CFRP bridge on the island of Rügen

- High weather resistance and durability
- Cost-effective transport and assembly due to lightweight segments (1.4 tons)
- Construction and maintenance cheaper than conventional bridge
- sustainable solution with high CO2 savings

Possible fields of application

The problem

Conventional reinforced concrete bridges have only limited resistance to weathering and are therefore subject to regular, cost-intensive maintenance intervals. Furthermore, the high dead weight limits the load capacity and often also leads to a costly installation.

The idea

With the same design, a CFRP bridge can span a distance up to four times greater than a comparable bridge made of conventional reinforced concrete. This is due to the high stiffness and much lower weight of carbon fiber compared to steel. Compared to steel, CFRP is also corrosion-free.

The solution

Sassnitz on the island of Rügen now has a 25 m long pedestrian bridge made using CFRP bracing technology from BaltiCo GmbH. Due to the comparatively low material requirements and high durability, this bridge is more cost-effective and environmentally friendly than comparable reinforced concrete bridges in all areas of the product life cycle.