE, S.A.

28 de mayo de 2014

De conformidad con lo previsto en la Circular 9/2010 del Mercado Alternativo Bursátil, por medio de la presente, ponemos a disposición del mercado la siguiente información relativa a CARBURES EUROPE S.A. ("CARBURES" ó la "Compañía").

En el día de hoy la compañía participa en el 10º Foro MEDCAP de empresas de mediana capitalización, organizado por Bolsas y Mercados Españoles. Adjuntamos presentación corporativa que será utilizada en dicho foro.

En Jerez de la Frontera, a 28 de mayo de 2014

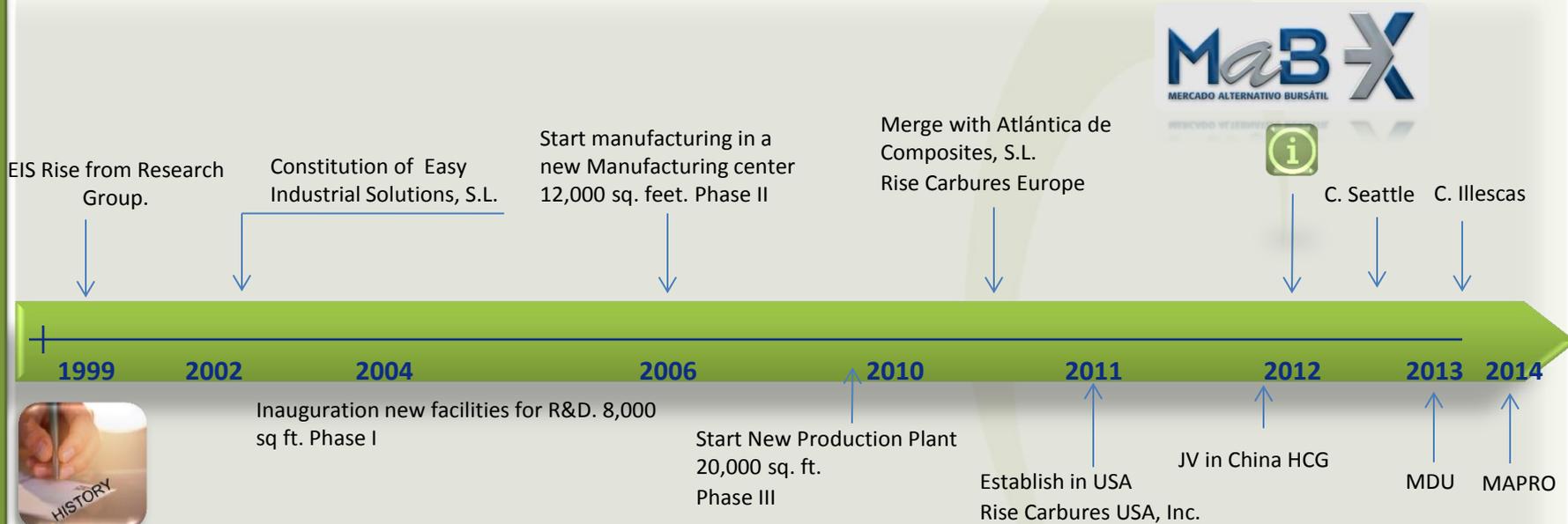
CARBURES EUROPE, S.A.

D. Rafael Contreras Chamorro
En nombre de Rafcon Economist, S.L. como
Consejero Delegado de CARBURES EUROPE, S.A.

carburesGroup

Manufacturing & Engineering





EASY INDUSTRIAL SOLUTIONS S.L. origin: Research Group founded in 1999

Year 2011: Merger with ATLÁNTICA S.L.. Objectives:

- Increasing the production capacity.
- Possibility of acquiring new production programmes.
- Manufacture of bigger parts.
- Possibility of access to the facilities of Jerez Airport

2012
Carbures becomes a listed company in the Spanish Secondary Stock Market

2012
Presence in USA: Seattle (WA), Greenville (SC) and China (Harbin)

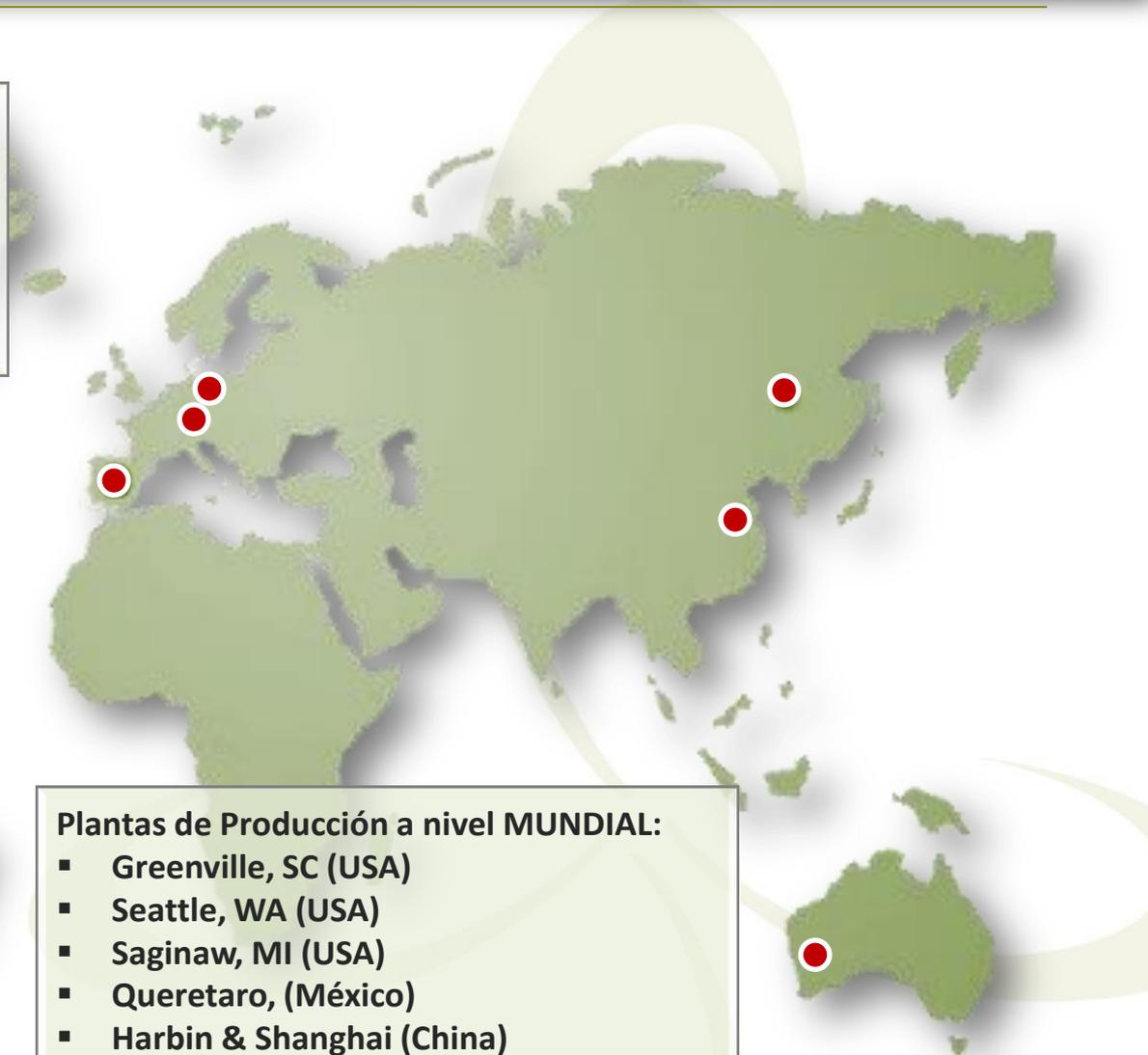
2013
Adquisition of MDU and COMPOSYSTEM

2014
Adquisition of MAPRO Technologies



Plantas de Producción en ESPAÑA:

- El Puerto Sta. María & Jerez (Cádiz)
- Illescas (Toledo)
- Aerópolis (Sevilla)
- El Burgo de Osma (Soria)
- St. Fruitos (Barcelona)



Plantas de Producción a nivel MUNDIAL:

- Greenville, SC (USA)
- Seattle, WA (USA)
- Saginaw, MI (USA)
- Queretaro, (México)
- Harbin & Shanghai (China)
- Tychy (Polonia)
- Perth, WA (Australia)
- Munich, (Alemania)

2. FACILITIES. CARBURES TECNOBAHÍA EL PUERTO DE SANTA MARÍA (CÁDIZ - EUROPE)



3. FACILITIES CARBURES AIRPORT Jerez de la Frontera(CÁDIZ-EUROPE)

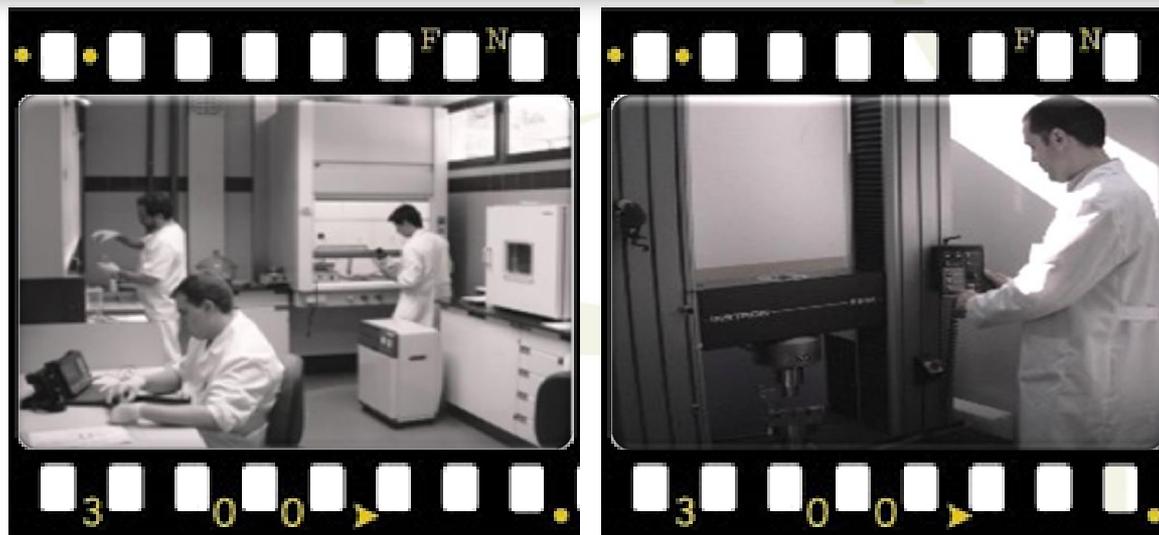




4. FACILITIES. ILLESCAS

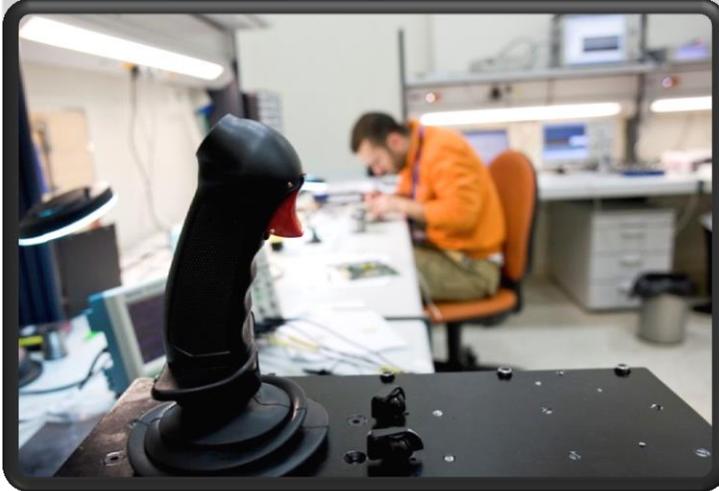
Manufacturing & Engineering





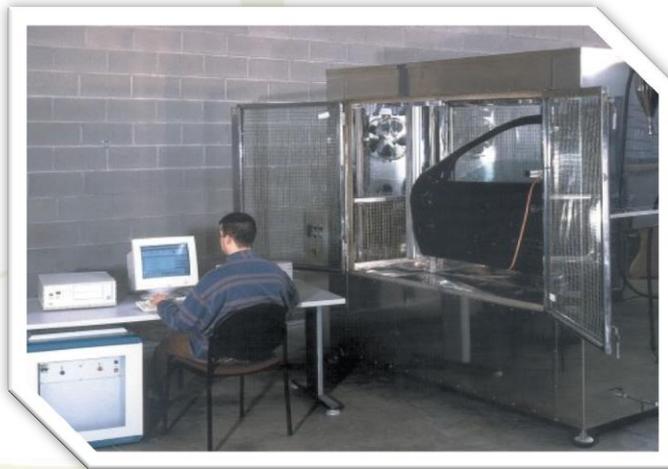
5. FACILITIES. MDU - SEVILLA (AERÓPOLIS) Engineering





6. FACILITIES. MAPRO - BARCELONA





7. FACILITIES. CARBURES ASIA Harbin (China)



HARBIN CARBURES GUANGLIAN AERONAUTIC COMPOSITE MATERIALS

哈尔滨卡普勒广联航空复合材料有限公司

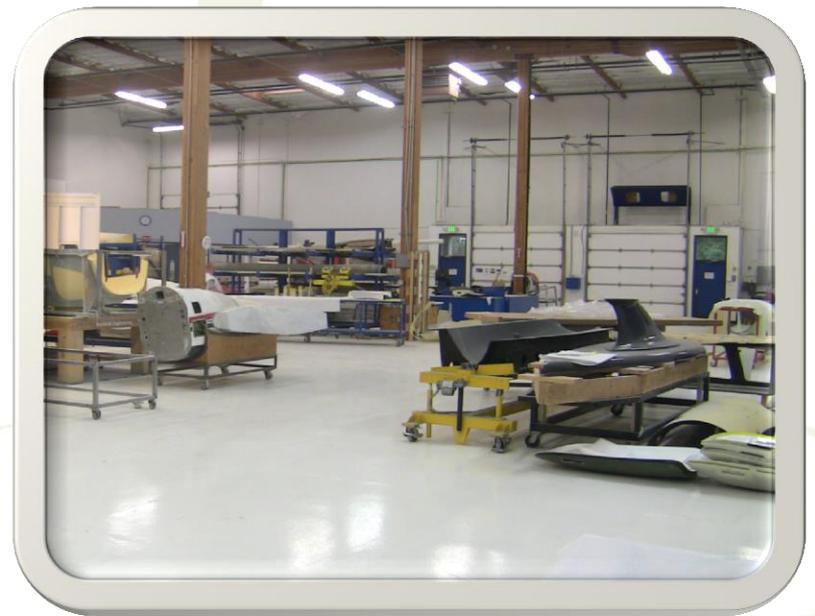
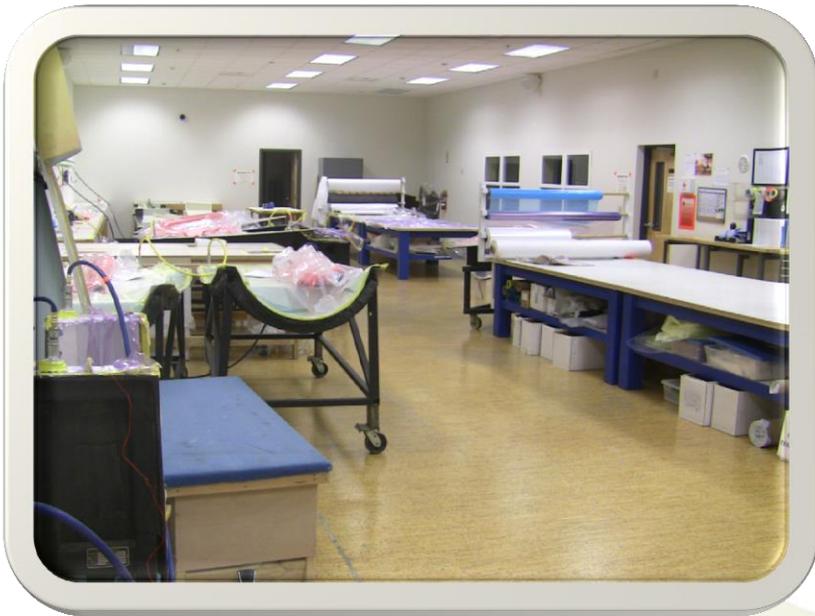
8. FACILITIES. CARBURES USA Greenville, SC

SCTAC
SOUTH CAROLINA
TECHNOLOGY & AVIATION CENTER



FACILITIES. CARBURES USA

Seattle, WA (USA)



Aerospace Products



Marine Products



Automotive Products





HLU - Hand lay-up

Hand Lay Up of preimpregnated or dry fiber.

- CAR Tecn.
- CAR Airp.
- CAR Illes.
- CAR USA
- CAR Harb



RTM – Resin Transfer Moulding

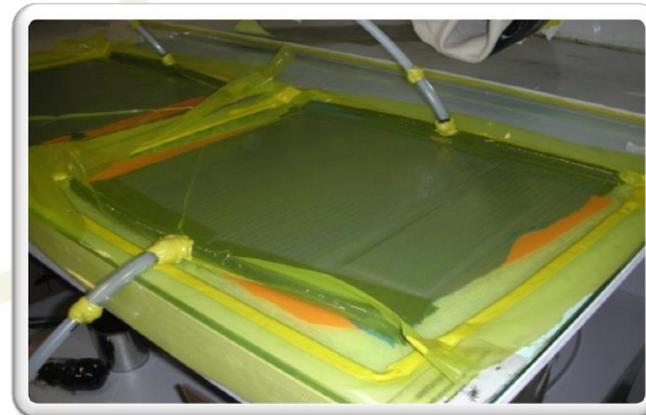
Manufacturing of composites by resin injection in dry fiber laid molds.



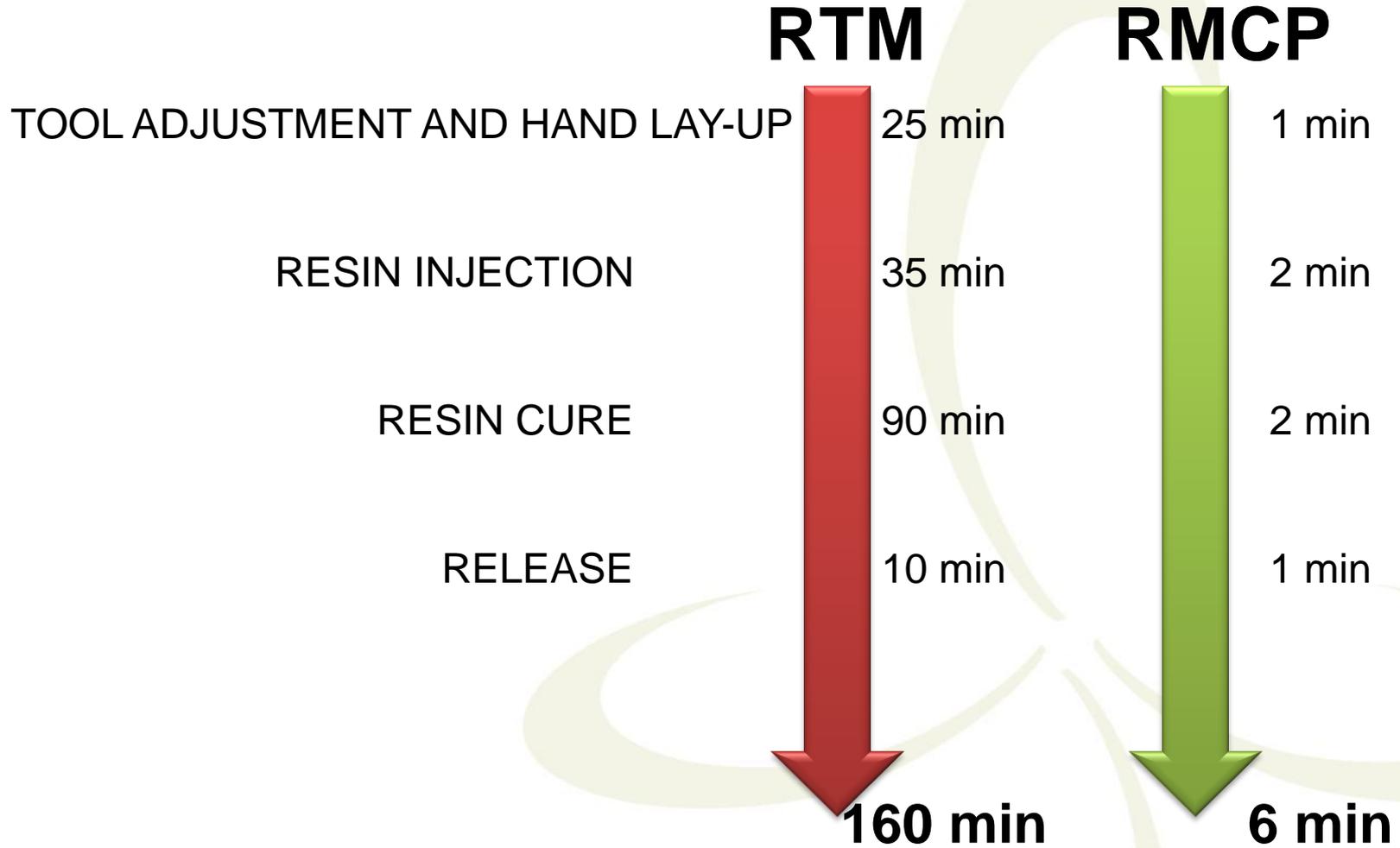
Rapid Multi-injection Compress Process



- CAR Tecn.
- CAR Airp.
- CAR USA
- CAR Soria

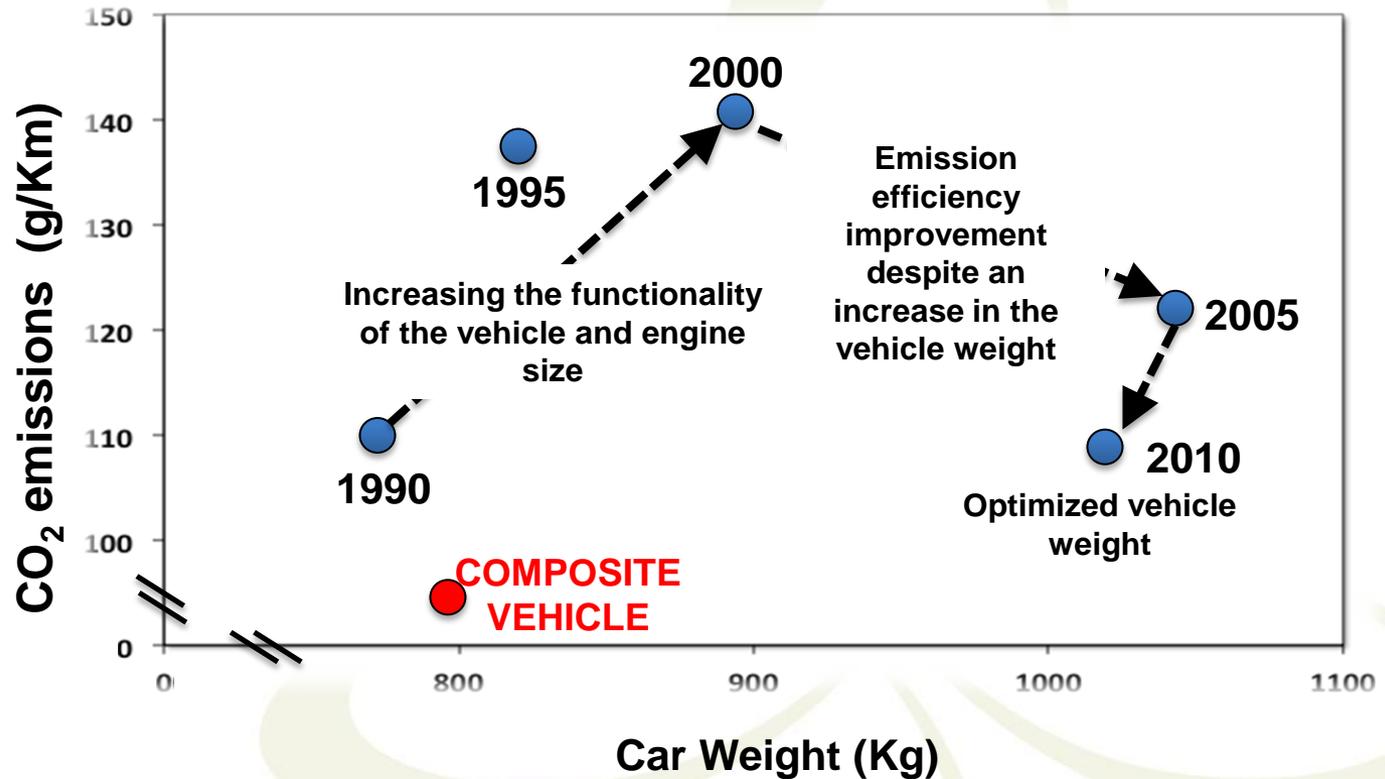


Molding Infusion technology

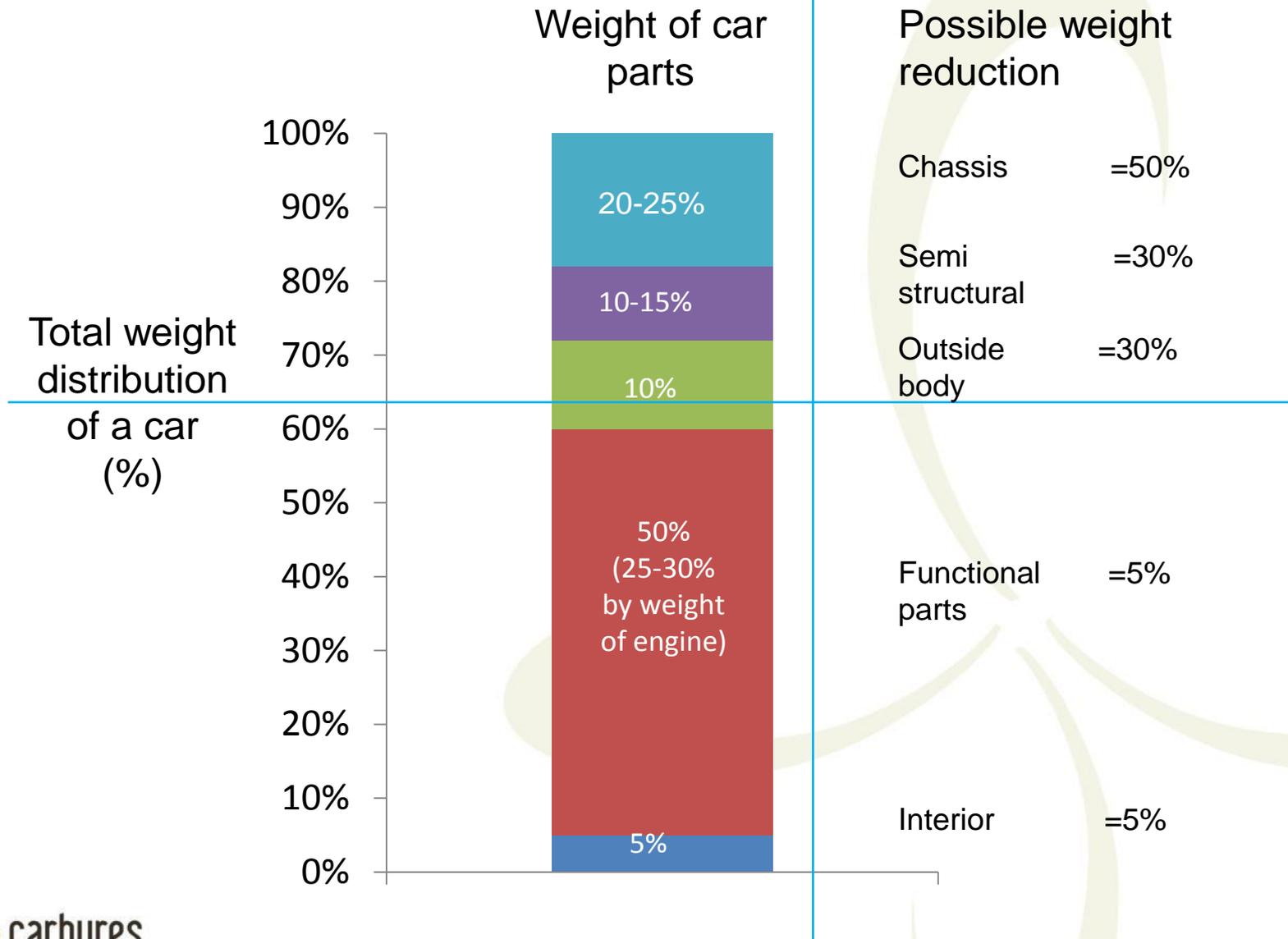




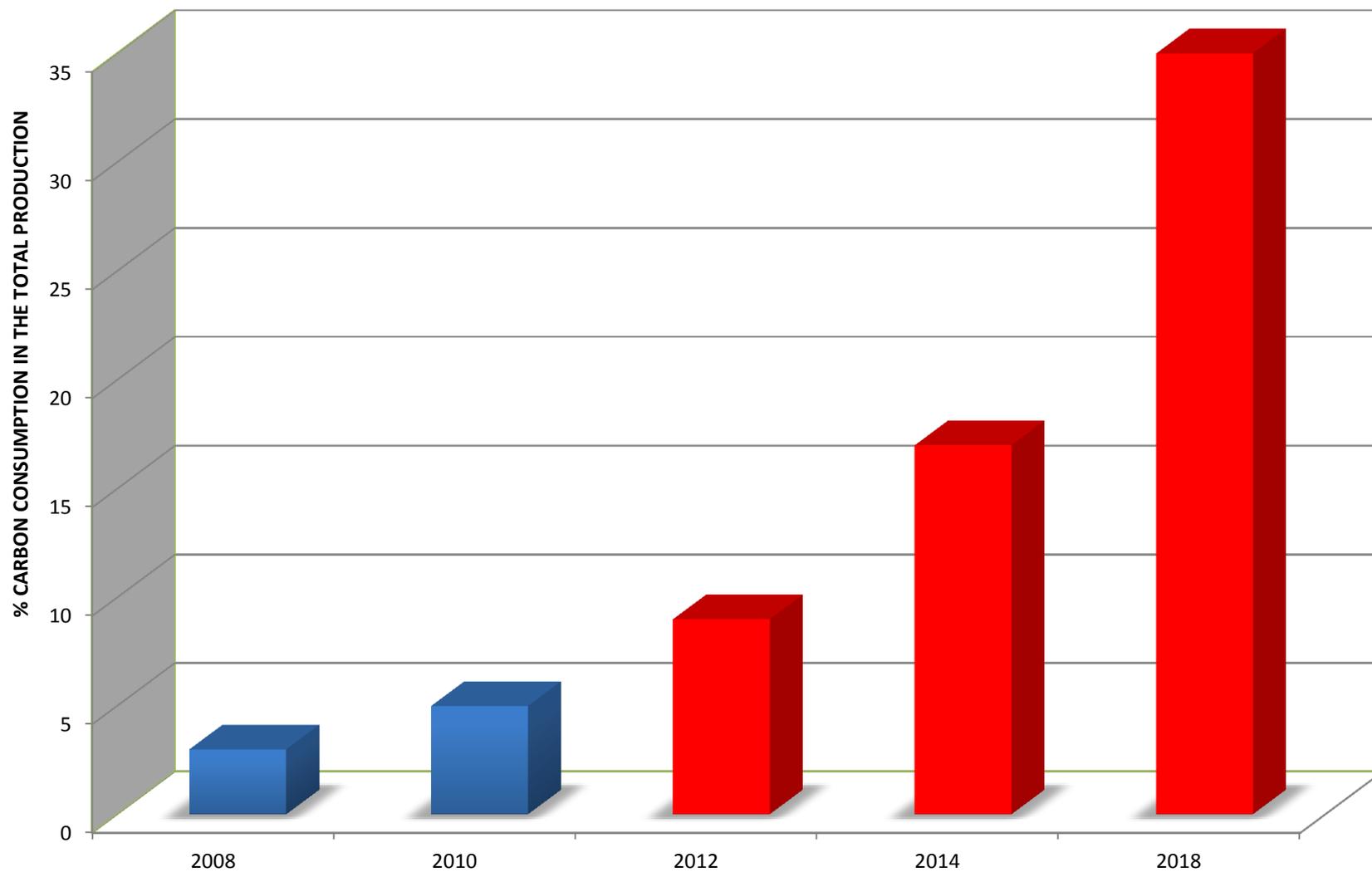
With the composite vehicle is expected to achieve a 20-25% reduction in vehicle weight and a 10-20% reduction in CO2 emissions



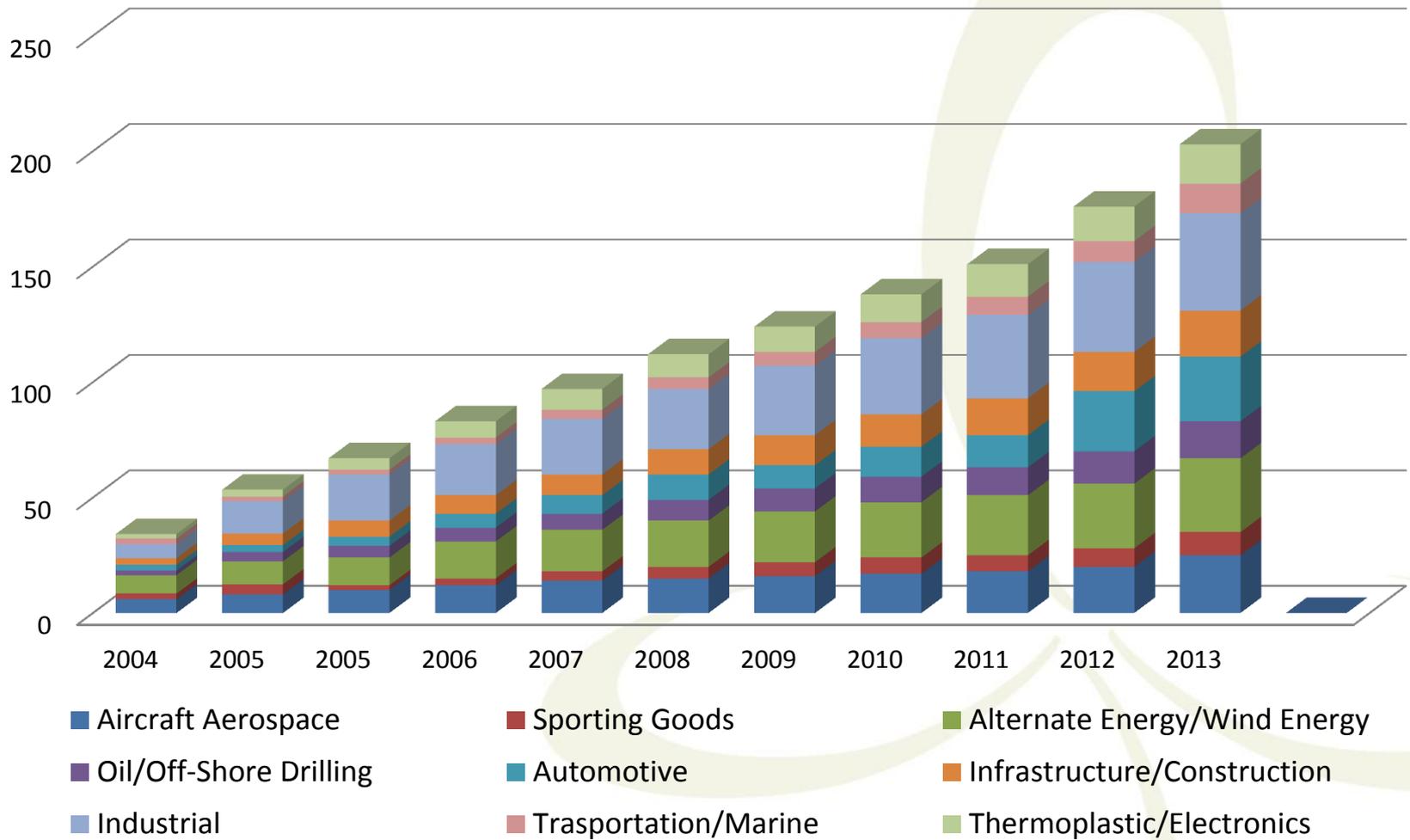
EU fare of 5€/gr. over CO2 requirements.
It will increase to 95€ in year '20



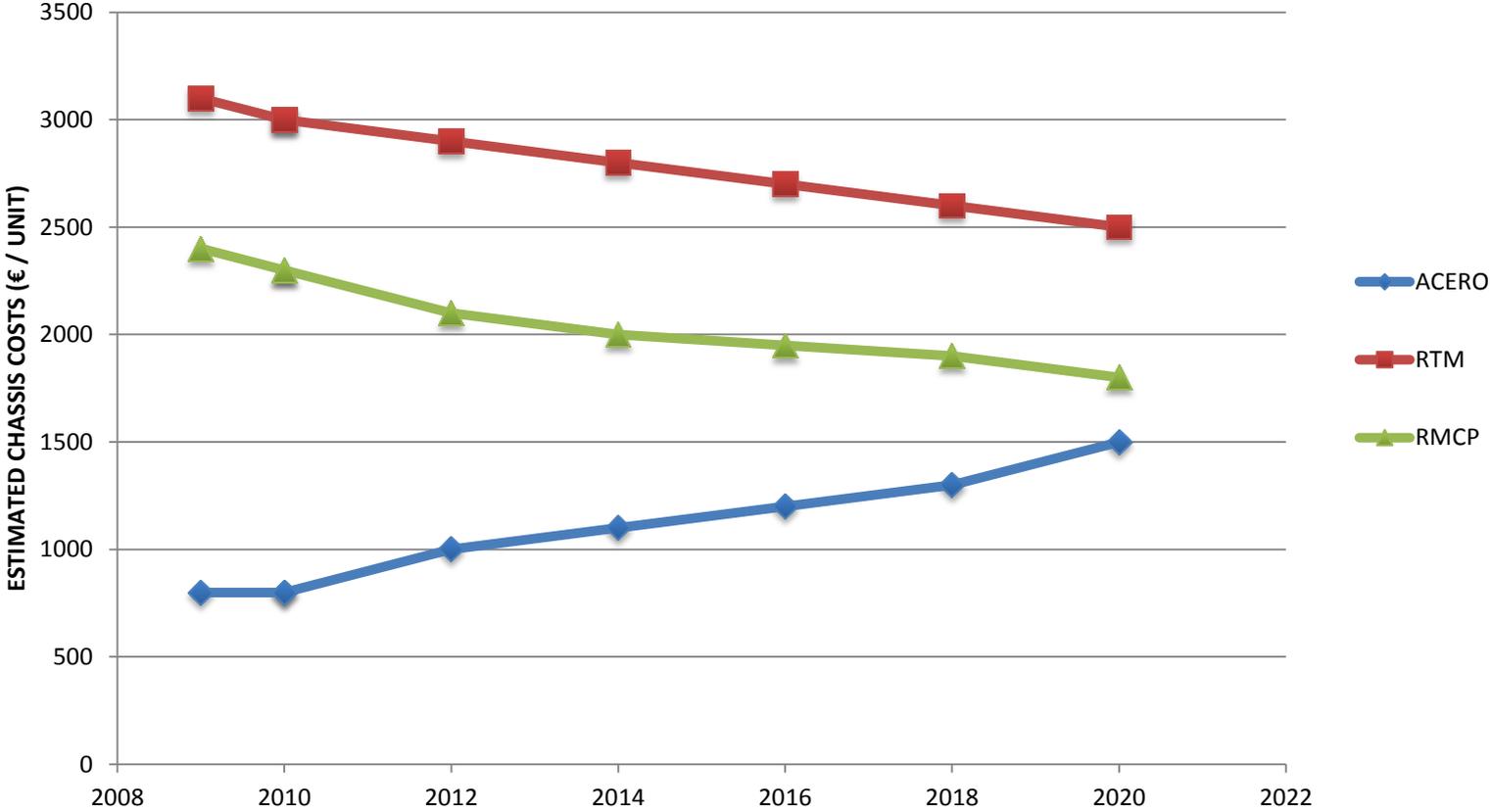
EXPECTED EVOLUTION IN THE CARBON CONSUMPTION DESTINATED TO AUTOMOTIVE



PROJECT CARBON FIBER MARKET DEMAND



EXPECTED EVOLUTION IN THE CHASSIS COST CONSIDERING AN ANNUAL PRODUCTION OF 60.000 PARTS



THE INCREASED COST IN STEEL PRICE IS ESTIMATED DUE TO THE TAXES DERIVATED FROM THE CO2 EMISSION.

PRINCIPAL AUTOMOTIVE COMPOSITE APPLICATIONS

	NATURAL FIBERS	THERMO-PLASTICS	THERMO-SET	COMPOSITE (CARBON FIBER)
Interiors Parts				
Interior Panels	✓	✓	✗	✗
Details of Interior	✓	✓	✗	✗
Functional Parts				
Fuel Tank	✗	✓	✗	✗
Water Tank	✗	✓	✗	✗
External Parts				
Hardtop				
Sunroof				
Door	✗	✓	✓	✓
Hood	✗	✓	✓	✓
Bumper				
Trunk hood				
Structural parts				
Frame				
Support Bumper	✗	✓	✓	✓
Seat Support				
Floor				
Chassis				
Chassis	✗	✗	✗	✓

PRINCIPAL APPLICATIONS
OF COMPOSITE

	NATURAL FIBERS	THERMO-PLASTICS	THERMO-SET	COMPOSITE (CARBON FIBER)
Interiors Parts				
Interior Panels	✓	✓	✗	✗
Details of Interior	✓	✓	✗	✗
Functional Parts				
Fuel Tank	✗	✓	✗	✗
Water Tank	✗	✓	✗	✗
External Parts				
Hardtop				
Sunroof				
Door	✗	✓	✓	✓
Hood	✗	✓	✓	✓
Bumper				
Trunk hood				
Structural parts				
Frame				
Support Bumper	✗	✓	✓	✓
Seat Support	✗	✓	✓	✓
Floor				
Chassis				
Chassis	✗	✗	✗	✓

TARGET CARBURES TECHNOLOGY

AUTOMOTION LIGHT BODY

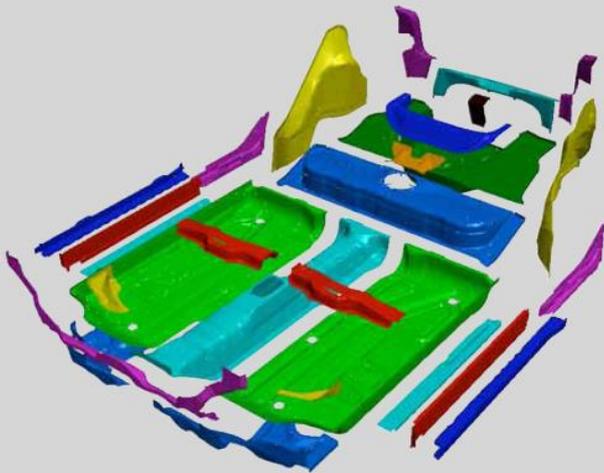
TECABS



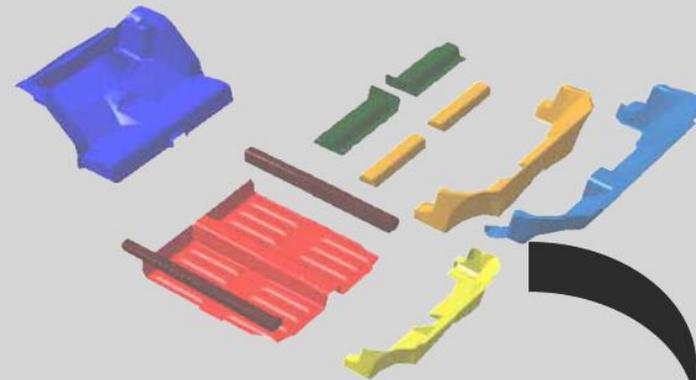
5th Framework Programme of European Community for
RTD and demonstration activities (1998-2002)

willems
&
van der wilenberg

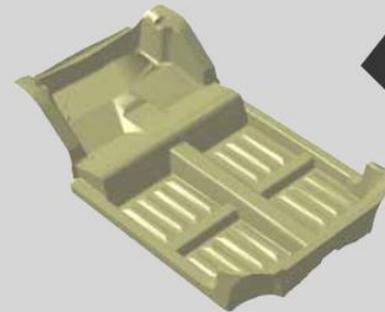
Part integration (floor pan)

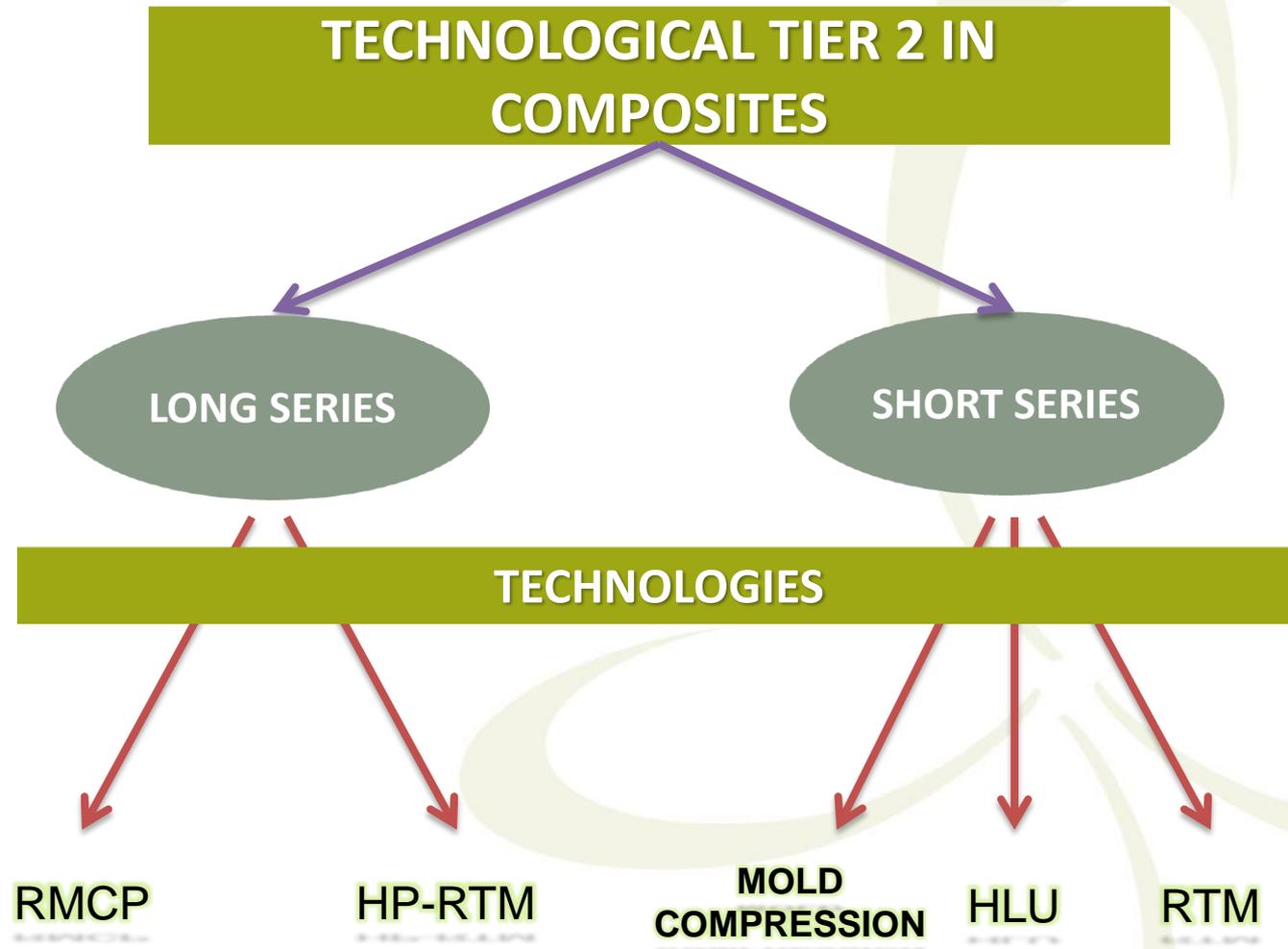


Steel: 28 parts



TECABS: 8 preforms + 5 cores





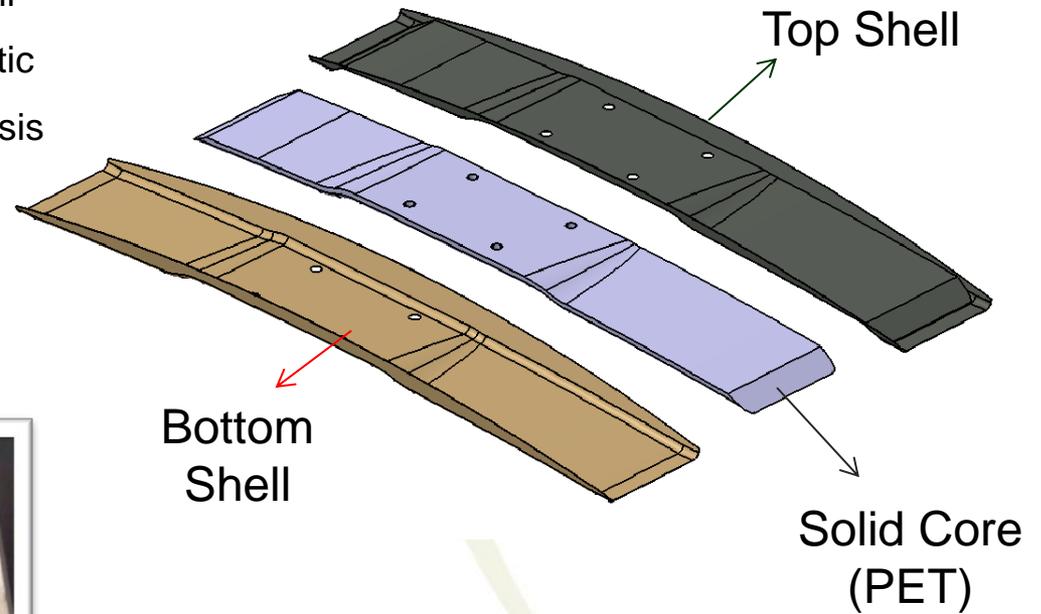


- Stiffness Ratio: 0.07%
- Total Weight of parts: 12.1 kg
- Weight Reduction: 54%

- Target:
 - Reduce the weight of the assembly (by 50%)
 - Utilize advanced material in secondary structure of the vehicle
- Approach: Match/Exceed the strength of metal and match the stiffness of baseline model (steel)



- ASTM Coupon test was done to obtain all required material properties, to verify static analysis result and perform fatigue analysis



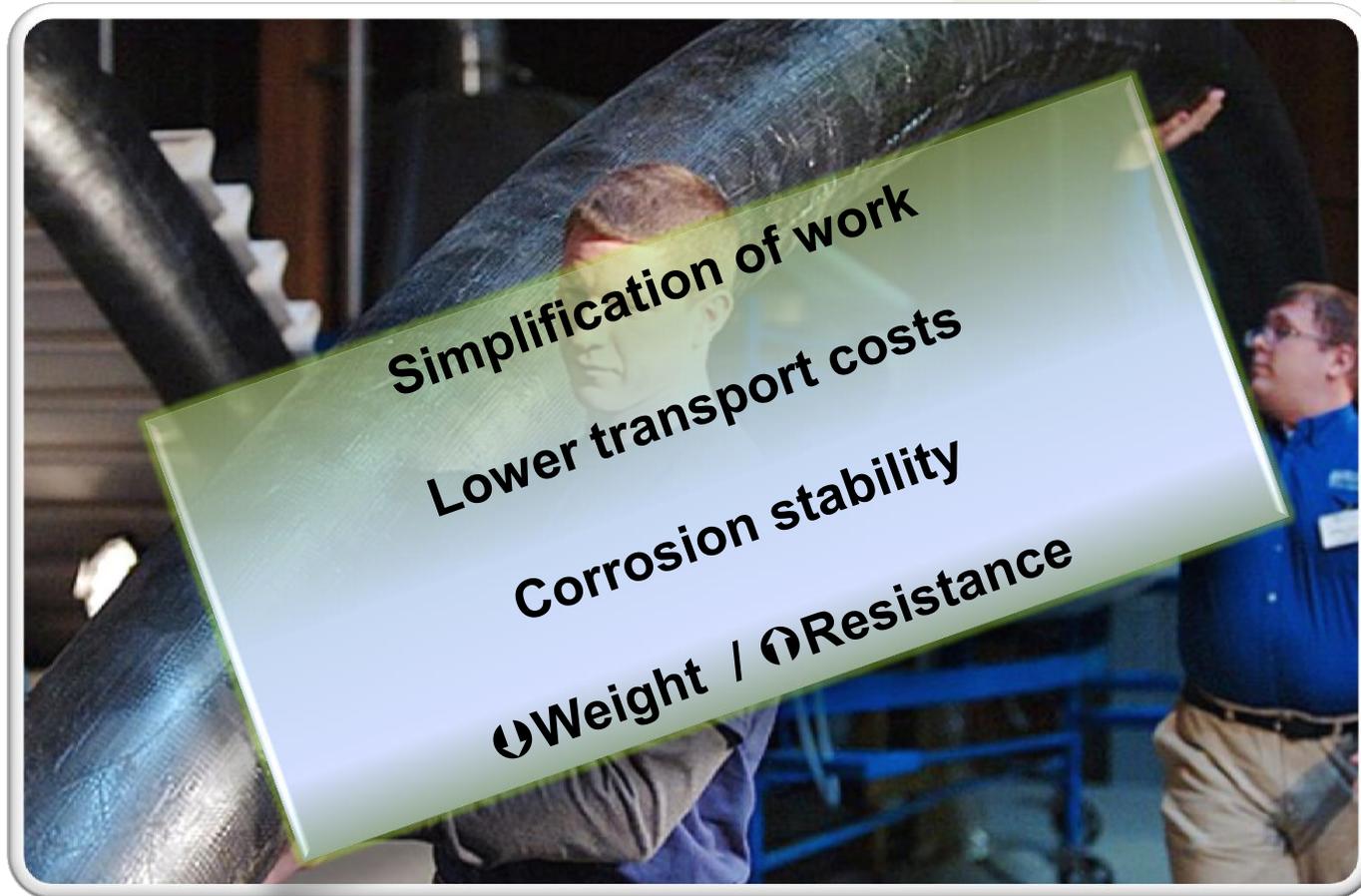
Prototype

Result

- Parts done by infusion at same cost
- Weight reduction between 20%-40%
- Quality improve
- Parts fit in the assembly



Making elements and structures in composites, replacing old materials we have important results as we can see in the picture



EXAMPLES WHERE COMPOSITES HAVE BEEN USED

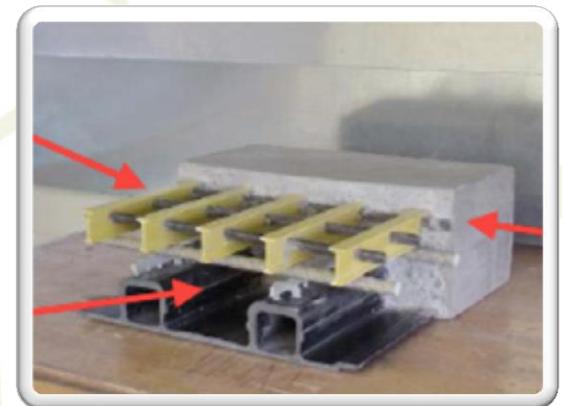
Compression strengthening pillars



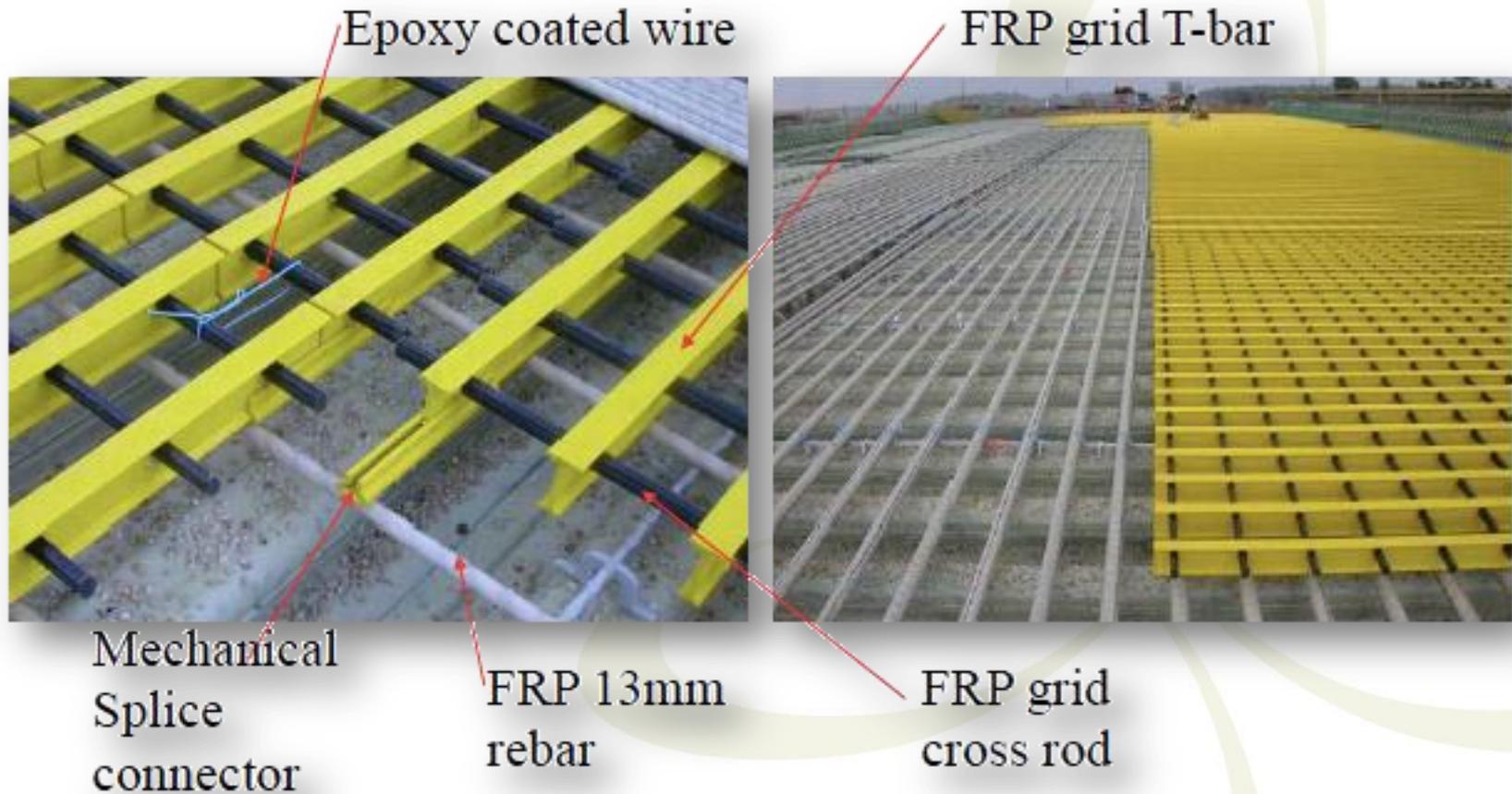
Rebar fiberglass



- very high tensile strength longitudinally
- Low weight (1/5 to 1/4 of steel density)
- Electromagnetic transparency
- Corrosion resistance



Rebar fiberglass



Composite Footbridges



Fabricación de las costillas trasversales



Pasarela finalizada



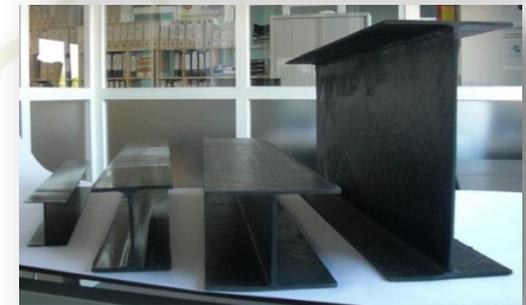
Manipulación en obra



Instalación

OTHER COMPOSITE APPLICATIONS

Heliports, stairs and spiral staircase, beams, buildings, furniture, etc



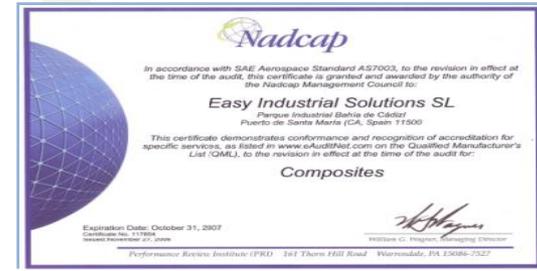


Certification Management system

- ISO9001:2008
- EN9100:2003
- ISO14001:2007
- OHSAS18001:2005

Process Certification

- Accreditation NADCAP in COMPOSITES
- Accreditation NADCAP in UTS Ultrasonic
- MANUFACTURING CENTER and I+D CENTER for AIRBUS MILITARY, according to the I+D 233/237/052 Std. Process Specifications
- I+D CENTER for AIRBUS SPAIN and SACESA
- COMPOSITES MANUAL MACHINING of FRP COMPONENTS FOR AIRBUS MILITARY, according to the NT-L-ID-05021 std.



CARBURES have the approval of "Delegated quality inspection" by Airbus Military for all our manufacturing work packages.

At present time, we are skilled enough to work in projects regarding the following AIRBUS models: A320, A330, A350, A380, A400M, A295, 330 MRTT.





ENGINEERING DIVISION

- **PECAL 2110** (AQAP-2110 “NATO Quality Assurance Requirements for Design, Development and Production”).
- **CMMI** Capability Maturity Model Integration L3, System Engineering; Soft + Hard + Manufacturing. (SEI-Carnegie Mellon University and Security Department of the USA)
- **ISO 9001** Requirements for Quality Management Systems
- **AS 9100 Rev C** Requirements for Aerospace Quality Systems.
- **ISO 14.001** Requirements for Environmental Management Systems
- **OHSAS 18.001** Labourers Security and Health



- **Official supplier::**

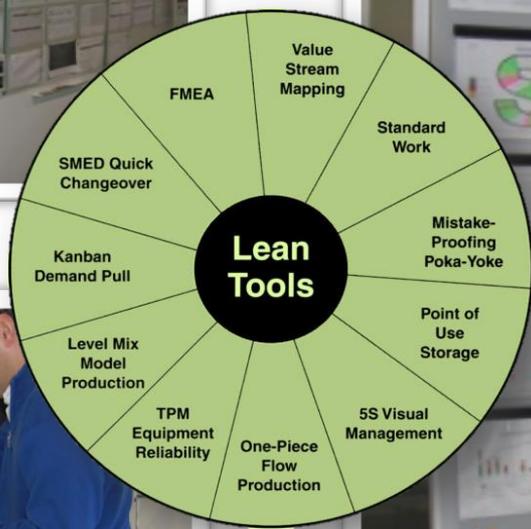
NATO: NC3A/BOA 13058 (Command and Control System) Agency.
NAMSA NCAGE 9433B (Maintenance and Supply) Agency.

Spanish Ministry of Defence Register number 7071

- **Security:**

- Security Agreement with the Spanish Ministry of Defence for industrial involvement on classified programmes.
- Security Agreement with the NATO for industrial involvement on classified programs.
- TAA (Technical Assistance Agreement) with Lockheed Martin (U.S.) within the context of the command and control systems of the newer submarines type S-80 and the Frigates type F100





Six sigma

Muda

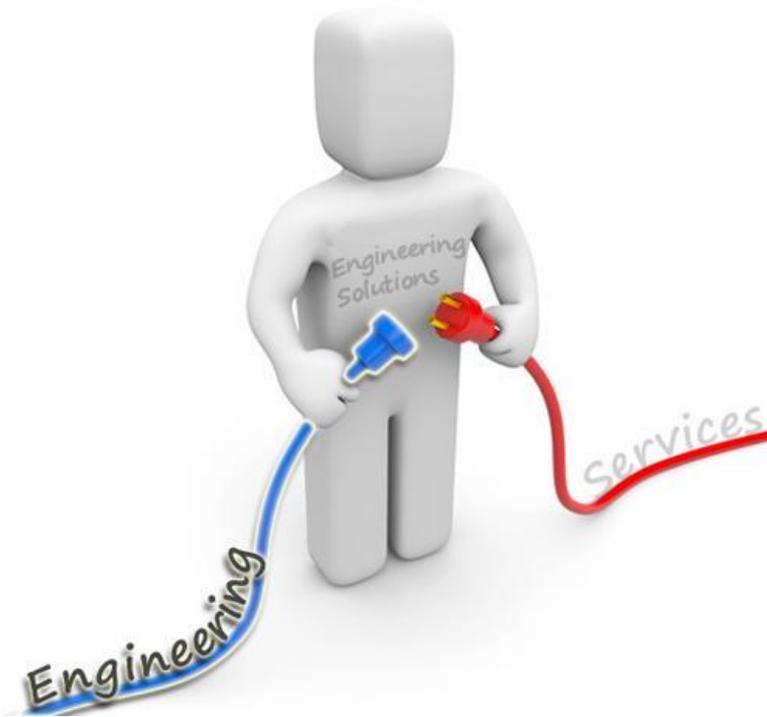
Poka-yoke

Kaizen

Kanban

5S

ENGINEERING SERVICES





- Carbures specializes in composite structural design and analysis, composite manufacturing and mechanical engineering supporting the aerospace, automotive and marine industries. Carbures has an engineering division, Carbures Systems/MDU.
- We work in:

EQUIPMENT AND SYSTEMS

- On-board electronic equipment
- Sensors, actuators and indicators
- Ad-hoc tests tooling/systems
- Cockpit control units
- Harnesses
- consoles
- Embedded software
- Communication systems (datalinks)
- Rdi Projects
- Specific application equipment: signal treatment, power electronic, frequency conversion, etc.

MRO

- Maintenance Service for Test Means for A400M and A330 MRTT.
Maintenance plans for:
Engineering equipment
Test Means
Test infrastructure
- Laboratory service and test means dispatching (FAL A400M).
- Support service for test means.
First-level support to the both test means and infrastructure as well as the analysis and second level scaling.

Engineering Services

- Design:
 - Aerostructures
 - Systems
 - Tooling
- Manufacturing
 - Assembly and installation processes
 - Systems
 - Electrical development
 - Composites development

$$S_{12}^2 = c^2 \Delta t_{12}^2 - \Delta z_{12}^2 = c^2 (\Delta t'_{12})^2 - \Delta z_{12}^2$$

$$\Delta t_{12} = (t_2 - t_1) \quad \Delta t'_{12} = (t'_2 - t'_1); \quad \Delta z_{12} = z_2 - z_1$$

$$c^2 \Delta t_{12}^2 - \Delta z_{12}^2 = c^2 (\Delta T_{12})^2 \quad \Delta t_{12} = \Delta T_{12} \gamma$$

$$\Delta t_{12}^2 = c^2 \Delta T_{12}^2 \gamma^2 - \Delta z_{12}^2 = \Delta T_{12}^2 (c^2 \gamma^2 - \frac{z_{12}^2}{T_{12}^2})$$

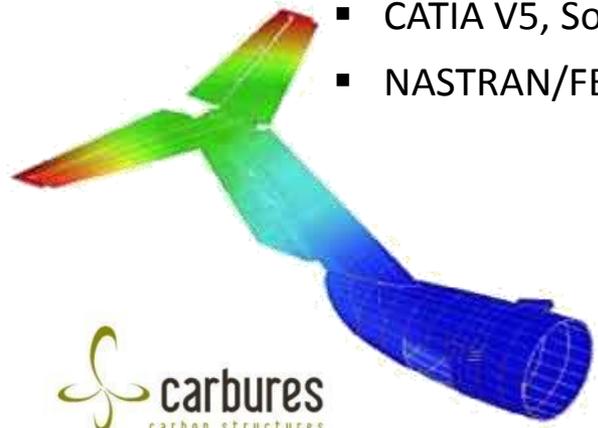
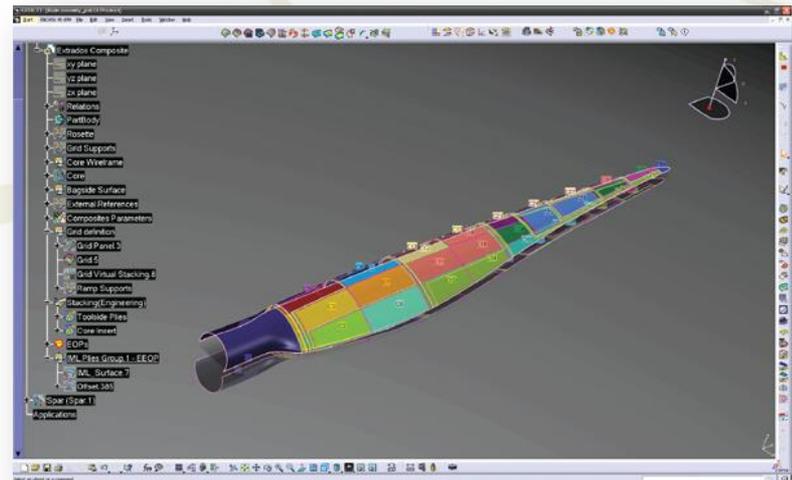
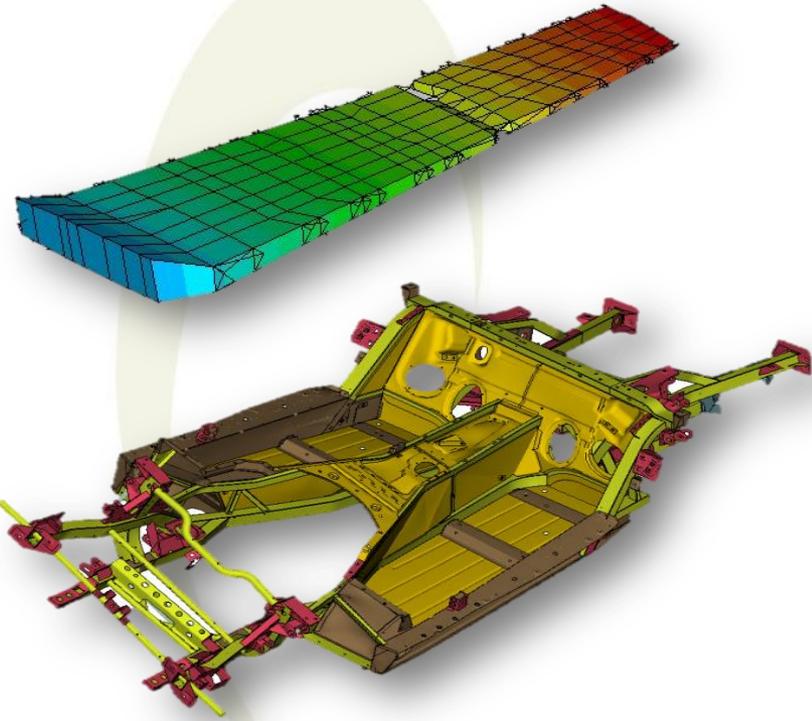
$$= \Delta T_{12}^2 (1 - \frac{v^2}{c^2}) = (\Delta T_{12})^2$$

- CLASSICAL HAND-CALCULATION METHODS

- Classical Laminate Plate Theory and
 - Mechanics of Materials Approach

- 3D CAD & FEA Modeling
- Vehicle dynamics (Multi body dynamics)
- DOP3D, ADAMS, Hypermotion
- Reverse Engineering
- Design for Manufacturing
- Software's

- CATIA V5, SolidWorks, NX 8, SolidEdge,
 - NASTRAN/FEMAP/HYPERWORKS



PROJECT LYNX I

The *Lynx* is XCOR's entry into the commercial reusable launch vehicle (RLV) market. This two-seat, piloted space transport vehicle will take humans and payloads on a half-hour suborbital flight to 100 km (330,000 feet) and then return safely to a landing at the takeoff runway.

Like an aircraft, *Lynx* is a horizontal takeoff and horizontal landing vehicle, but instead of a jet or piston engine, *Lynx* uses its own fully reusable rocket propulsion system to depart a runway and return safely. This approach is unique compared to most other RLVs in development, such as conventional vertical rocket launches and air-launched winged rocket vehicles "dropped" at altitude from a jet powered mothership.

Lynx has an all-composite airframe that makes it lightweight and strong. With an added thermal protection system (TPS) on the nose and leading edges it is able to handle the heat of re-entry from the edge of space. The wing area is sized for landing at moderate touchdown speeds near 90 knots. *Lynx* is about 9 meters (~30 feet) in length with a double-delta wing that spans about 7.5 meters (~24 feet).

Carbures, is a composite supplier in this project.

carburesGroup



carburesGroup

www.carburesgroup.com

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carburesGroup

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- In case of questions for commercial usage please get in contact with us.

E-Mail: info@carbures.com

Usa - Europe -
China

*...Helping your needs
become a reality...*

