

Problem

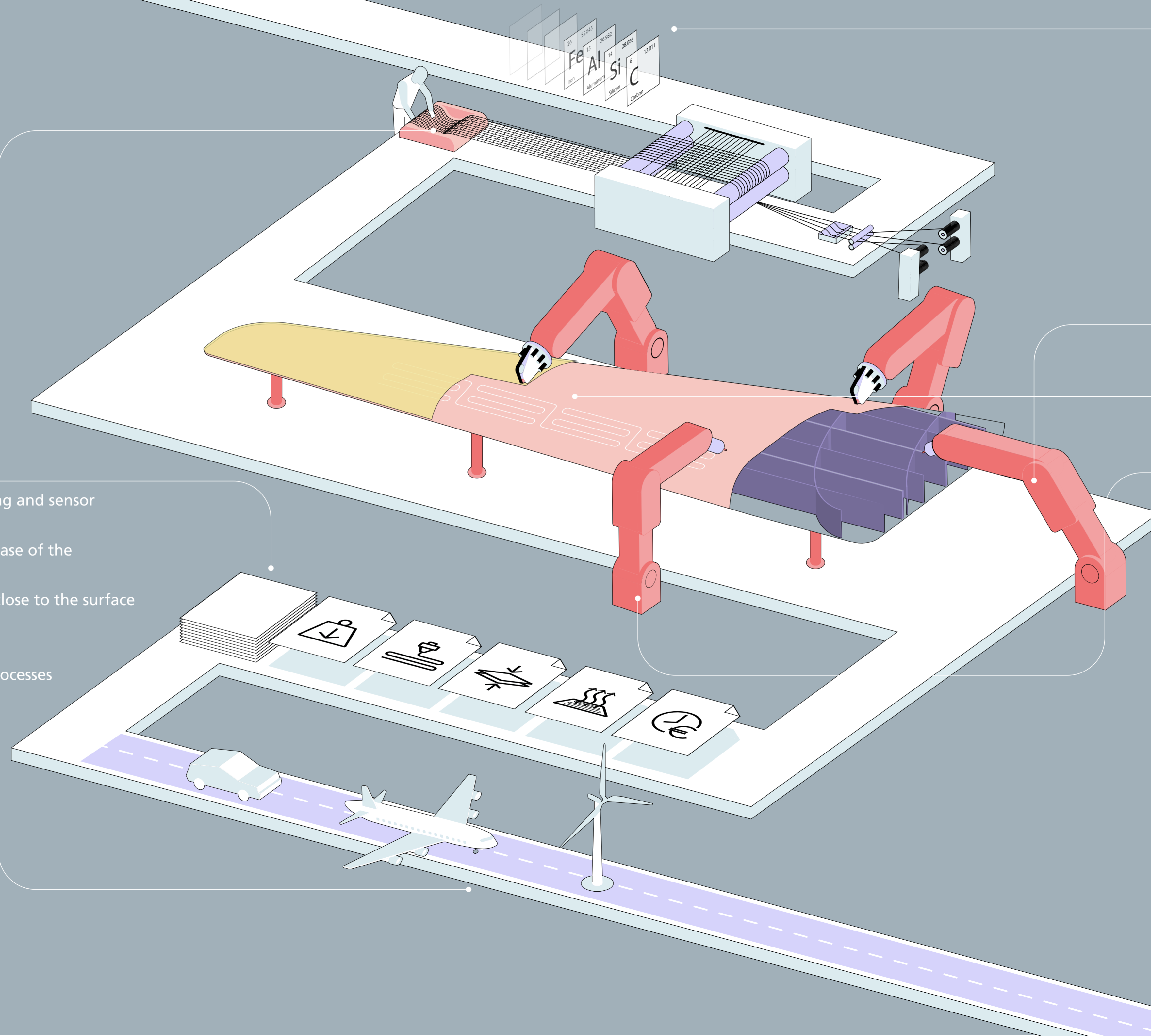
- Complex textile processing
- High proportion of handwork
- Use of resource- and cost-intensive tools
- Curing of components in autoclave or oven

Unique selling proposition

- Weight reduction compared to existing heating and sensor systems
- Lower material usage with simultaneous increase of the functional area
- High degree of efficiency due to heat supply close to the surface
- Lower assembly and maintenance costs
- Continuous additive manufacturing process
- Unification of manufacturing and assembly processes

Application

- Space and aviation
- Automotive
- Mechanical and plant engineering
- Wind energy



Background

Every industrial era can be fundamentally defined by a new material development. Great potential comes in the application of CFRP through innovative and robot-assisted manufacturing processes.

Function

- 1 Tools and core structures using additive manufacturing processes
- 2 Cover layers using Automated Fiber Placement (AFP)
- 3 Electrical conductor structures via piezo jet printing
- 4

Contact

Fraunhofer Institute for Applied Polymer Research IAP
Research Field Polymeric Materials and Composites PYCO

Telephone +49 3328 330-303
marcello.ambrosio@iap.fraunhofer.de

Research Field Functional Polymer Systems
Telephone +49 331 568-1915
christine.boeffel@iap.fraunhofer.de
<https://www.iap.fraunhofer.de/en.html>