



This project is co-financed by the  
European Union and the Republic of Turkey  
Bu proje Avrupa Birliđi ve Türkiye Cumhuriyeti tarafından  
finanse edilmektedir

**Özgür Arslan**

**OLGUNCELİK**

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# Description of the OlgunÇelik

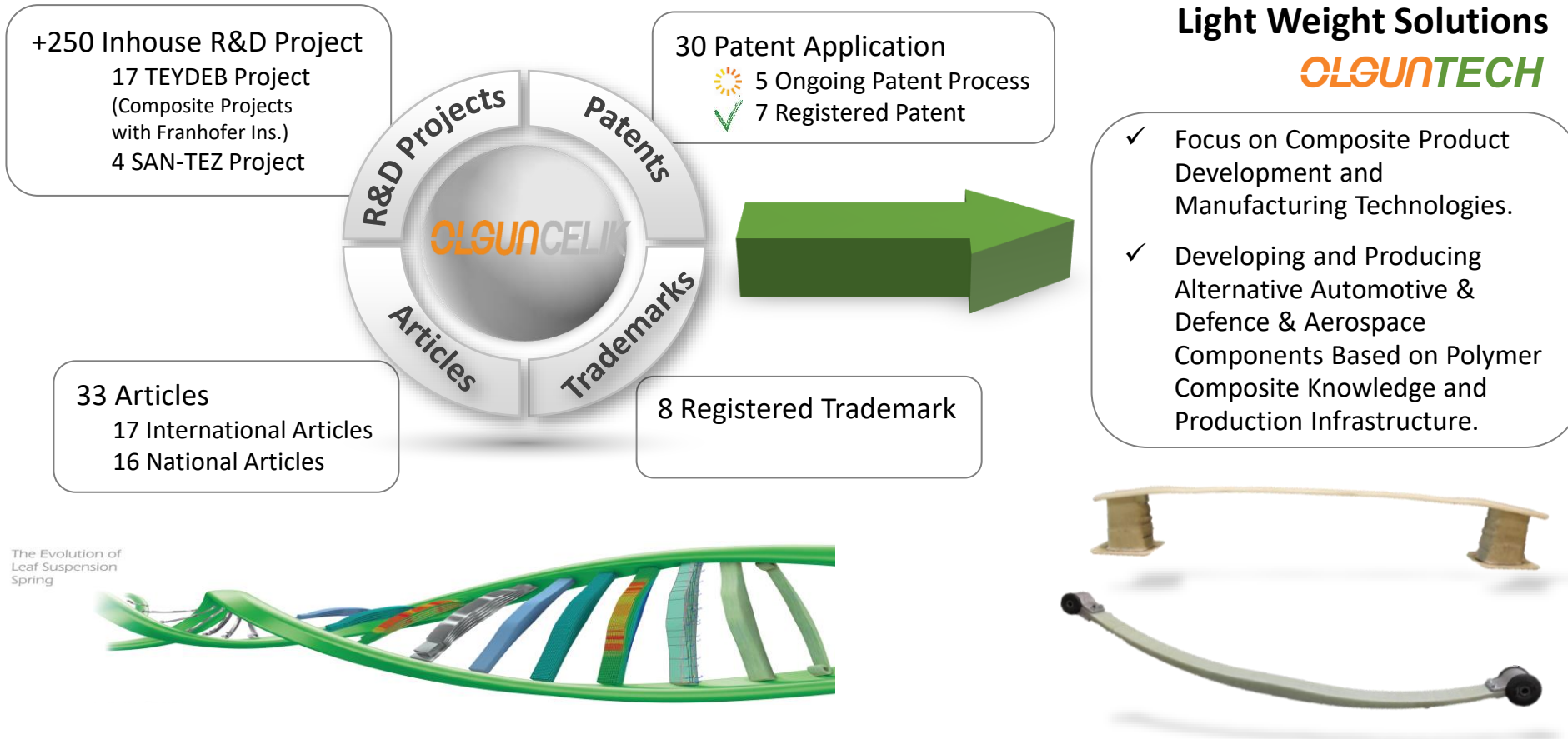
**OLGUN**CELİK

- ✓ OlgunÇelik is a 75 Years Old Automotive Tier1 Full Service Supplier
- ✓ Operates in Manisa Industrial Zone
- ✓ Design, Develop & Manufacture Leaf Springs for CV's
- ✓ EU Market Leader in the LCV Leaf Spring Market
- ✓ Recognized R&D Center since 2010
- ✓ Concentrates on Composite Technologies since 2013 under the OLGUNTECH Business Unit



# Vision

Being one of the most preferred global technology company in transportation industry



# Range of Products and Services



## PRODUCT HIGHLIGHTS



**Composite Leaf Spring**  
(Glass Fibre Reinforced Polymer Composite)

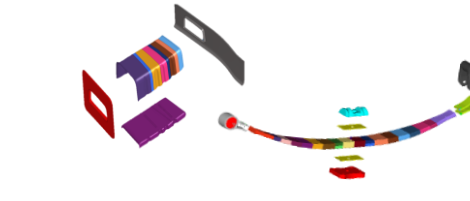


**Rear Bumper Beam**  
(Glass Fibre Reinforced Polymer Composite)



**Out of Autoclave Prepreg Vacuum Bag Molding**  
(Carbon Fibre Reinforced Polymer Composite)

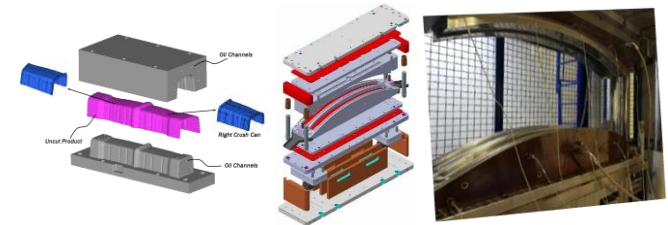
## ENGINEERING SERVICES



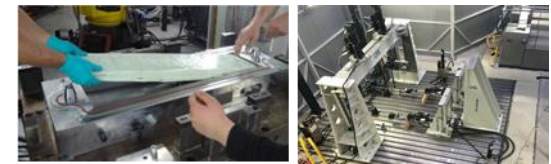
**CAD Design**  
Composite Structures / Design,  
Layup Design



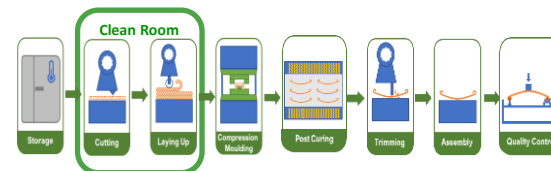
**CAE Analysis**  
-Structural / Vibration / Dynamic /  
Kinematics / Manufacturing /  
Simulation / Fatigue Life



**Tooling Design / Development & Validation**



**Prototyping & Verification**  
3D Manufacturing  
Material Characterization / Mechanical /  
Functional Tests



**Production Manufacturing & Process Development**

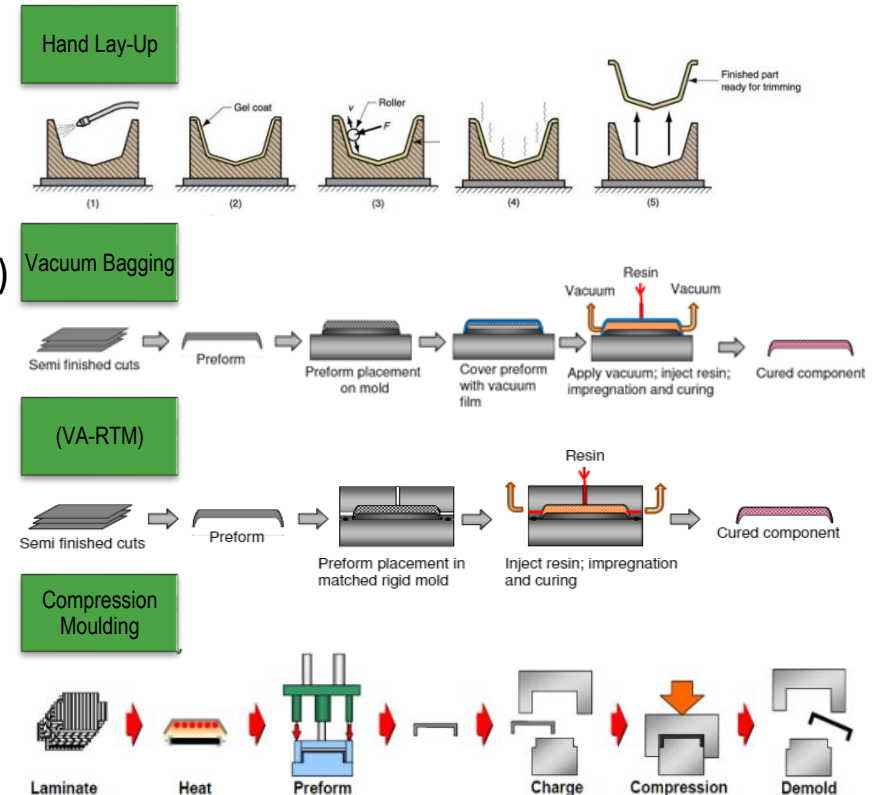
# R&D Activities and Interests

- ✓ Composite Components and Systems Design
  - ✓ FE Analysis & Simulation
  - ✓ Manufacturing Process Development and Simulation
  - ✓ Prototyping
  - ✓ Low Rate Production
  - ✓ Design Validation & Testing
- ⊙ Industrialization of New Materials for Composite Structures
  - ⊙ Analysis, Simulation and Validation Activities
  - ⊙ Novel Manufacturing Technologies and Processes
  - ⊙ Additive Manufacturing of Composites and Other Structures



# Prototype Production

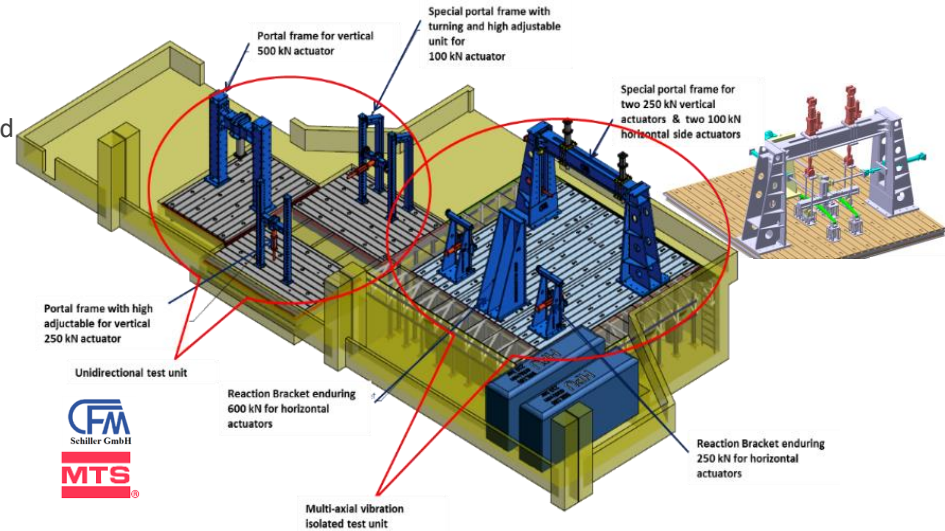
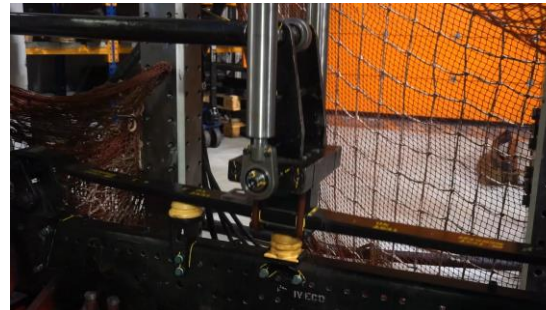
- ✓ Cold Room
- ✓ CNC Ply Cutter
- ✓ Tape Slitter (Unwinding, slitting and rewinding machine for slitting fabrics and prepreg rolls.)
- ✓ Curing Press (200 / 700 Tonnes)
- ✓ Vacuum Assisted Curing Oven (Up to 200 °C heating)
- ✓ VA-RTM
- ✓ 3D Printer
- ✓ Secondary Operations (Various drilling, milling, cutting, grinding and machining stations)





# Test Center

- 🚧 Loading Capacity till 50 Ton
- 🚧 Complete Front and Rear Suspension system durability testing with Road Load Data or block cycles
- 🚧 Adaptable design for light, medium and heavy commercial suspension systems
- 🚧 5 Axis system and adaptable to extend to 6 axis



# Project Ideas

HORIZON-CL5-2022-D2-01-05: Next generation technologies for High-performance and safe-by-design battery systems for transport and mobile applications (Batteries Partnership)

- *Development of battery system materials produced from composite materials*
- *Studies of mechanical design*

HORIZON-CL5-2022-D3-03-01: Innovative components and/or sub-systems for CSP plants and/or concentrating solar thermal installations

- *Development of components for solar thermal installations*

HORIZON-CL5-2022-D5-01-09: Nextgen EV components: High efficiency and low cost electric motors for circularity and low use of rare resources (2ZERO)

- *Design of electric motor components using composite reinforced materials*
- *Supporting of design and simulation studies*





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Thank You...

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