



9T LABS

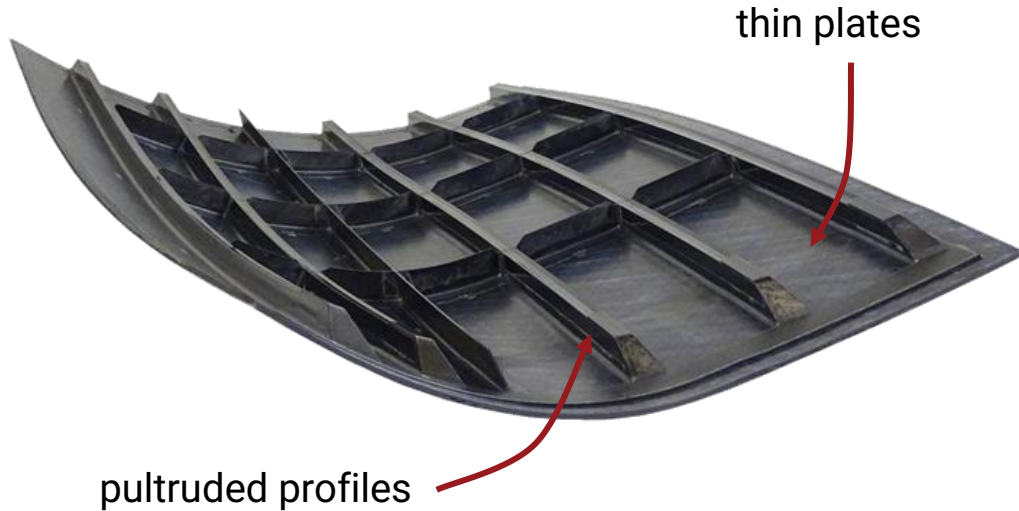


Series production of carbon fiber composites
through additive manufacturing

IACMI 2022

Martin Eichenhofer, CEO (martin@9tlabs.com)

9T Labs makes it possible to substitute small metal parts with composite materials at scale.

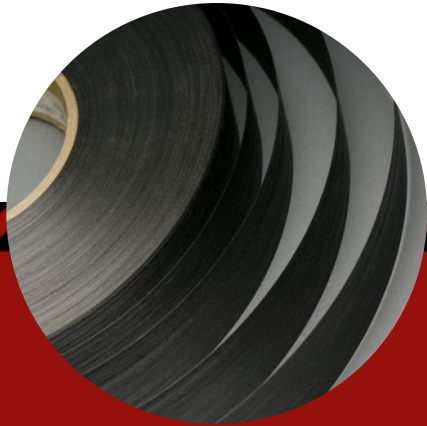


What about small, thick and complex parts?



9T Labs' approach overcomes the current part limitations in fiber composite manufacturing by combining different disciplines.

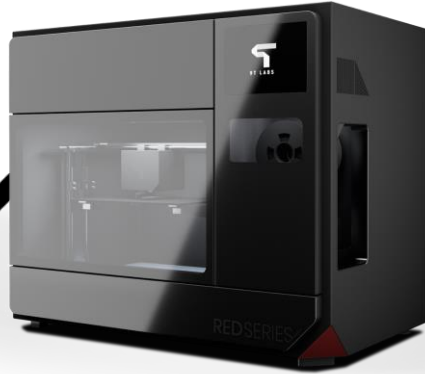
continuous fiber materials



performance

+

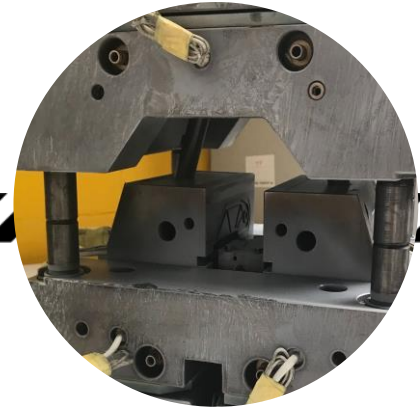
3D printing



automation
optimized part design

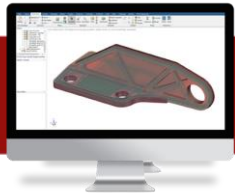
+

moulding

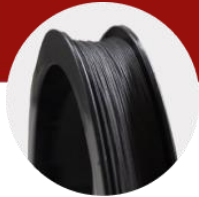


high reproducibility
low porosity
surface finish
precision & tolerances

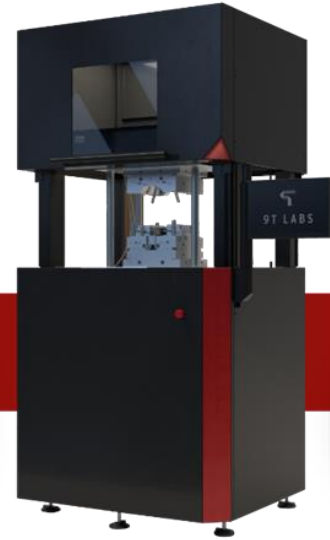
We provide an end-to-end solution for serial production of small and complex fiber composite parts.



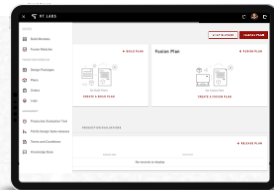
The optimal part is created inside our design & simulation environment.



Additive manufacturing is used to produce complex parts cost competitively.



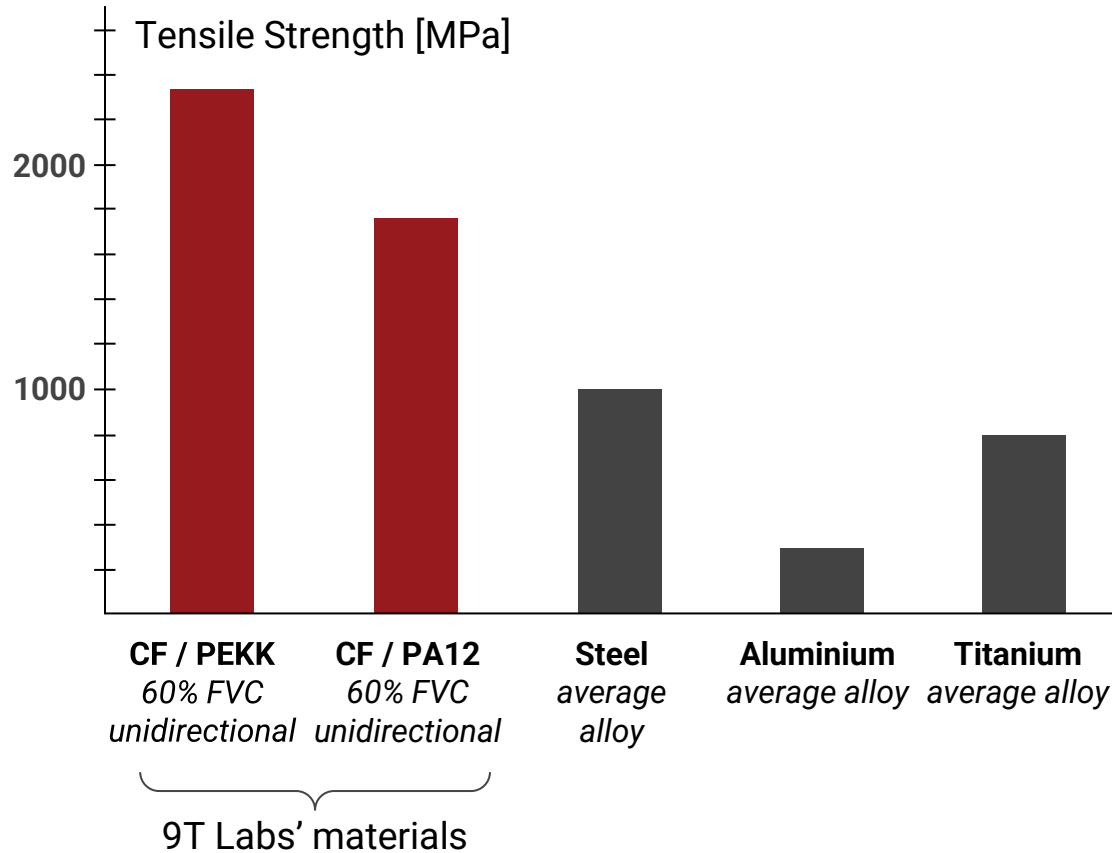
Welding of printed parts is the game-changer for high value applications and serial production.



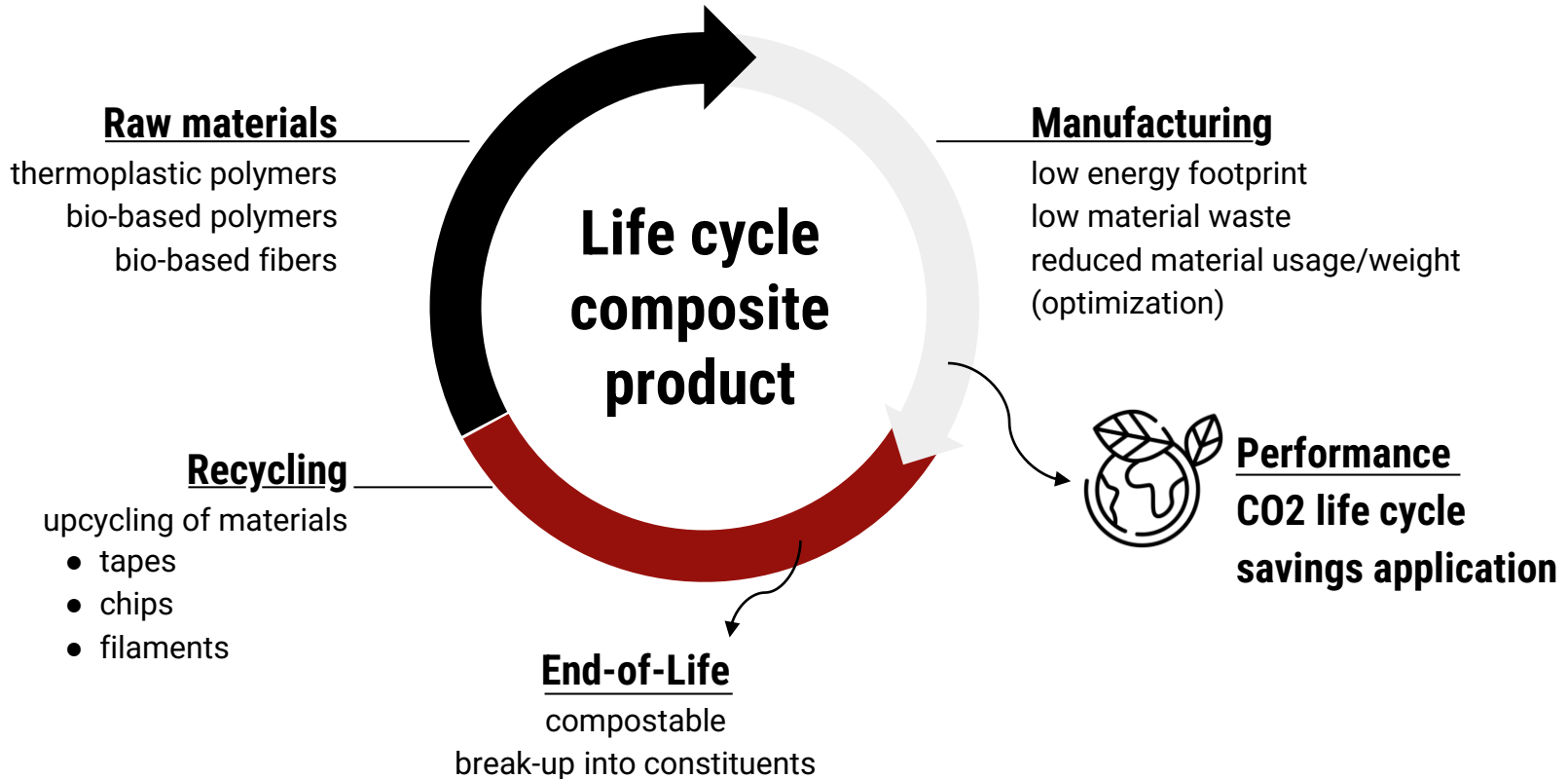
Workflow Software

Our cloud-based platform controls the workflow and manages production data.

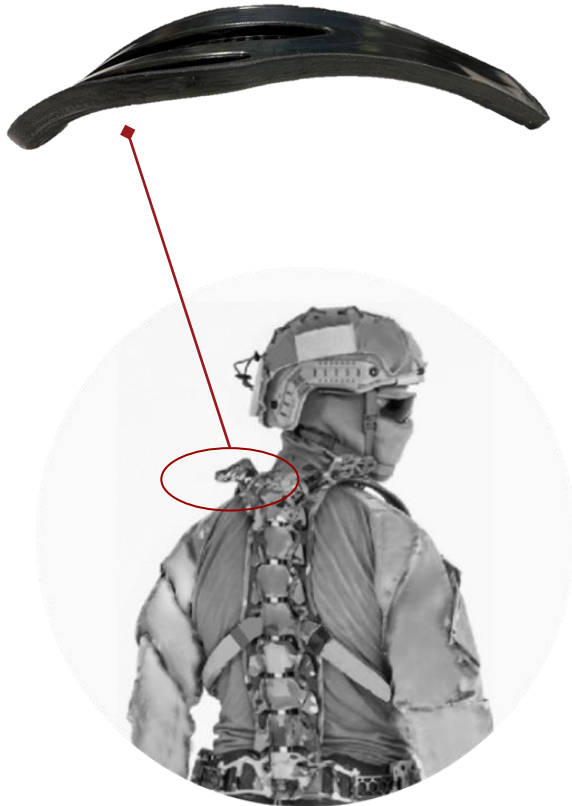
Tapping into the existing qualified supply chain of thermoplastic UD-tapes.



It is our mission to provide a sustainable alternative to metal production, by making recyclable, biobased materials available through an efficient manufacturing workflow.



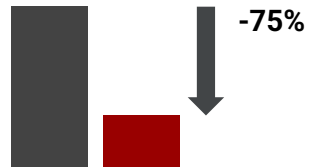
New capabilities unlock high performance metal replacement at high volumes: Redefine composite molding.



Part description
winglet
Production volume
year

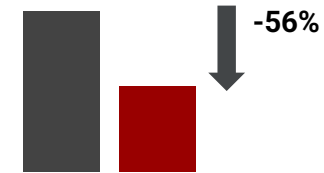
Exoskeleton
10'000 parts /

Costs / Part



■ Titanium

Part Weight



■ 9T Labs CF/PA12

AFT brings new capabilities to unlock high performance metal replacement at high volumes: Redefine composite molding.

Hybrid molding

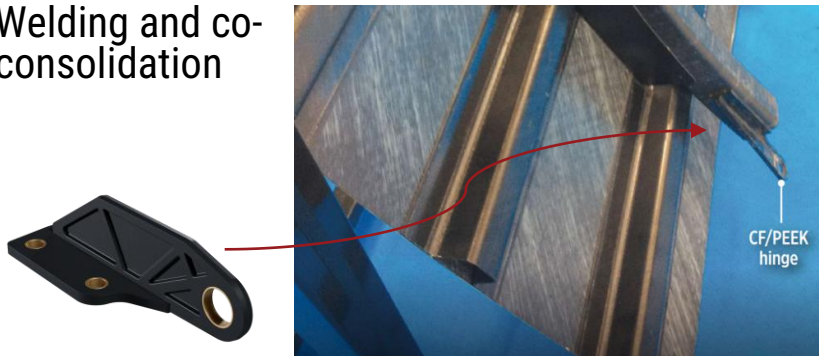


printed continuous reinforcements

BMC/Platelets

organosheet

Welding and co-consolidation



CF/PEEK hinge

Embedding sensors and conductive wires

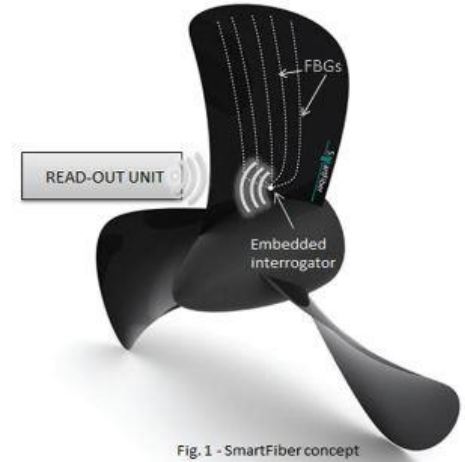
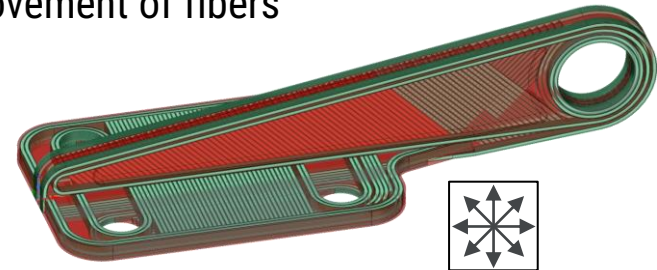


Fig. 1 - SmartFiber concept

Reshaping and Z-movement of fibers



multiple part assembly