RAIZ

Forest and Paper Research Institute

TECHNOLOGICAL SCOUTING NEWSLETTER

December 2019

Highlights

UTAD establishing a new network of pilot forests

Biorefinery related projects and products by Stora Enso, Suzano, Borregaard, BillerudKorsnäs and Södra, from bio-based plastics, biocomposites to packaging and lignin

Contents

Services Provided by RAIZ Technological Scouting:

Technological Scouting Newsletter (monthly)

Technological Scouting On Demand (specific technological issues, upon request)

Industrial Property (IP) Survey (quarterly)

For further information please contact: mariana.oliveira@thenavigatorcompany.com

UTAD: new network of pilot forests

The University of Trás-os-Montes and Alto Douro (UTAD) is part of the European project ForManRisk which, with € 1.5 million, intends to implement a network of pilot forests in the Southwestern European territory to experiment with new regeneration and risk management techniques. The project also aims at the development of forest management tools to improve fire risk prevention and optimize the coordination and efficiency of operations. The project will be implemented by the end of 2022.

Read more ➢ ECO

Forest

photo: MADERA21

Start-up TTC Systems: tool to measure forest inventory in an automated way

The Chilean start-up has developed the "Stock Control App" which allows the measurement of forest inventory through mobile devices without the need for an internet connection, minimizing the time of the process and ensuring accuracy in the calculation. The technology captures the information through a photographic shot with a mobile device, which is processed by the software, delivering values of volume, quantity of pieces and diametric distribution. This reduces the time and risks of doing so on the ground, as well as the error and loss of information, along with obtaining documentation of inventory tests for corroboration and audits. In addition, the application does not need an Internet connection, so it is perfectly usable in the forest properties, providing information on hundreds of piles of pieces in a short time.

Read more ➢ MADERA21

Forest

Domsjö Fabriker: new demo scale plant for production of hemicellulose copolymers

The Swedish Domsjö Fabriker is establishing a demo scale plant for production of the hemicellulose copolymers developed and patented by Ecohelix, a Stockholm start-up developing hemicellulose copolymers with high amount of functional groups, excellent barrier properties and low viscosity. Typical applications include various pulp and paper chemicals, in formulations for gas and grease barriers and in cosmetics. The two companies are already cooperating on a pilot scale plant located at the Domsjö Fabriker Mill, used to verify the raw material, the process, the products and producing sample materials for potential customers. The results and the feedback from the customers are already very promising, confirming the need for a larger demo scale plant.

Read more ➢ PaperFirst

- Technological
- Product Development

photo: Stora Enso

Stora Enso: pilot plant for bio-based plastic packaging material

Stora Enso is investing 9 million EUR to build a pilot facility for the production of bio-based plastics as barriers in transparent packaging. The pilot plant will help the development of a cost-competitive process for manufacturing furandicarboxylic acid, FDCA, from sugars, which is a key component of the bio-based barrier material polyethylene furanoate, PEF. Stora Enso's pilot aims to validate the chemical process and to provide sample materials for gaining further insights into market and product demand. The new pilot project will be run by Stora Enso's Biomaterials division at its Langerbrugge paper mill.

Read more ➢ Cision

- Technological
- Product Development

BIOREFINERY

photo: Borregaard

Norske Skog and Borregaard: new collaboration on biocomposites

Innovation Norway is providing 17 million NOK for the research and development of fiber composites to Norske Skog Saugbrugs and Borregaard. The two companies will work on the development of a new type of biocomposite for different applications, including furniture, packaging and car interiors. The research efforts will focus on the selection of plastic raw materials, fiber blending, technology development and testing of biocomposites.

Read more ➢ Norske Skog

Technological
Product Development

photo: BillerudKorsnäs

BillerudKorsnäs: new environmentally friendly barrier paper for food packaging

BillerudKorsnäs is launching Repel Pure, a 100% primary fibre paper where the grease-resistant barrier is plant-based and totally biological, replacing the commonly used paper based packaging containing a treatment of non-decomposable high-fluorinated chemicals.

Read more ➢ RISI

Technological
Product Development

BIOREFINERY

Södra: 8 million SEK for resource efficiency

The Södra Research Foundation is granting 8 million SEK to 7 research projects concerning topics ranging from the core products and processes of the forest industry, to new innovations in the use of forest byproducts. The projects consider, for instance, the development of a new drum-chipping technology for the pulping process, the increased utilization of spruce for sustainable façades, the development of bio-based surface treatments for wood, the digitalization of timber drying processes, the production of carbon fibre from kraft lignin and cellulose, porous materials for medical use, and a new process for the extraction of vanillin and vanillic acid from lignin.

Read more ➢ Södra

Technological
Product Development

Suzano: lignin Ecolig

Suzano has created a new webpage for marketing its certified eucalyptus lignin and derivatives, branded as Ecolig. Several applications are as well shortly described, such as in rubber composites formulations, in phenolic resins, in thermoplastics, and as dispersants for the construction sector.

Read more ➢ Suzano

Technological
Product Development

I4.0

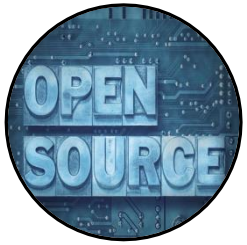


photo: TechRepublic

Open source and its benefits for companies

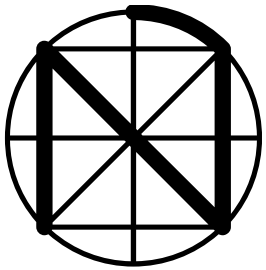
The 2010s were the years when open source began to drive most every modern technological innovation. From cloud to mobile to big data to data science, open source has been at the heart of these and other mega trends since 2010 and, as such, has encouraged contributions from the most different sources. With a high interoperability (exists or can be created with new features), with a concept of community between the worlds of business, research and academia, providing cost reduction in licensing, and the code being open and free there is a community of thousands, millions (project dependent) who discover and correct errors and redistribute to everyone for stability and continued security, open source is expected to continue to shape the next decade technical evolution.

Read more ➢ TechRepublic | CNBC

Technological
Forest

RAIZ – Forest and Paper Research Institute
Quinta de S. Francisco, Apartado 15, 3801-501 Eixo
Tel: +351 234 920 130, Fax: +351 234 931 359

mariana.oliveira@thenavigatorcompany.com



PART OF
THE NAVIGATOR COMPANY