



Press release

Avantium joins the Paper Bottle Project

AMSTERDAM, 11 October 2019, 07:00 CET – The Paper Bottle Company (Paboco®) - a joint venture between paper packaging material developer BillerudKorsnäs and bottle manufacturing specialist ALPLA - today announces at the Paboco Pioneer Community Event in the Carlsberg Academy in Copenhagen that Avantium joins the Paper Bottle Project. Avantium will be one of the technology providers for the fully plant-based and recyclable Paper Bottle. A thin layer of Avantium's PEF (polyethylene furanoate) will provide the Paper Bottle with the high barrier properties (the ability to withstand gas permeability through the bottle) needed for beverages such as beer and carbonated soft drinks.

The Paper Bottle Project is an innovation community joining some of the world's leading players in materials, design and technology. In 2015 the large brewery Carlsberg Group joined the Paper Bottle Project, followed by leading brand owners such as cosmetics manufacturer L'Oréal, global spirits company The Absolut Company, soft drink company Coca-Cola Europe and global coatings company Teknos. The Paper Bottle Project now runs as its own business, name and brand – Paboco®, the Paper Bottle Company.

The Paper Bottle is the first of its kind for beer, carbonated and still drinks, beauty products and more. The Paper Bottle is using renewable paper to build strength and structure, supported by a barrier solution being Avantium's PEF. PEF is a 100% plant-based and recyclable polymer that can be applied to an enormous range of applications, including packaging of soft drinks, water, alcoholic beverages and fruit juices. PEF's barrier and thermal properties are superior to conventional PET. In combination with a significantly reduced carbon footprint, the added functionality gives PEF all the attributes to become the next-generation polyester.

It is possible to fully recycle the Paper Bottle by separating the paper and PEF. By separation, each layer becomes a mono-material returned to the recycling stream. Development work of the Paper Bottle with the PEF layer is in progress. The focus will be on building experience with our Pioneer Brands, and look to 2020 to start controlled testing.

"Participating in the Paper Bottle Project and collaborating with like-minded companies within the Paboco Pioneer Community – from bottle manufacturers to consumer brands – on developing new sustainable packaging material is a great opportunity for Avantium. It is a milestone in the development of high-value applications such as specialty bottles. The Paper Bottle shows how we, together with partners, can use innovation to help shape packaging for a circular and sustainable future," says Marcel Lubben, Managing Director Avantium Renewable Polymers.





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About Avantium

Avantium is a leading technology development company and a forerunner in renewable chemistry. Avantium develops novel technologies based on renewable carbon sources as an alternative to fossilbased chemicals and plastics. The company currently has three technologies at pilot and demonstration phase. The most advanced technology is the YXY® plant-to-plastics-technology that catalytically converts plant-based sugars into a wide range of chemicals and plastics, such as PEF (polyethylene furanoate). Avantium has successfully demonstrated the YXY Technology at its pilot plant in Geleen, the Netherlands. The second technology is the Dawn Technology™ that converts non-food biomass into industrial sugars and lignin in order to transition the chemicals and materials industries to non-fossil resources. In 2018, Avantium opened the DAWN pilot biorefinery in Delfzijl, the Netherlands. The third technology is called Mekong and catalytically converts industrial sugars to plant-based MEG (monoethylene glycol). Avantium is currently building a new demonstration plant for Mekong with an opening planned in Delfzijl by November 2019. Next to developing and commercializing renewable chemistry technologies, the company also provides advanced catalysis R&D services and systems to customers in the refinery and chemical industries. Avantium works in partnership with like-minded companies around the globe to create revolutionary renewable chemistry solutions from invention to commercial scale.

Avantium's shares are listed on Euronext Amsterdam and Euronext Brussels (symbol: AVTX). Its offices and headquarters are in Amsterdam, the Netherlands.

About Paboco

Paboco, the paper bottle company, is a joint venture between paper packaging material developer BillerudKorsnäs and bottle manufacturing specialist Alpla, grown from the start-up and innovation expert EcoXpac. Together with leading brand owners, we run the paper bottle project, an innovation community aiming to provide consumers with a fully bio-based and recyclable paper bottle, an alternative that ultimately will change the industry and impact the environment for good.

For more information:

Caroline van Reedt Dortland, Director Communications, Avantium +31-20-5860110 / +31-613400179, caroline.vanreedt-dortland@avantium.com