

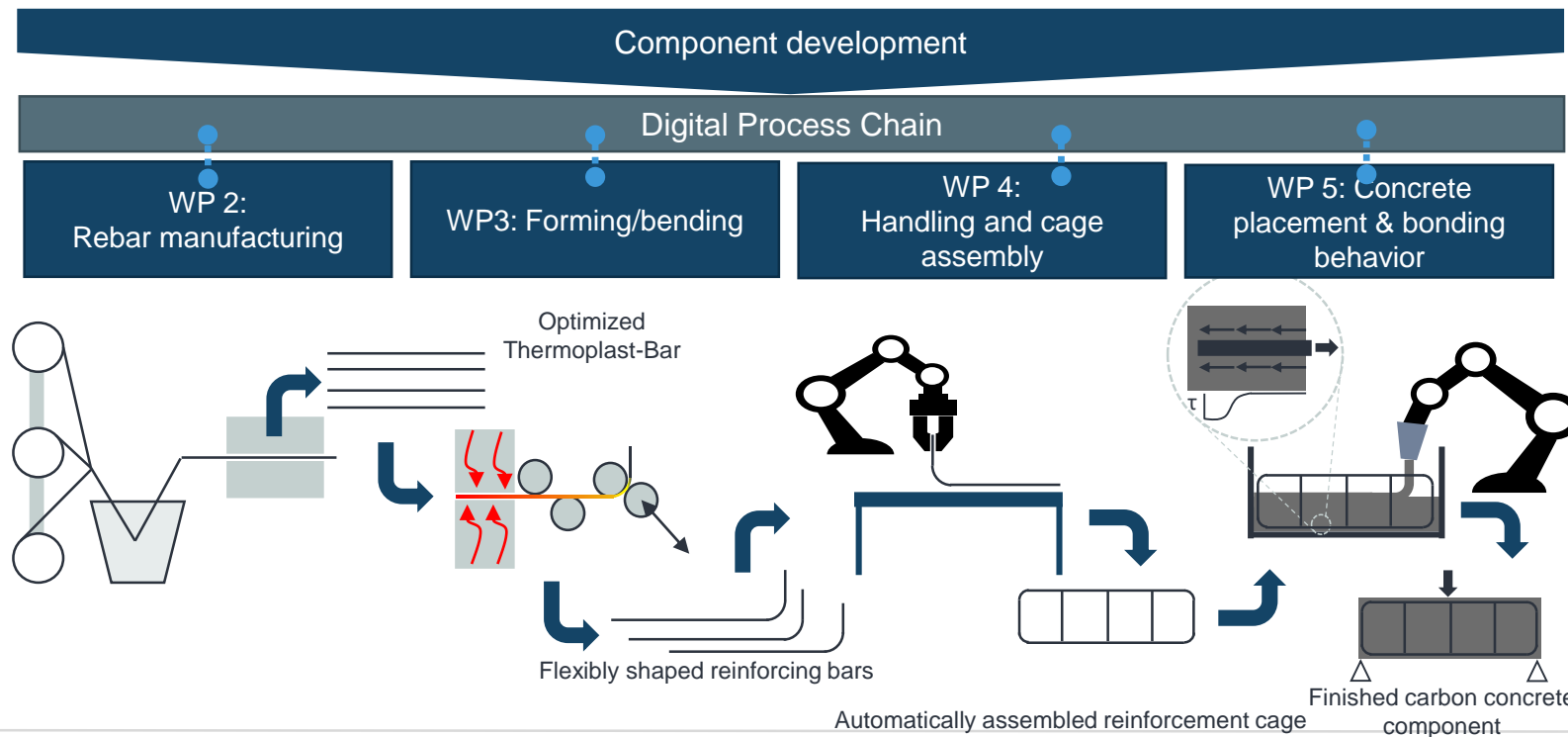
Project Idea: Automatic Flexible CFRP-Rebar Forming

Combined material process development and digitalization for resource-efficient concrete components with flexible thermoplastic rebars

Motivation

- Concrete production accounts for a high proportion of global CO₂ emissions
- The use of CFRP rebars allows for a lower concrete cover than with reinforced concrete, which means that less concrete is required
- Due to their formability, thermoplastic CFRP rebars offer further design freedom

Possible Approach



Aims

- Integrated development of material and process for manufacturing thermoplastic rebars
- Digitization and automation of the entire process chain from raw material to finished reinforcement cage