## Use of Aerospace thermoplastic composite production waste Designing new applications through reshaping of thermoplastic composite strips

## The Challenge Valuable waste

Thermoplastic composite materials are increasingly used in aircraft construction due to their highmechanical properties, toughness, rapid processing rates and reprocessing possibilities at their endof-life. In the production thermoplastic composite parts, **10-40% of the material remains unused**, so-called production waste. Despite being a **high-performance material that can be re-processed**, **real-world applications** of the material into structures or products are **lacking**.

## How to overcome this challenge?

Show, do not tell

Instead of answering the question directly, this research **inspires** and **guides designers & engineers** on **how to reuse the thermoplastic composite production waste material** by demonstrating the design process of a structural member and a pedestrian bridge out of this material. While the **structural member** showcases the potential of this material for purely **functional applications**, the **bridge** aims to **stimulate the creative use** of the material. Moreover, the research results in a **framework** based on the design process.



The framework: Recapturing value through design

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