Tree to Textile

Kraftsamling Sverige

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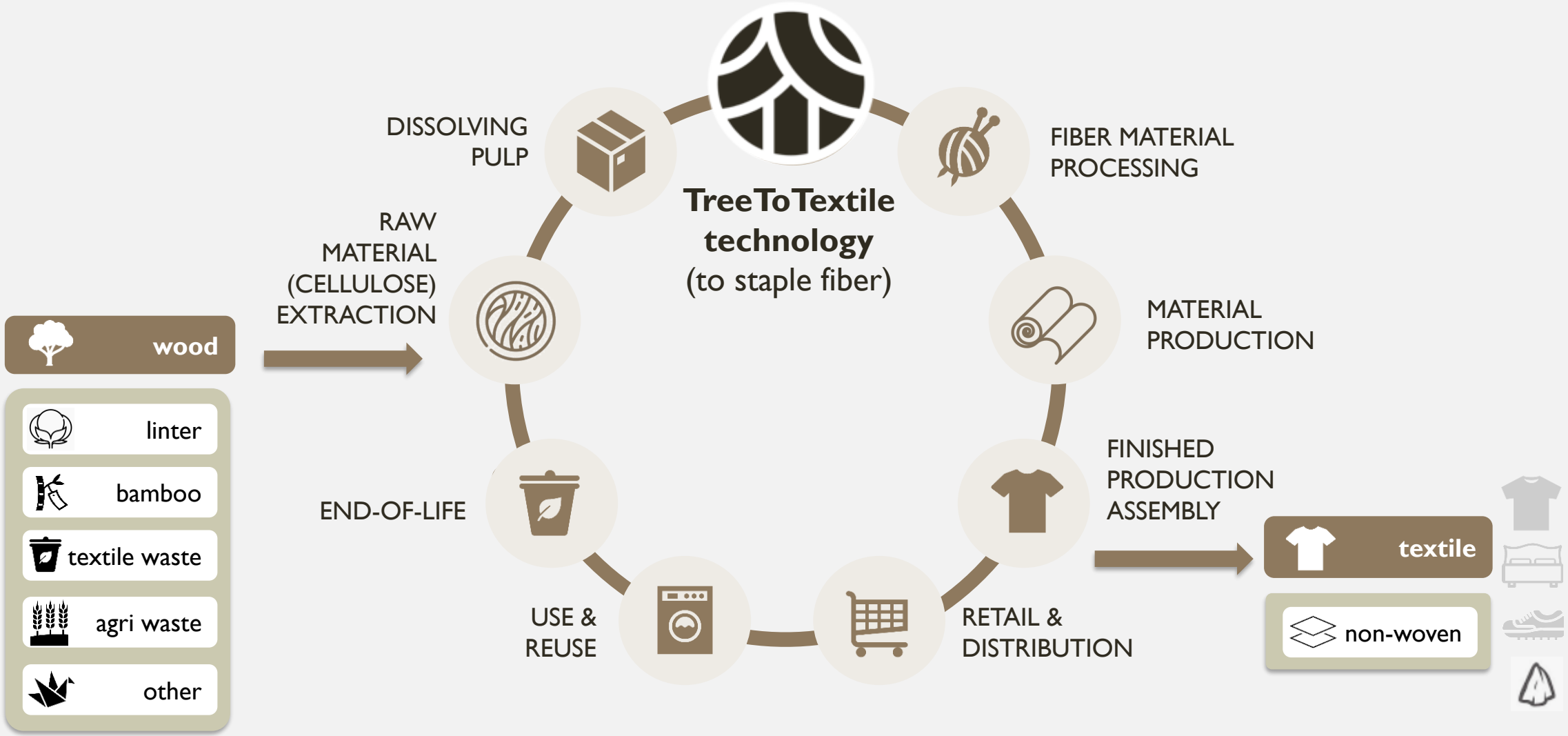
THE TREETOTEXTILE PROCESS WITHIN THE TEXTILE VALUE CYCLE



OUR JOURNEY IN BRIEF

Tree to Textile

2014

The company was established by **IKEA, H&M & LSCS invest**

2015

A **development agreement** was made with the Swedish research institute **RISE IVF** and a **pilot spinning machine** was put into operation late 2015

2016

The first **fibers were tested** downstream with very good results

2019

Stora Enso joined as shareholders in early 2019

2021

Approval of grant from Swedish Energy Agency and decision to invest in **construction of a Demo plant** beginning of 2021

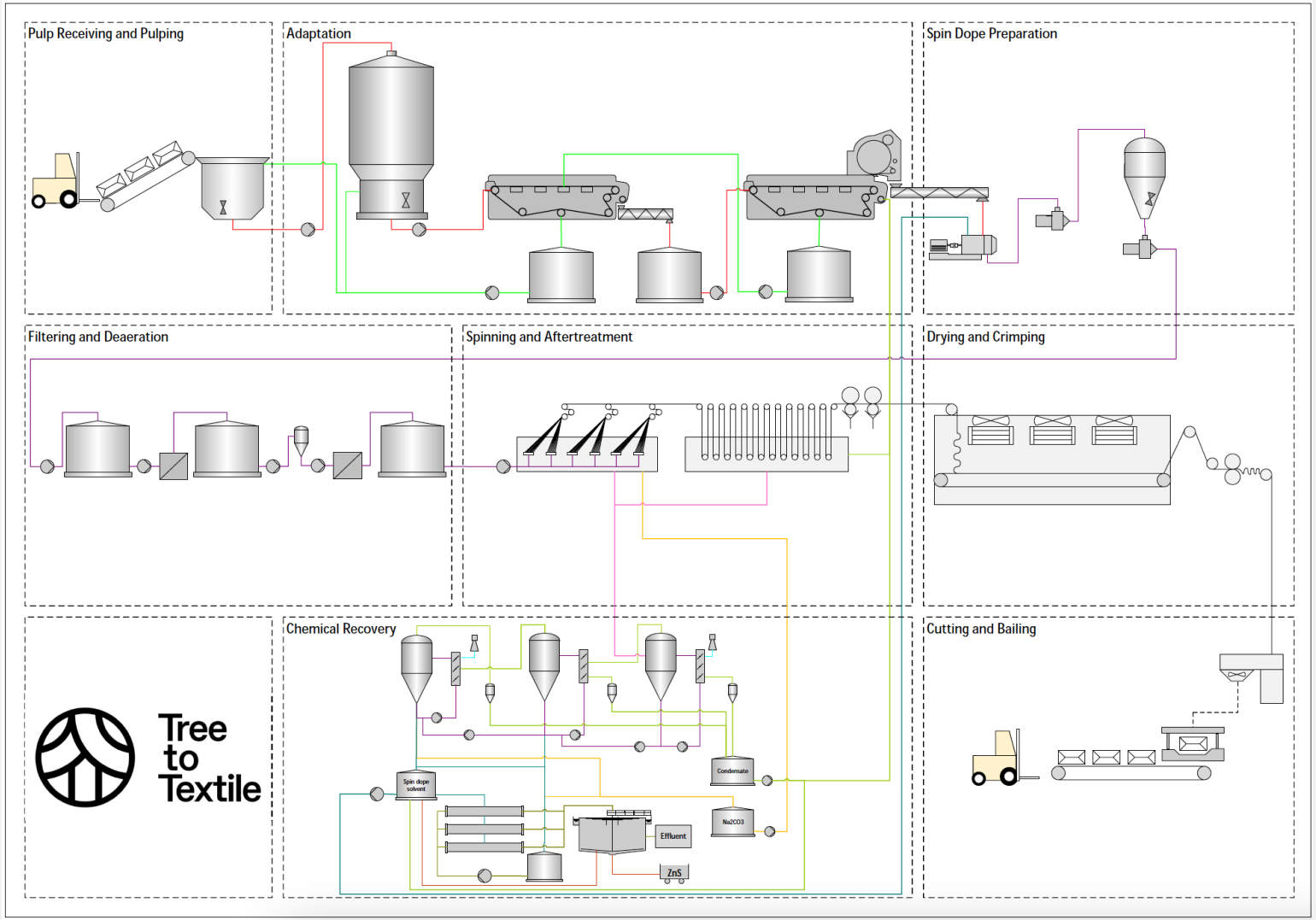
350kg per hour and 1,500 tons *fiber annual throughput*

2022

The plant will be **started Q4 2022**

Next step *upscaling to commercial size production*

TTT PROCESS OVERVIEW



Chemicals

- For TTT
  - NaOH, ZnO, Na2CO3 and H2SO4
  - No residue stream of Na2SO4
- For BAT viscose
  - CS2, H2SO4, NaOH and ZnO

According to 3rd party verified LCA study based on data from pilot plant, the TTT process consumes

- **less energy**
- **less chemicals**
- **less water**

compared to best technology benchmark viscose production

TTT IN A NUTSHELL

- TTT has developed a unique biobased fiber with low environmental impact at a low cost., the TTT process consumes:[1]

  33% less energy[2]**,**

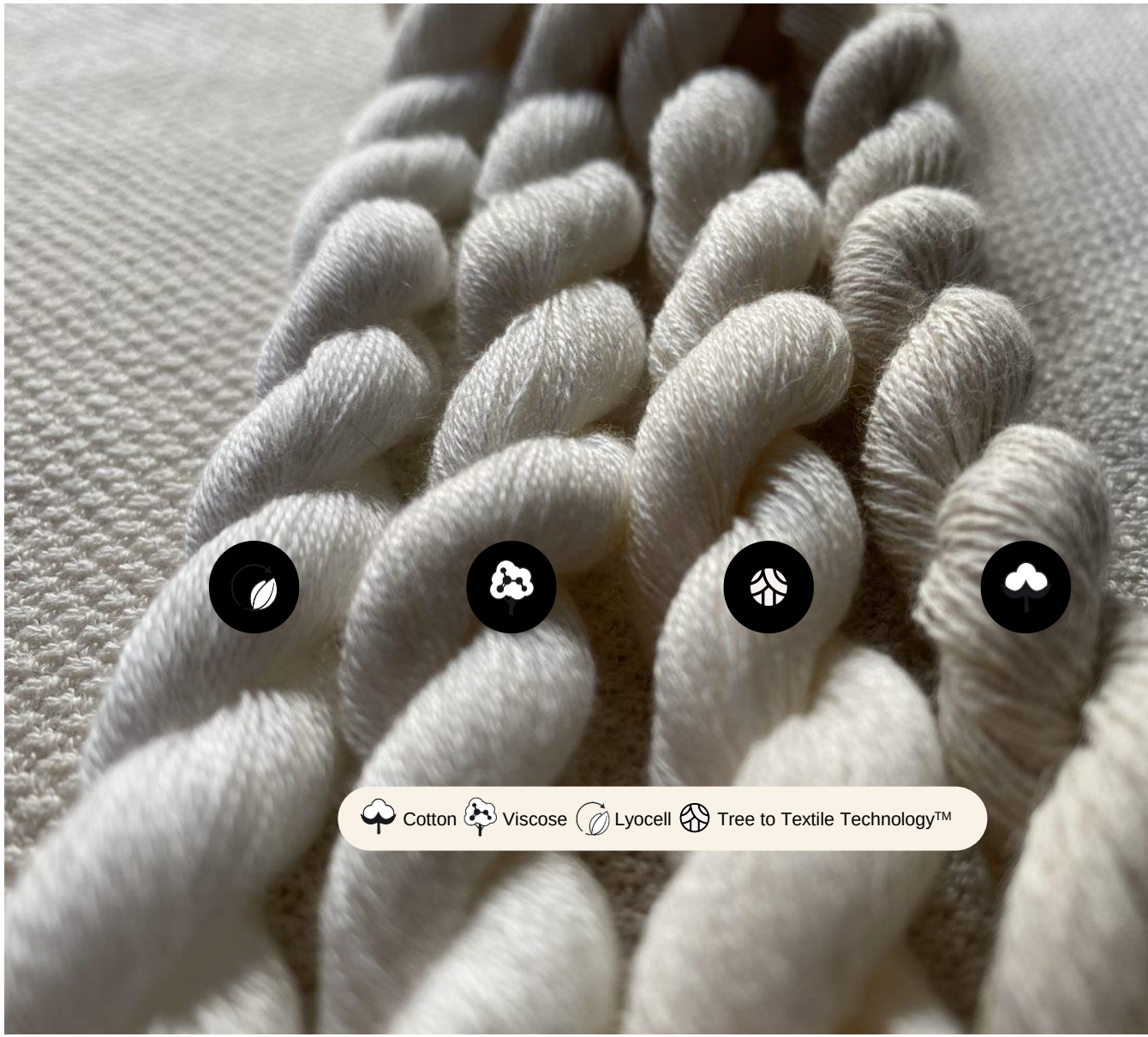
  70% less chemicals[3]**,** and

  80% less water[3]

  compared to best technology benchmark viscose production

- The fiber is versatile and has the properties between cotton and viscose.

- TTT will make the technology available through licensing.



Note: [1]*According to a 3rd party verified LCA study based on the data from pilot plant*
[2] *from dissolving pulp to staple fiber ~33%, from cradle to factory gate ~15%*
[3] *from cradle to factory gate*


BETTER FIBERS- TO ALL
Tree
to
Textile