



## REFFIBRE: maximising the value from paper for recycling

### REFFIBRE meeting in Arnhem

The REFFIBRE project focuses on helping the European paper and board mills to transform into multiproduct mills. Input material will no longer be limited to virgin wood fibres and paper for recycling, but instead consist of a wide array of cellulose-containing streams. These will be used in order to produce all sorts of sustainable materials next to paper and board. REFFIBRE models the paper and board production over its entire life cycle, using key indicators to measure the impact of new products from side streams on the environment.

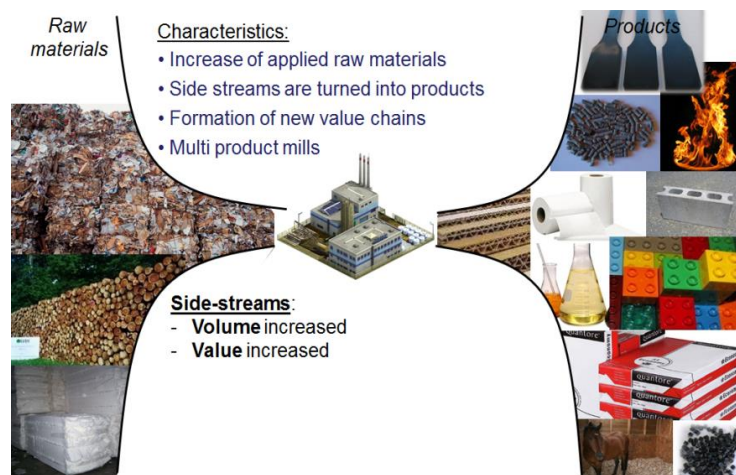
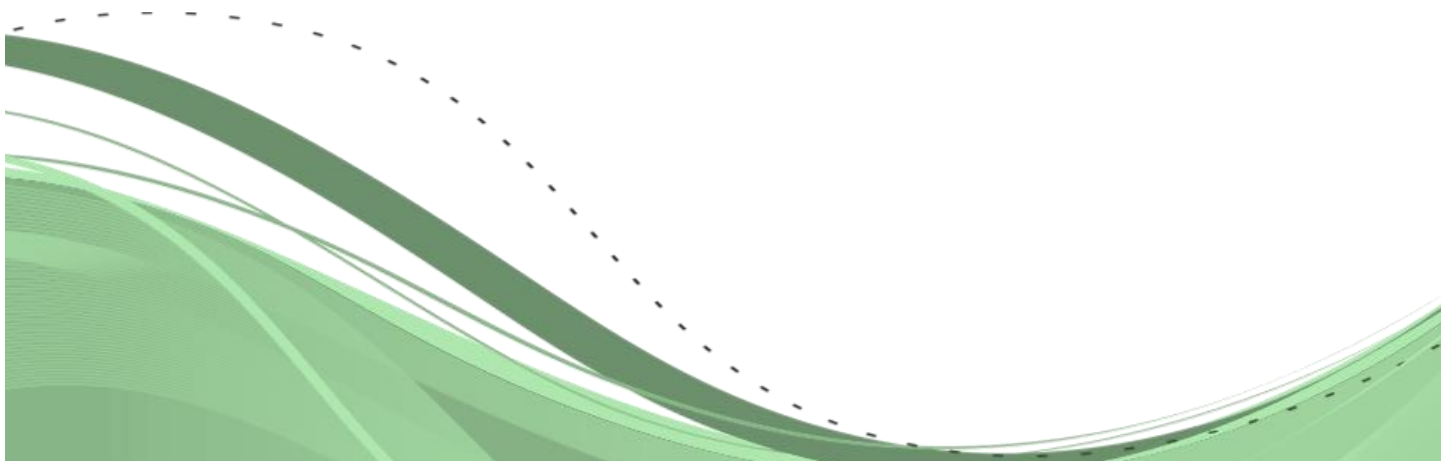


Figure 1. Multi-product mill

On September 30 and October 1, 2014, the REFFIBRE consortium convened in Arnhem in order to discuss the progress made and the necessary next steps.



## Modelling

The work regarding the modelling of the production processes is progressing steadily. The modelling of the flotation, screening and dispersion process steps, as well as that of the impact of different pulp types and varying ash contents on the end product characteristics, are starting to take shape. Real data from the industrial partners are being collected so as to test the models.

The modelling that focuses on the circular economy aspect is also on schedule. The value chains are well defined. This enables the Life Cycle Analysis tool to determine the impact of new materials, products and processes on several key indicators (environment, finances) over the total life cycle. These will also be tested using the real data obtained from the industrial partners.

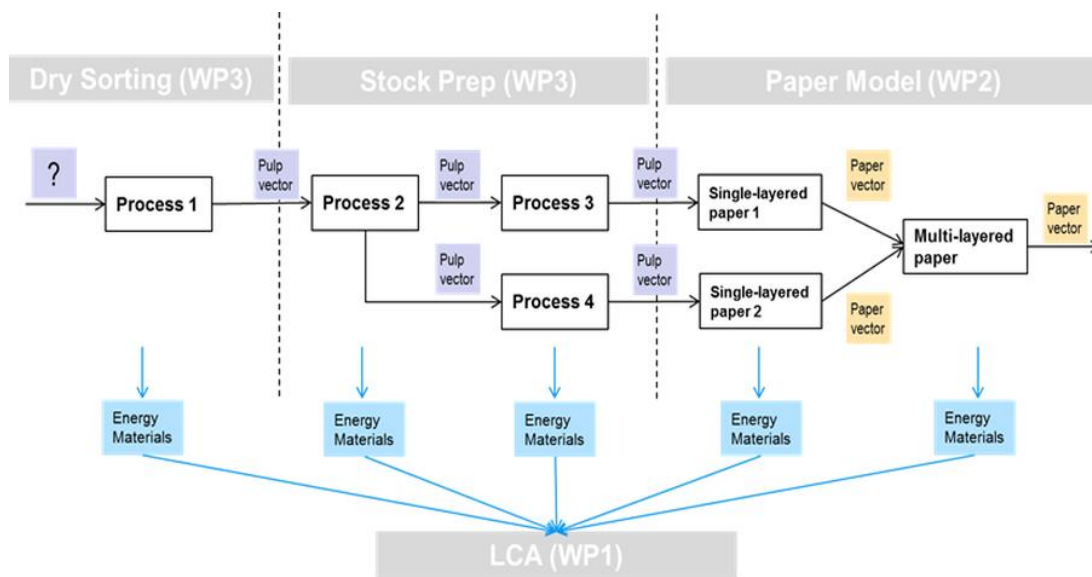
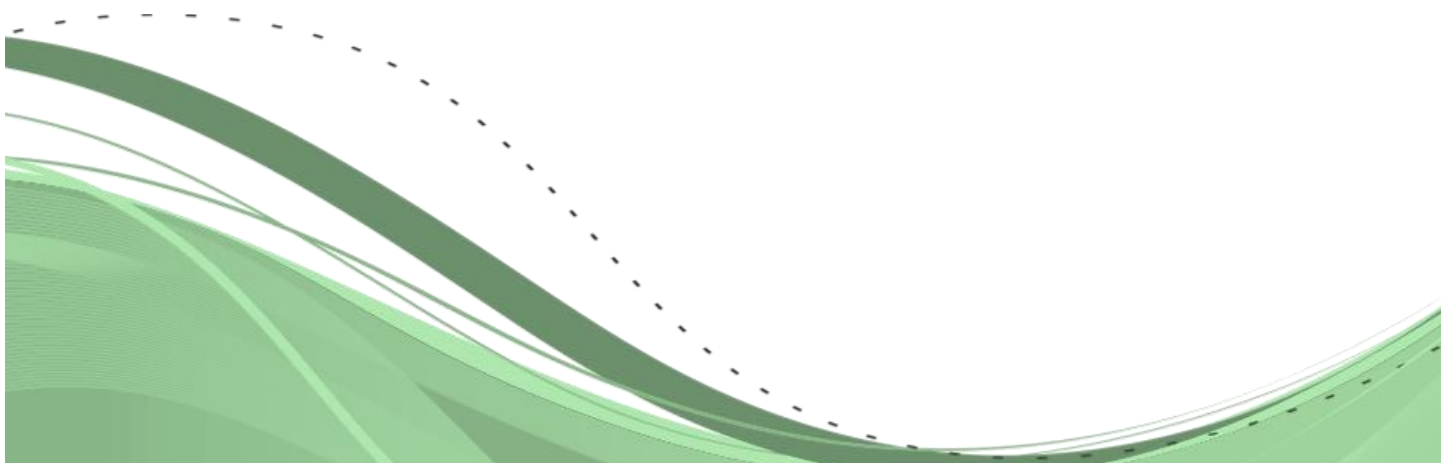


Figure 2. A schematic view of process models data transfer in WP3 (dry sorting and stock preparation), WP2 (paper making) and WP1 (environmental and economic assessment)

## Demonstrations

The validity of the models will be proven using data from demonstration trials in mill- and pilot-scale by industrial and research partners. Several potential technologies that can convert side streams into high-value products have been identified.



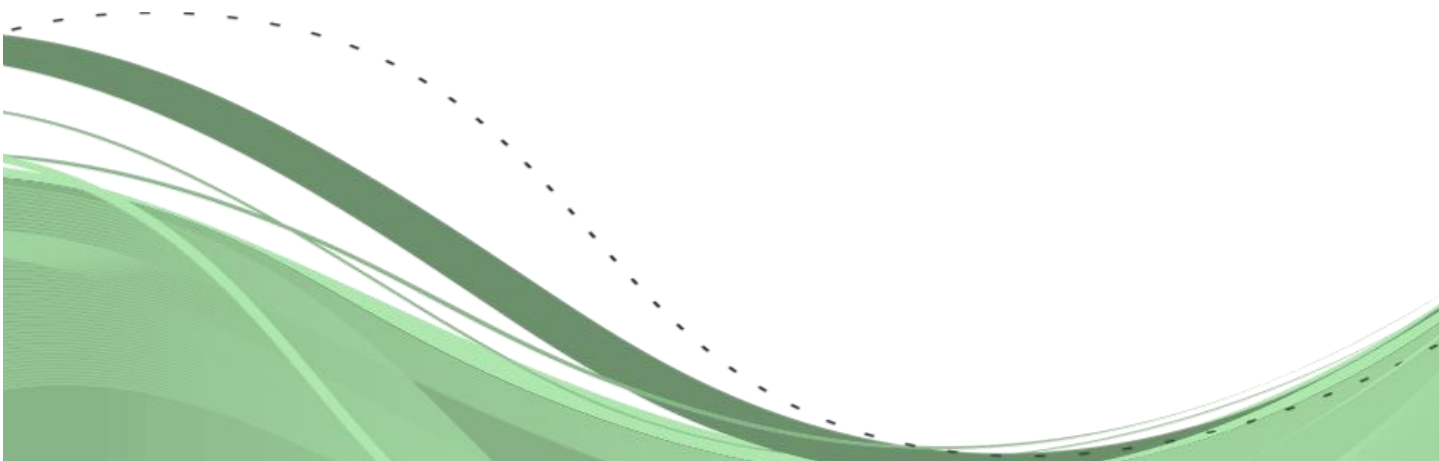


**Figure 3. Some high-value products from side streams**

In the next months the final decision will be made regarding the demonstration projects that will be executed. These will bring the mills in the consortium one step closer to a conversion into multiproduct mills, while at the same time will showcase how the REFFIBRE models can predict the impact of such innovations on the paper and board characteristics, as well as their environmental and economic impacts.

### **Knowledge sharing**

The REFFIBRE meeting took place at the same venue where our local host Bumaga BV organized a workshop on “Added value and customer value” for the Dutch paper and board industry. This was arranged in such a way so as to provide the chance for members of the REFFIBRE consortium to share some of their expertise with the Dutch workshop participants as well as networking opportunities during lunch.



The REFFIBRE team also visited Schut Papier for a closer look at the operations of the Dutch paper and board industry. Schut Papier is a Dutch paper mill and a leading manufacturer of high-quality uncoated paper. The mill is known for its versatility, since they are able to make custom products to the exact specifications of their clients. Schut Papier's policy is very much in line with the goals of REFFIBRE, as it develops innovative programs to use fibres from waste streams for bio-based paper products.



Figure 4. Snapshot from the visit at Schut Papier

### Follow the developments in REFFIBRE

The results of both the modelling work and the pilot trials will be published later on the REFFIBRE webpage ([www.reffibre.eu](http://www.reffibre.eu)).

