

Development of an Integrated Technology for Harvesting, Singulation, Logistics and Manufacturing of Warp-Knitted Grid Structures from Hemp Stems

Problem / Motivation

- There is a growing demand for regional, bio-based plaster carrier systems for sustainable construction and renovation
- Reed mats, which are commonly used as ecological plaster carriers, are becoming increasingly limited due to climate change and more difficult harvesting conditions
- The natural variability and inhomogeneity of hemp stems complicate singulation, sorting, handling and textile processing



HANFPUTZTRÄGER



Solution

- Development of a continuous value chain from hemp harvesting to a bio-based plaster carrier system
- Design of innovative harvesting and logistics technologies for the gentle handling
- Creation of automated sorting and preparation processes for stem separation, alignment and quality selection
- Development and integration of textile manufacturing technologies to produce hemp-based grid structures for sustainable construction

Project Launch

03/2026

Project Partner

Hanffaser Uckermark eG

GEKO Maschinenbau GmbH



Prototype of a plaster-bearing lattice made from hemp stalks

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