



WHAT IS DISCARDED TODAY, BECOMES THE PRODUCT OF TOMORROW

The reuse of materials that were once considered waste **creates new job opportunities and local development**, while reducing the need for the extraction of virgin raw materials, preserving the planet's natural resources.

Born Recycled goes beyond a simple design project. It is a production philosophy that values the **connection between industry and the environment**.

BORN
RECYCLED

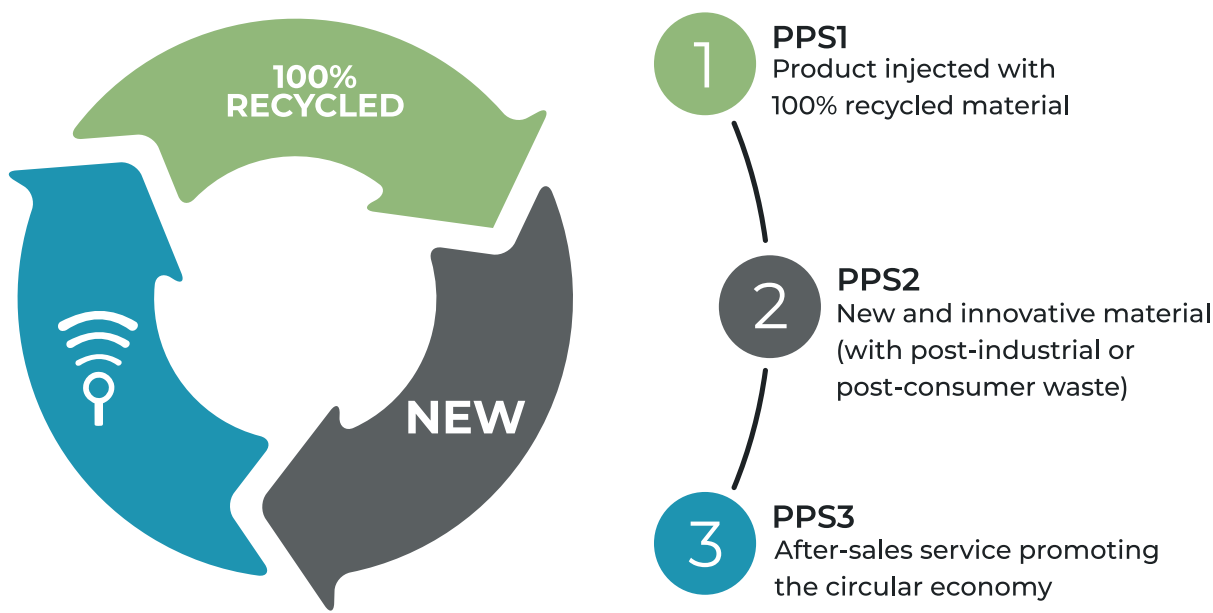


The History of the Born Recycled Project

Nautilus, a pioneering company in the **field of education**, seeks solutions that go beyond the ordinary, with a special focus on **Sustainability and Circular Economy**.

With this vision in mind, and with the strategic collaboration of Fibrenamics, the Born Recycled project was born – an ambitious program aimed at transforming waste into new products, integrating sustainability at every stage of the production process.

Born Recycled was conceived with a clear goal: to create a closed-loop sustainable production cycle, where **discarded materials are given new life** and become part of durable and innovative products. The premise of the project is the use of waste from different production sectors of the company, such as polymeric materials (in both pre- and post-consumer phases) and woodworking waste, also combined with waste from other industrial sectors (notably slate, which evokes a nostalgic memory of school). These materials, which would often end up in landfills or incinerators, are carefully reintegrated into the production process, maximizing their value and drastically reducing the environmental footprint.



The Injection Molding Process: 40% Recycled Polymer

In the initial phase of the project, the focus is on developing a material for the injection molding process that uses **40% recycled polymer**. The polymer material, derived from post-consumer products and pre-consumption industrial waste, is processed and transformed into pellets, which are then mixed with woodworking waste and slate, also treated and transformed into pellets. The **main challenge** is ensuring that this **mixture maintains its mechanical properties** without compromising the aesthetics and quality of the final product.

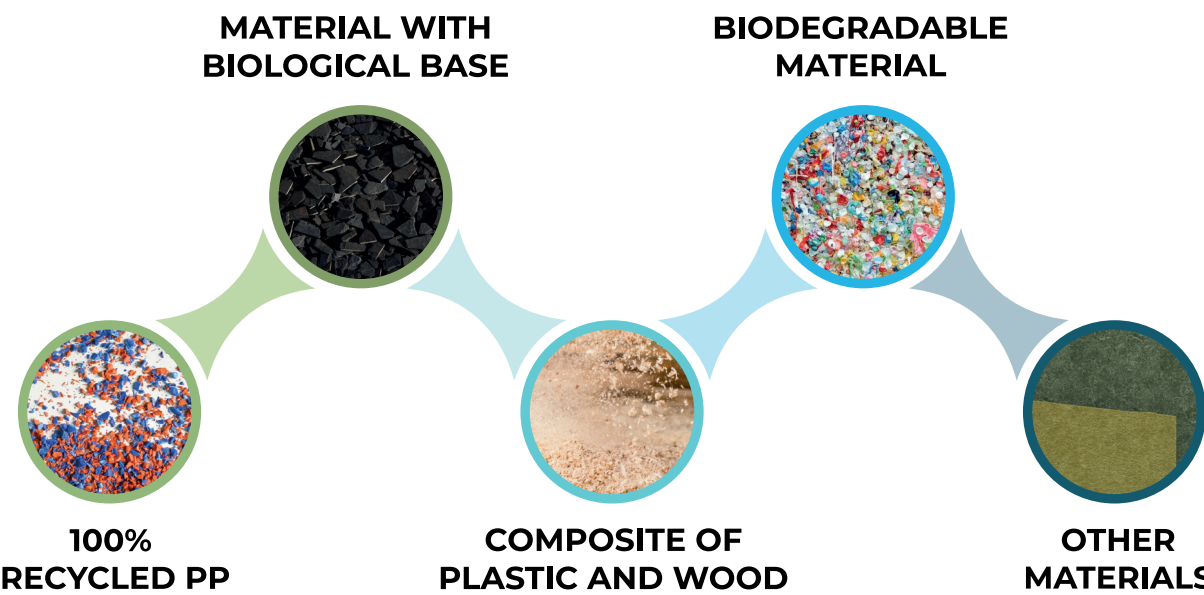
The Compression Molding Process: 80% Recycled Polymer

At the same time, the team of engineers and designers is also working on creating the same material, but more suited for the compression molding process, incorporating an even higher percentage of recycled polymer. The **goal is to achieve 80% recycled polymer** in the composition of the new material.

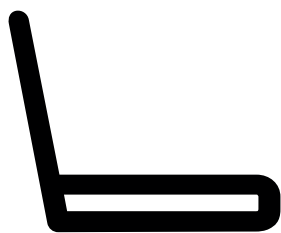
Compression molding allows for greater flexibility in integrating large amounts of recycled materials with different granulometry, resulting in products with a unique aesthetic, where the textures and colors of polymer, wood, and slate waste create distinctive surfaces.

Sustainability in Born Recycled goes beyond the simple reuse of materials. Nautilus and Fibrenamics have adopted a holistic approach, where every stage of the product lifecycle is designed to minimize environmental impact. From the selection of materials, through the manufacturing process, to the disposal of raw materials – everything has been designed to ensure that the least amount of waste possible is generated.

The products created within the scope of the project will be 100% recyclable. At the end of their lifecycle, they can be disassembled, separated, and reintegrated into the production cycle, closing the loop in a continuous and sustainable manner. This concept, known as 'cradle-to-cradle,' is the foundation of the future vision driving the Born Recycled project.



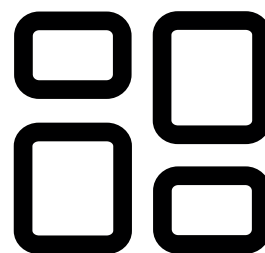
Possible New Products



CHAIR SHELL



DESK TOP



ACOUSTIC PANEL

Lifecycle of Born Recycled Products

In the Born Recycled project, the lifecycle management of products is carried out through the incorporation of information technology that allows the registration of data about the origin of materials, manufacturing processes, technical specifications, recycling instructions, and other information, functioning as a digital passport for each product.

When the product reaches the end of its lifecycle, the information in the digital passport facilitates the identification of components to be reintegrated into the production cycle, aligned with the previously mentioned 'cradle-to-cradle' concept. This technology thus enables complete and secure traceability, ensuring the sustainable circularity of each product produced, reinforcing the environmental commitment of Nautilus and Fibrenamics.



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