

RAIZ



Forest and Paper Research Institute

**TECHNOLOGICAL
SCOUTING NEWSLETTER**

September 2021

Highlights

- The packaging segment is the main subject of this newsletter, from moldable paper to new barrier and film solutions.



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- VTT: new packaging film

Services Provided by RAIZ Technological Scouting:

Technological Scouting Newsletter (monthly)

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

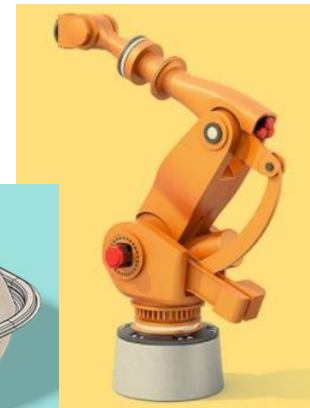
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START-UP OF THE MONTH



The USA based start-up Zume has re-commissioned its fleet of pizza-making robots to develop, as they claim, the world’s most advanced molded-fiber manufacturing system for solutions and services across the food, beverage and healthcare areas. Zume products include meal boxes, bowls and beverage cups. They’re made of moldable fibers like sugarcane, bamboo, wheat and blends of various grass fibers. Zume has now partnered with Solenis to open-source a PFAs-free food packaging replacement for food packaging manufacturers (as detailed in slide 5).

Read more > [Zume| Video](#)



PACKAGING



Metsä

Metsä: award for its 'smarties giant hexatube'

Metsä Board was the winner of the Award for General Packaging of the European Carton Excellence Awards with the 'Smarties Giant Hexatube'.

It is a plastic-free pack, comprised of a one-piece construction made entirely from recyclable paperboard with an integrated cartonboard lid. The carton was produced with MetsäBoard Pro FBB Bright lightweight paperboard.

Read more > [Metsä](#)

● Technological
● Product Development



Metsä

Metsä: 100% recyclable paperboard lid

Metsä and the Finnish start-up The Paper Lid Company had developed a 100% recyclable paperboard lid for use in takeaway cups. The lid is made from fully recyclable dispersion barrier board and is suitable for use with both hot and cold drinks. It uses the technology developed by The Paper Lid Company making possible to turn the paperboard into the desired shape. The result is a one-piece lid that clicks firmly in place and offers performance that is comparable to that of a traditional plastic lid.

Read more > [Metsä](#) | [Video](#)

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Zume

Solenis and Zume: new molded fiber packaging opportunities

Solenis has partnered with Zume, a USA molded fiber producer, for the development of non-plastic and PFAs free food and consumer packaging. In fact, the companies have open-sourced the recipe and method for manufacturing, for encouraging any manufacturer in the world to start using this technology as quickly as possible.

Read more > [Solenis | Open- Source Report: Putting Forever Chemicals to Rest: An Open-Source Guide to PFA-free Packaging](#)

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Pulpac

Pulpac & RISE & AR Packaging: upscaling and dissemination

The Swedish start-up Pulpac, which has developed a patented technology for moulding cellulose into hard, durable packs, for replacing single-use plastics, along with AR Packaging and RISE, will start a new project, supported by the Swedish Innovation Agency, for developing and to commercially validate ten standardized product concepts within different packaging and single-use applications.

A rapid upscaling and dissemination of Pulpac's patented Dry Molded Fiber technology with ready to use and validated designs is expected. RISE will validate products' recyclability, biodegradability and compostability.

Read more > [RISE](#)

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Paper Advance

Ahlstrom-Munksjö: mono-material oxygen barrier technology

Ahlstrom-Munksjö has released a mono-material oxygen barrier technology made of 100% cellulose fibers, the PureBarrier™. Additionally, it presents gas barrier properties as well as natural wet strength. It is naturally grease resistant, does not contain any loose fiber or added chemicals, and can be made heat sealable with a biopolymer. Based on Ahlstrom-Munksjö's technology for producing vegetable parchment, it can work as a replacement for plastic or aluminum in barrier packaging.

Already commercialized as coffee capsule lids and brewing materials for espresso systems. Currently being evaluated for other nonfood applications like Health & Beauty products.

Read more > [Paper Advance](#)

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Holmen

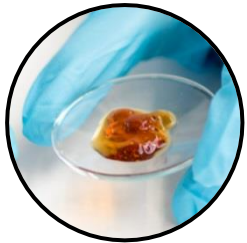
Holmen Iggesund: paperboards coated with a new barrier solution

Holmen Iggesund announced the launch of paperboards coated with "Bio E", a barrier coating solution made from 75 % renewable raw materials and approved for industrial composting. This bio-based coating is both liquid and grease resistant. Bio E is offered in combination with several of Holmen Iggesund's paperboards, fulfils European and US FDA requirements for food contact, being suitable for all kinds of food packaging. Bio E is also approved for use in microwave ovens.

Read more > [Holmen](#)

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PACKAGING



Forest.fi

VTT: new packaging film

VTT Technical Research Centre of Finland Ltd, Häme University of Applied Sciences HAMK and Aalto University have been working on combining birch nanocellulose and willow bark extract for producing a new packaging film. The components of willow bark are embedded into a net-like matrix made of birch nanocellulose, forming a gel-like but strong structure which, in addition to other properties, is antioxidant. The nanocellulose forms the structural support for the chemically active willow bark extract.

Read more > forest.fi

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PAPER BASED PRODUCTS



Sappi

Sappi: RFID chips embedded paper

Sappi with ISBC, a Singapore based company producing Radio-Frequency Identification (RFID) based products, has developed the ISBC® RFID Paper, made with 100% fibre-based Swiss Matt paper substrate from Sappi. RFID chips are embedded into the paper sheets causing no effect over the paper surface, remaining flat and smooth and easy to print. The desired information can simply be transferred to the paper-embedded RFID chip, for which ISBC has developed a special encoding machine. Foreseen applications are for business cards, postcards, stickers, promotional flyers, access & loyalty cards, brand protection labels and diplomas.

Read more > [Sappi](https://sappi.com)

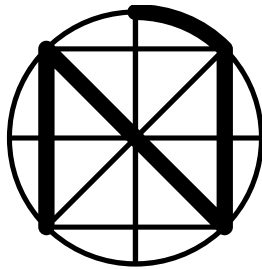
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