



PRESS RELEASE

Circularise and Porsche collaborate with Borealis, Covestro and Domo Chemicals to enable the traceability of plastics in the automotive sector

- **Circularise and Porsche together with the pioneering material suppliers Borealis, Covestro and Domo Chemicals launched a blockchain traceability project as part of the Startup Autobahn program**
- **By digitizing materials Circularise was able to create a digital thread through the whole supply chain leading to tracing materials and CO₂ footprints.**

Stuttgart/The Hague/Vienna/Leverkusen/Ghent, November 3, 2020 - Circularise, the blockchain supply chain transparency provider, as part of the Startup Autobahn innovation program, recently launched a project with Porsche and its pioneering material suppliers – Borealis, Covestro and Domo Chemicals – to enable the traceability of plastics on blockchain and to ensure that the use of sustainable materials in Porsche cars can be proven. By digitizing materials Circularise was able to create a digital thread through the whole supply chain, enabling material traceability, tracking the CO₂ footprint and other sustainability metrics like water savings.

Getting information from supply chains has always been a challenge. Not only because of the inherent complexity of the supply chains and the multitude of suppliers, but also due to concerns around trust, privacy and confidentiality. That is why blockchain is offering such a fitting solution to transparency challenges in supply chains. “We believe transparency should not come at the cost of reduced privacy and confidentiality. That is why we developed our patent pending technology for creating verified statements on public blockchains without revealing any underlying sensitive data. While this raw data is very valuable in a B2B setting, consumers demand a more distilled and interactive version. We are proud to present exactly that in collaboration with Porsche and some of their pioneering suppliers,” says Mesbah Sabur.

Porsche has a large number of suppliers providing parts to its cars but it doesn't stop the company looking for more information about the materials that go into its cars. According to Antoon Versteeg, Project Lead Innovation Research at Porsche, “We need to know more details on the parts and materials being used in our products, that means information on production processes deep down the supply chain, statements of recycled content and more. With the help of Circularise, as well as with the help of their partners we were able to trace for a number of specific cases plastics from raw material production to the final car.”

A number of suppliers who can deliver sustainably produced materials for the automotive industry were involved in this project to realise the final outcome. Each batch of material was digitized on the blockchain receiving a digital copy called digital twin. The digital twin carries all relevant information regarding the batch, such as its environmental footprint and origin. This digital thread created transparency between project partners leading to an improved supply chain collaboration.

This also offers great advantages to the material manufacturers. According to Thomas Nuyts, Director of Global Product Management at Domo Chemicals, “as leader in the production of sustainable polyamides, we at Domo can only gain by making the supply chain more transparent. By tracking our materials, we will make a huge step ahead in supporting the automotive industry in its sustainability challenges. Besides providing recycled solutions from current sources we also aim to enlarge this loop and find new raw materials for our products to meet the mobility needs of today and tomorrow.”

However, the companies cannot simply create a digital twin. First, the batch of materials needs to be audited by an independent third party to verify that the material and related claims are true. “Verification is essential. Even with a supply chain involving blockchains we want independent auditors for our system. And this is how we gain the trust and confidence of all our value chain members. Several years from now, after these systems are in place on a wider scale, things will have been standardized. For now, it’s still early days. Auditors and certifications are essential to ensure that no one can engage in greenwashing. But we really need to pick up the pace as we keep moving towards more circularity,” says Christopher McArdle, Borealis Vice President Polyolefin Strategy and New Business Development.

Once the materials are digitized, the parties along the supply chain can now update the digital twin mimicking the physical supply chain and reflecting the manufacturing processes along the lifecycle of the product. Due to Circularise’s “Smart Questioning” technology this process can happen while preserving everyone’s privacy regarding their identity and business relations and protecting confidential information.

Burkhard Zimmermann, Head of Resin, Digital Transformation & Sustainability at Covestro’s Polycarbonates segment: “For us, it is really important to share information and be more transparent while maintaining confidentiality. For instance, the material composition is of competitive advantage so we would never share that openly. Here, Circularise helps us to maintain this confidentiality and only disclose the information needed from raw material producer to recycler. And with that, we can close the loop.”

Not only this approach helps car manufacturers to make better decisions for the next generations of vehicles and support end-of-life recycling approaches, it also helps final consumers to learn more about their vehicle and its origins, enabling them to make more sustainable choices. Ultimately reducing the environmental impact across the whole value chain.



Porsche and Circularise launch blockchain traceability project in cooperation with Borealis, Covestro and Domo Chemicals | Photo Courtesy: Circularise



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About Porsche AG

Porsche AG is a German automobile manufacturer specializing in high-performance sports cars, SUVs and sedans. The headquarters of Porsche AG is in Stuttgart, and the company is owned by Volkswagen AG, a controlling stake of which is owned by Porsche Automobil Holding SE.

<https://www.porsche.com/>

About Circularise

Circularise founded in 2016 and based in The Netherlands helps plastic manufacturers, brands and OEMs to trace raw materials from source, into parts and ultimately to end products. The company uses blockchain and other emerging technologies to enable companies share data about their products while retaining privacy over sensitive information.

<https://www.circularise.com/>

About Borealis:

Borealis is one of the world's leading providers of advanced and circular polyolefin solutions and a European market leader in base chemicals, fertilizers and the mechanical recycling of plastics. We leverage our polymers expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries. In re-inventing for more sustainable living, we build on our commitment to safety, our people and excellence as we accelerate the transformation to a circular economy and expand our geographical footprint.

With head offices in Vienna, Austria, Borealis employs 6,900 employees and operates in over 120 countries. In 2019, Borealis generated EUR 8.1 billion in sales revenue and a net profit of EUR 872 million. OMV, the Austria-based international oil and gas company, owns 75% of Borealis, while the remaining 25% is owned by a holding company of the Abu-Dhabi based Mubadala. We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with the Abu Dhabi National Oil Company, or ADNOC, based in UAE); and Baystar™ (with Total, based in the US). www.borealisgroup.com | www.borealiseverminds.com

About Domo Chemicals

DOMO Chemicals is a leading producer of high-quality engineering nylon materials for a diverse range of markets, including the automotive, food, medical, pharmaceutical, chemicals and electronics industries. The company offers a complete portfolio of integrated nylon 6 and 66 products, including intermediates, resins, engineering plastics, performance fibres, packaging film and distribution of petrochemical products. Headquartered in Germany, the family-owned company leverages advanced technology and consumer insights to deliver sustainable & innovative solutions. DOMO generated 2019 sales over EUR 900 million and employs in 2020 approximately 2200 employees worldwide.

www.domochemicals.com

About Covestro

With 2019 sales of EUR 12.4 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the

development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 17,200 people (calculated as full-time equivalents) at the end of 2019.

www.covestro.com.

Forward-looking statements

This news release may contain forward-looking statements based on current assumptions and forecasts made by Circularise, Domo and Covestro AG. Various known and unknown risks, uncertainties and other factors could lead to differences between the actual future results, financial situation, development or performance of the company and the estimates given here. The companies assume no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

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