



# BENEFIT FROM ...

- Deep expertise in composites of our eXpert team (PhDs and engineers in material and structural engineering)
- End-to-end solution to tackle your problem(s) from material to design engineering
- Augment your engineering team, on- or off-site
- Flexibility on structural FE tools (access to main commercial FE software)
- Strong industrial network (testing, process analysis, relation to material suppliers)



#### MATERIAL CHARACTERIZATION

- Identify the required tests, the ideal test norms/ methods, and the ideal test lab to perform the campaign
- Complete management & execution of testing campaign
- Post-process and analyze test data with a critical eye
  Execute full calibration of Digimat material models
- Create material databases dedicated to your needs



# VIRTUAL MATERIAL TESTING

perts

Stream

- Reduce physical testing, therefore save cost & time
- Increase understanding of microstructural sensitivities and material variabilities
- Do material and/or processes innovation
- Unique expertise to exploit dedicated solutions and tools for analyzing various composites and performances



### METAL TO PLASTIC DESIGN CONVERSIONS

- 20-40% mass saving vs. existing metal design
- 10-50% cost saving vs. existing manufacturing process
- Save designing time thanks to fewer design iterations and prototyping
- Design analysis and optimization performed with state-of-the-art technology
- Expertise to design challenging plastic components



#### COMPOSITE DESIGN VALIDATION & OPTIMIZATION

- Perform metal to composite conversions, and composite design optimization (shape and ply layup)
- 5-15% saving in material cost
- Save designing time thanks to fewer design iterations and prototyping
   Prevent process related issues from detailed process
- Prevent process related issues from detailed process analyses; elliminate build and break iterations
- Assistance on preparing stress & method reports to your OEMs



# LET US HELPYOU GET STARTED TODAY!

#### Your contact person:

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# PLASTIC DESIGN VALIDATION & OPTIMIZATION

- 10-20% additional mass saving on an existing plastic design
- Save designing time thanks to fewer design iterations and prototyping thanks to state-of-the-art process to structure analysis coupling
- Expert review of FEA results and potential design weaknesses, suggestions on design changes
- Assistance on preparing stress & method reports to your OEMs

## CUSTOM BUILT & DIAGNOSTIC SOLUTIONS

- Increase understanding of causes & effects
- Propose & execute adapted analysis to identify root-causes and corrective actions to solve a given process issue
- Develop tools and/or methods that meet your specific needs and requirements to resolve your material and design challenges
  - Technology transfer and method consolidation



The combination of the unique features of Digimat, and the extraordinary scientific staff, set e-Xstream Engineering at the leading edge of this important new engineering competency needed to successfully support the introduction of materials innovations in 21st century applications.