

CO-CREATION: Water Post-Hydrolysis of Hardwood Kraft Pulp for High-Purity Cellulose and Xylan

Project duration:

16.06.2019–16.12.2019

WANTED PARTNERS:

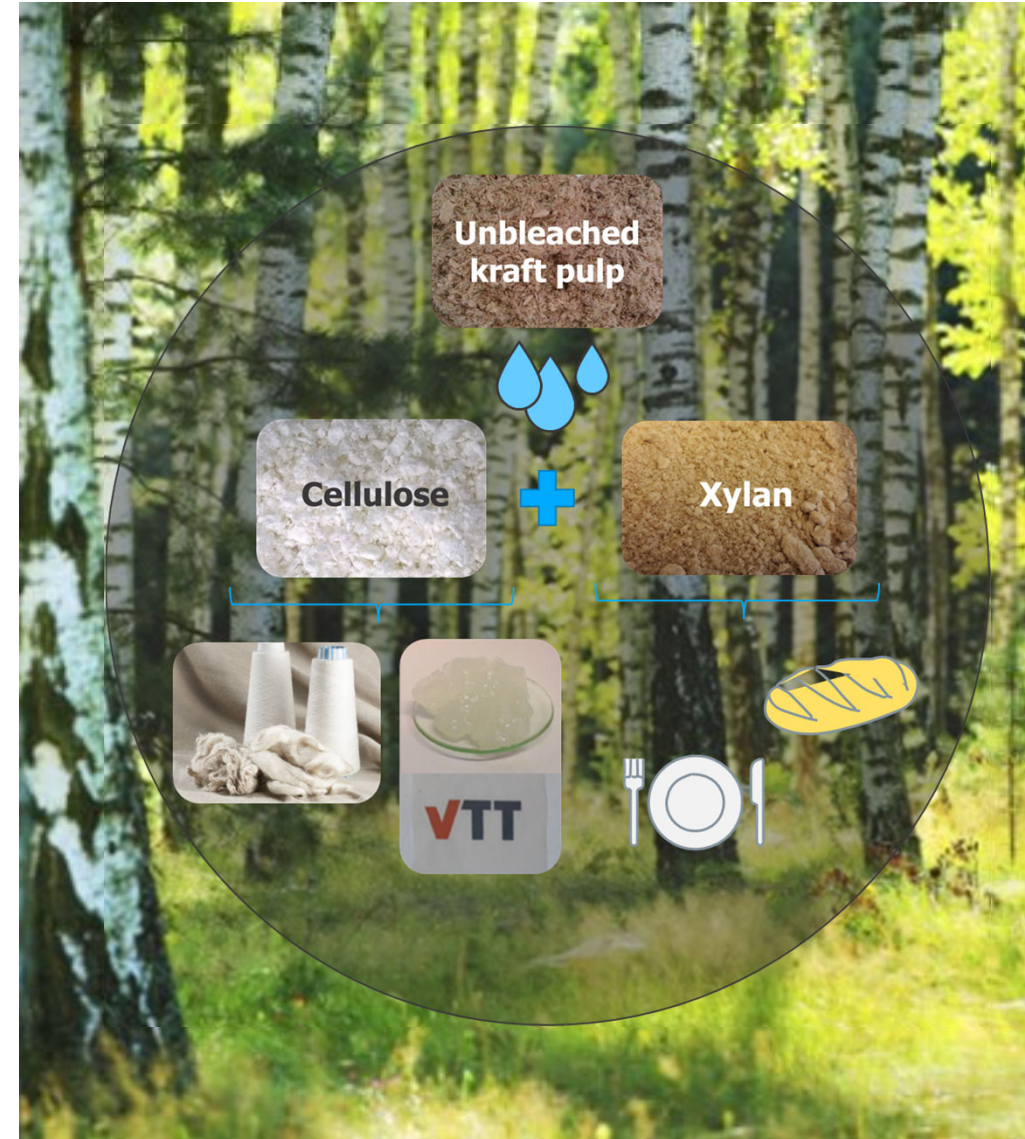
Companies along the value chain in the production and conversion of cellulosic pulps and sugar-based streams:

Equipment suppliers, pulping companies, textile fiber manufacturers, nanocellulose producers, food and ingredient companies

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CO-CREATION:

Water Post-Hydrolysis of Hardwood Kraft Pulp for High-Purity Cellulose and Xylan

AIM & CONTENT OF THE CO-CREATION PROJECT

To gather a network of companies that will develop and exploit the water post-hydrolysis concept for a) the upgrading of kraft pulps into high-purity cellulose for textiles and other applications (i.e., nanocellulose) and b) the recovery of xylan from the aqueous side-stream for subsequent valorization (i.e. dietary fiber).

BENEFIT & COMPETITIVE ADVANTAGES

- High-purity cellulose fraction with yields 5-7% (on wood) higher than in competing processes.
- Xylan is dissolved in high-purity in the aqueous hydrolysate, allowing simple recovery for valorization.
- Complete flexibility in the choice of end-product (market or dissolving pulp, nanocellulose).

TARGET MARKETS & GLOBAL MARKET POTENTIAL

Textiles, food ingredients and nanocellulose markets, with estimated values of \$1.2 trillion (textiles, CAGR ~4%), \$60 billion (food ingredients, CAGR ~8%) and \$700 million (nanocellulose, CAGR~18%) in the next 5-6 years.