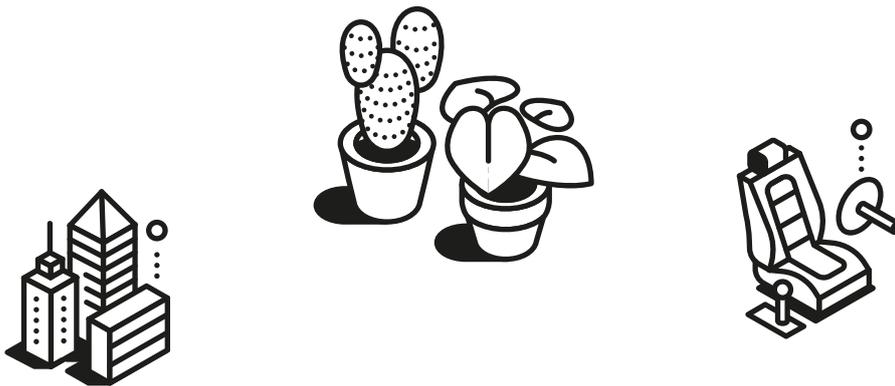


Pioneers in sustainable interior design - Rattan is set to disrupt an industry

A project between Motherson and out for space



The call for sustainability in the automotive industry is nothing new. According to figures from the German Federal Motor Transport Authority (KBA), around 194,200 passenger cars with purely electric drives were registered in 2020 – an all-time high. Compared to the previous year, this corresponds to a tripling of the number of registrations. 2021 also started with a significant increase of 117.8 % compared to the same period of the previous year.

While there is a clear trend towards greener mobility, one question remains: Can a car truly be green if the cabin is coated in leather and plastic? [EDITOR: JOHANNES DALHEIMER](#)

As one of the leading suppliers of automotive interior parts such as cockpits, instrument panels, centre and floor consoles, the Motherson Group has long recognised this dilemma. Driven by the advanced engineering team, new approaches are constantly being developed on how closed-loop systems can be realised to meet the demand for green mobility **■**.

Did you know?

Plastics represent only about 10% of the weight of today's vehicle but about 50% of the volume.

In recent years, various materials and concepts have been developed in the automotive industry, which attempt to meet these requirements. These range from carpets made from old fishing nets to lab-grown leather for dashboards and seat covers made from cork-like materials.

A completely new approach is provided by the German startup out for space. With their **rattan**  wood material called karuun®, they have the potential to usher in a new era of sustainable decorative materials.

out for space is offering a **hardware** solution that allows its customers to **shape an eco-friendly future**.

out for space is **transforming Rattan's natural structure into a material which is both versatile and innovative** by taking advantage of its **3D deformability, translucency, sound absorption, light weight and homogeneous fibre structure**.

out for space aims to off-take its competitors by **transforming Rattan's natural structure into a material which is both versatile and innovative**. Without **karuun®**, customers would **use artificial composite materials**. This would **not fulfil the requirements of the increasing customers need for social and ecological responsibility and thus running the danger of having to pay an image loss**.

out for space first caught Mother'son's eye at Startup Autobahn in Stuttgart in 2020. The idea of the collaboration arose from the intention to develop a surface that, in combination with sensors and backlighting, provides for smarter and more **sustainable**  vehicle interiors.

karuun® is ideal not only because of its technical properties such as low weight. This new material is also at the cutting edge in terms of preserving the rainforests, which form the largest CO2 reservoirs on earth. Rattan relies on biodiversity and cannot flourish in a monoculture, so supporting its cultivation actively helps preserve the planet's rainforests and gives the local community a sustainable income.

The Project

In the first step, the material parameters were defined. The difficulty was, on the one hand, to achieve material properties that allow complex shapes without tearing. On the other hand, the thickness

Rattan

A climbing palm which grows quicker than trees and whose cultivation provides significant advantages over other types of wood and non-timber products.

out for space

Headquarters

Kisslegg, DE

Founded

2015

No. of Employees

1 to 10

Website

www.karuun.com

Sustainability

Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

of the material had to be minimised to allow for haptic feedback.

karuun® comes with a natural fibre structure, that lends the material its all-important pliability; the combination of capillary treatment and a special nonwoven viscose fabric ensures that the innovative surface boasts unprecedented three-dimensional **formability** .

Formability, lightweight and light & sensors
transparency are the main USPs of karuun® – Motherson

Paired with the manufacturing engineers' expertise, spherical objects can be produced without having to worry about splintering. These kinds of material properties were only possible using artificial composite materials in the past.

After successfully passing various load and function tests, two prototypes were created which were integrated into the existing smartboard. The smart surfaces developed in collaboration between Motherson and out for space include two types of sensors and intelligent lighting systems.

The Outcome – what's next?

The prototypes developed certify karuun®'s suitability for the use as a smart surface. The material is currently being tested in detail to enable the integration of other types of sensors. If these test cycles also deliver positive results, Motherson plans to expand the field of application for karuun® within its interior product portfolio.

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About STARTUP AUTOBAHN

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