

Tasseikan : Biotech for Biopolymers

To stimulate the market introduction of biobased polymers, achieving low-cost production is essential. For the 100% biobased polymer PEF, the cost-effective production of its renewable building block FDCA remains the main bottleneck. PEF can replace the petrochemical plastic PET in many applications and offers superior performance benefits. Tasseikan and its partners are developing a biotechnology-based route to produce FDCA at significantly lower cost.

Goal

Developing a low cost route from (2G) sugars to FDCA via biotechnology and subsequently making PEF out of this bioFDCA. Recycling options are also being developed via partners.

Benefits of the FDCA Biotech route

- High yield on feedstock - nearly 100% conversion of intermediate HMF (~80% on sugar)
- Virtually no by products – high purity FDCA
- Feedstock flexibility – low-cost sugars, less pure feedstock needed
- Mild process (low Capex/Opex, easy permitting)

Consortium

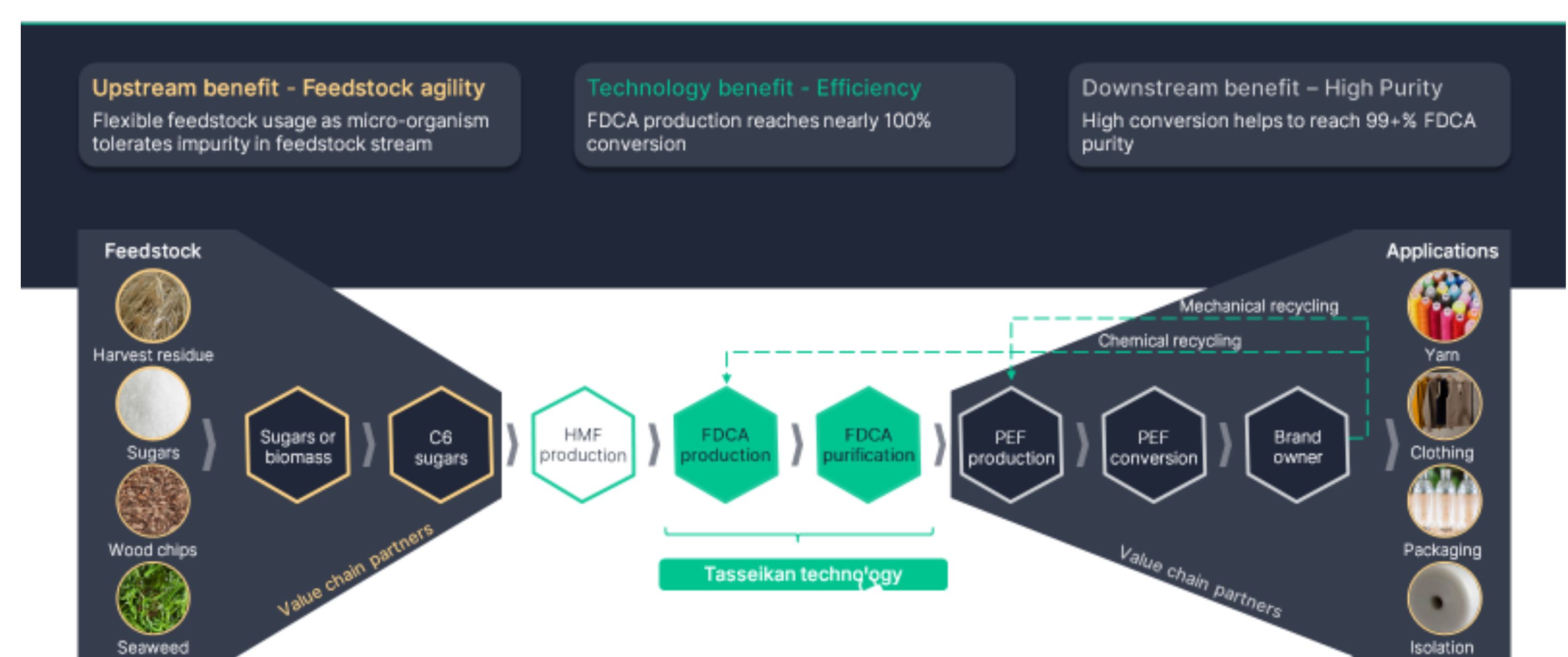
Recently the MOOI project “Biotech for Biopolymers” started with:

- T.EN Netherlands
- NHL Stenden University of Applied Sciences
- CuRe Technologies
- Tasseikan (*project lead*)

Next to the biotech route, polymerization and recycling technology is also being developed.

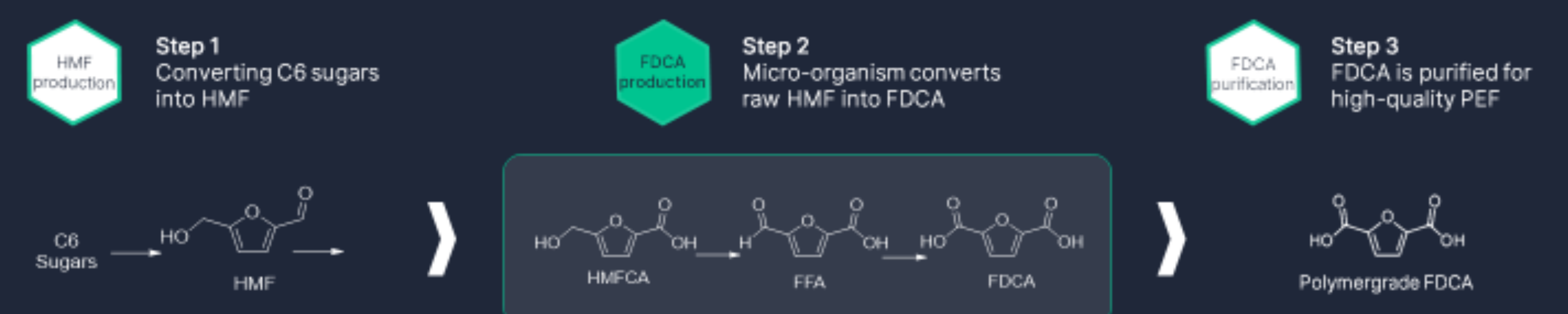
RESOLVING THE BOTTLENECK IN THE VALUE CHAIN

Tasseikan holds the cost-effective technology to scale to mass-production



TASSEIKAN'S BIOTECHNOLOGY EXPLAINED

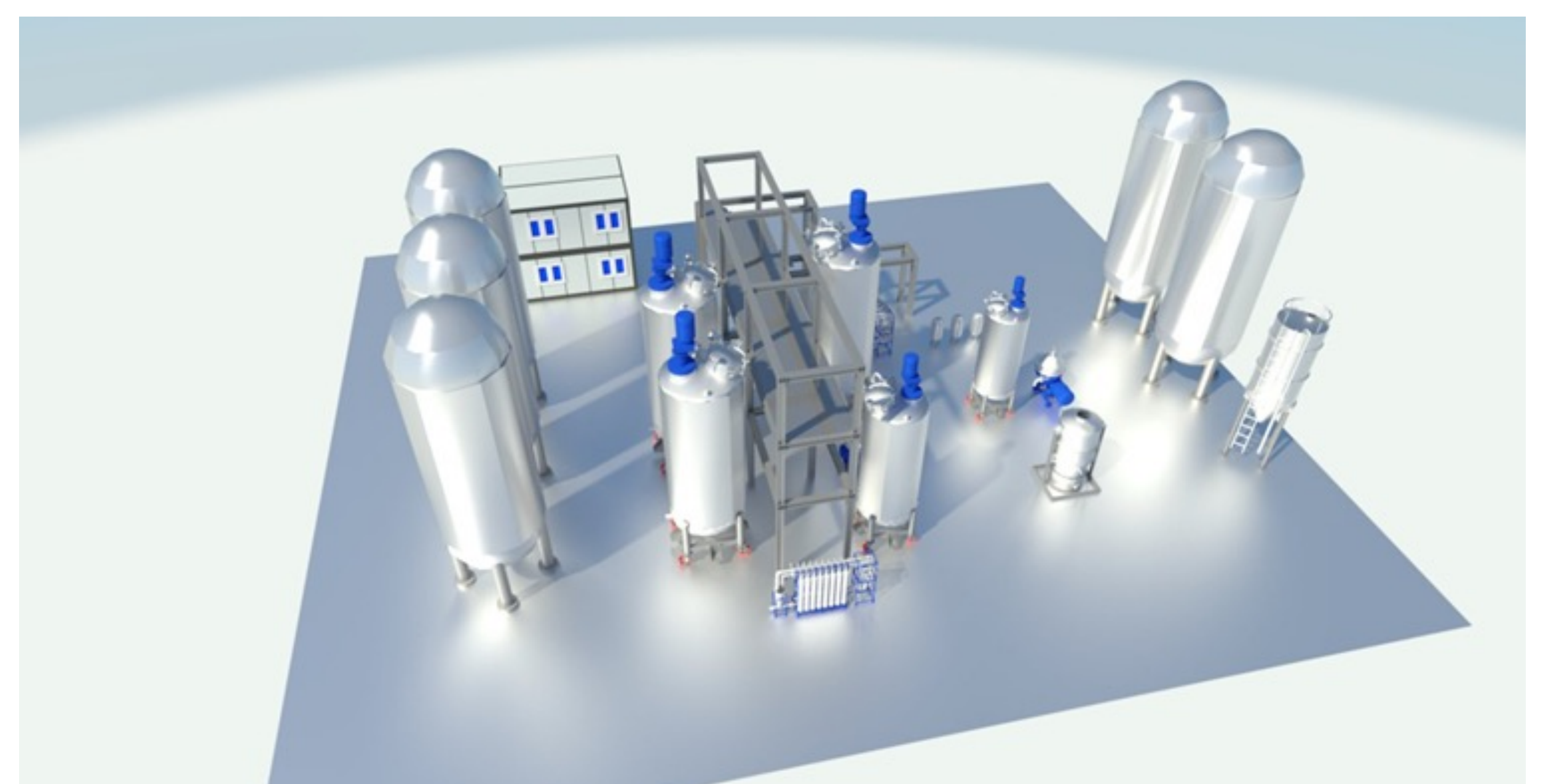
Conversion of feedstock to the highest purity FDCA



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Artist impression pre-industrial FDCA plant

