From waste to high value

Katja Latvala| katja.latvala@ch-bioforce.com

CH BIOFORCE®
The Bioforce of Nature

2011

Co-founders Lari Vähäsalo, Sebastian von Schoultz and Nicholas Lax discover the fractionation technology and file the first patents.

2016

CH-Bioforce Oy is established.

2017

Current pilot plant (1 ton/batch) is built in Raisio with the support from Business Finland.

2018

Financial analysis, technology validation, material evaluation.

2019

Construction of an automated pilot production line begins & EU Horizon SME funding boosts innovation.

2020-2025

Continuous development of the technology and improvement of the current pilot plant. New collaborations, extensive validation with customers and first commercial applications.

2026

Operations at new small-scale plant begin (capacity 225 tons/year).

2029

The first mid-scale plant (capacity 20,000 tons/year) will be launched, marking the start of the company's future full-scale industrial phase.

2030s

Large-scale plants will be developed as the technology continues growing towards global commercial deployment.

From garage to global impact: BIOFORSENSE® redefining biopolymers

With BIOFORSENSE® technology, cost-efficient and sustainable biopolymers can be produced from **virtually any raw material.**

Input material	Biorefinery	Biopolymers	Applications
 Wood chips	 Patented technology	 **XYLENSE®** for dietary fibre	 **Cosmetics**
 Straw		 **LIGNENSE®** for UV blocker	 **Food & Beverage**
 Oat husk		 **CELLENSE™** for microplastic replacement	 **Packaging**

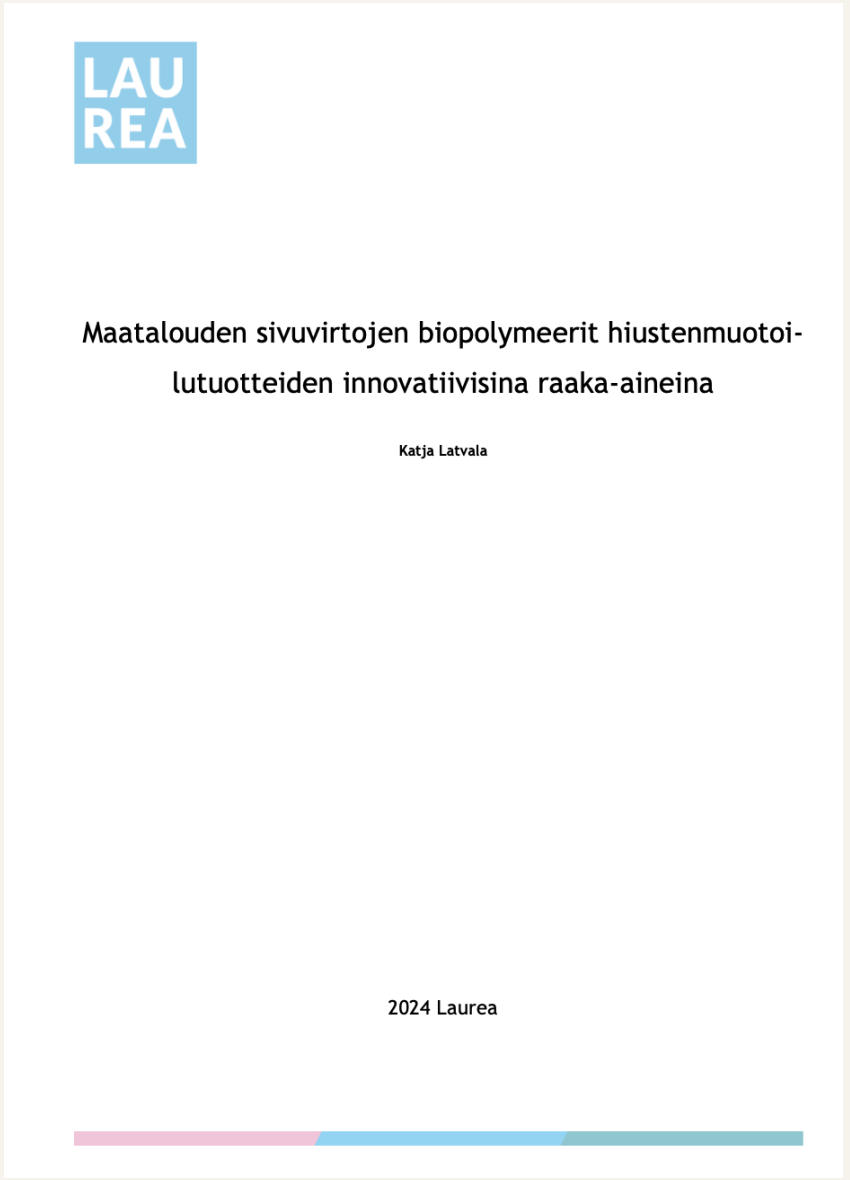
Sustainable, cost-effective biopolymers are a scalable alternative to replace fossil and food-based ingredients in everyday consumer products.

Powerful, renewable ingredients for product formulations

Three selected case studies

Biopolymers	Product formulations	Impact
 **Microplastics replacement**	 **Cosmetics**	Microplastics were fully replaced (100%) in cosmetics produced by our customer.
 **Dietary fibre increase**	 **Beverages**	Demonstrated a 140% increase of dietary fibre in the products.
 **Sustainability to adhesives**	 **Glues**	Enable the use of renewable biopolymers instead of toxic fossil-based polymers.

Bachelor’s and Master’s Theses under the FARKOS Project




BIOFORCE®
The Bioforce of Nature
MAKING THE WORLD MORE SUSTAINABLE BY CONVERTING WASTE TO HIGH VALUE