

Consortium Model factory paper

Content

1. The consortium
2. Model factory paper
3. Fields of innovation
4. The bridge between research and industry
5. Roadmap
6. Need for support

The consortium

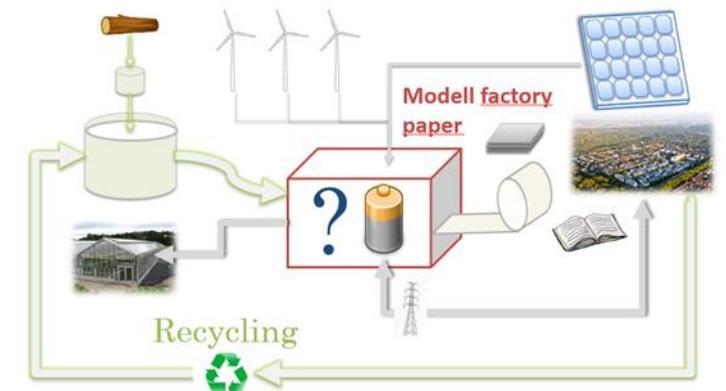


Model factory paper

The pulp and paper industry is among the first to develop strategies for the challenges of the future (CEPI Roadmap 2050 [2011], Fiber & Paper 2030 [2015], FTP-CEPI Vision 2040 [2018]).

The model factory paper is intended to realize essential points of these strategies.

- From 2020, paper production is to be rethought in the model factory
- Joint pre-competitive research, supported by industry, institutes and universities
- Integrate paper production into future urban symbiotic industrial ecosystems
- Develop disruptive technologies and processes that replace today's technology
- Advancing and expanding the bioeconomy across sectors
- Research and develop sustainable paper production in all its facets



Fields of innovation

The model factory paper focuses on a number of thematic priorities:

- Minimization of raw material and energy losses by closing circuits in the use of water, raw materials, electrical energy and steam.
- Create an energy ecosystem for future primary energy sources.
- Development of processes and technologies for the production of paper products that are safe in the interests of the consumer, produced resource-efficiently, fully recyclable and biodegradable.
- Use of artificial intelligence to describe and predict material behavior throughout the product lifecycle.

The bridge between industry and research

- The disruptive development of climate-neutral paper production is too big for one party alone
- Results from research and universities should arrive faster in the industry
- The task is complex, the model factory brings the necessary different competences together
- The model factory paper offers pre-competitive knowledge to other industries and looks for solutions from other industries
- The model factory paper offers a neutral platform for open innovation projects to interested partners
- The model factory paper works at the interface to the energy industry and other energy-intensive industries on the topics of energy production and storage as well as synergetic use
- Examples: Use of waste heat from paper production for greenhouses (RTT); Conversion of steam generation to hydrogen as a primary energy source

The model factory paper builds the bridge between industry and research as well as other sectors with the same challenges to the disruptive development of climate-neutral paper production!

Roadmap

By the end of 2019:

- Form consortium and finalize consortium agreements
- Describe concept, develop budget and set up financing
- Acquire sponsors and funding
- Create management structures
- Create the innovation roadmap of the model factory
- Prepare utilization and processing concepts

From 2020:

- Plan, build and commission the model factory
- Operate for at least 10 years with the support of the consortium
- Operate as an open-innovation-platform for project-based research and development work

Need for support

- The consortium model paper factory needs start-up financing for the planning, construction and commissioning of the model factory
- The total cost will be € 10 million by the time the model factory paper is operating
- Of which, the consortium will contribute € 2 million through investments and other equipment
- The financial framework is estimated at € 8 million by the time the model factory is operating
- The consortium will provide € 1.5 million from its own resources until the commissioning of the model factory
- € 6.5 million is needed for the start-up financing to construct the model factory
- The ongoing operation of the model factory is covered by contributions from consortium partners and sponsors as well as project-related research and development grants
- The consortium welcomes a consideration in the ETS Innovation Fund to support the start-up financing