REAL 5G.

ROHACELL® IS A CLEAR CHOICE.

Corebon – Skiers designing skis was just the beginning of their story.
Founded in 2003, Corebon knows all the secrets to designing and producing superior alpine skis. Started by skiers who also had a background in production, they knew there were better and more efficient ways to produce their composite ski products. Thus began their search for new technologies to make possible the improvements they desired, but knew could not be achieved with existing, traditional methods.
What they uncovered were not only new processes for more efficient ski production, but also a new opportunity to use their production technology know-how to produce advanced antenna products for the 5G revolution. Today, they are continuing to develop efficient composite production technology with benefits for many other product industries.

We sat down with **Tobias Björnhov, CEO of Corebon** (Malmö, Sweden) to talk about how and why it all began, the reason they use Evonik's ROHACELL® foam, and where the future of 5G communication is going:

When did you first begin working with Evonik?
Tobias Björnhov (TB): Corebon and Evonik first met when our primary focus was on producing alpine skis, but we were also exploring prototype robotics production at that time. We suspected the materials and tools needed to produce our skis could translate to efficient production of other products. We were right, and we soon discovered Evonik was the right partner for innovative material solutions, like ROHACELL® foams.

What is special about the production process you developed?
TB: Corebon's process is unique because it combines novel technology with established processes to create a production method that allows for high levels of accuracy and fast, repeatable cycles. The processes were developed internally and the systems combine speed, uniformity and repeatability in the production of composites. We've been able to reduce production times in certain industries by at least a factor of 4. This is the big breakthrough that the composites industry has been crying out for.

Why is 5G, or the IoT (Internet of Things), an attractive market and a big focus for Corebon now?
TB: Simply put, 5G is the future of global communication. It will take time to be adopted everywhere, but it will become an essential part of everyday life for billions of people around the globe. To be involved in what may become the largest infrastructure project ever is a very exciting prospect for us.

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Why are the requirements for 5G so different from 4G?
TB: The nature of 5G is that the shorter wavelength of the signal allows a huge increase in the amount of data that can be sent, but the downside of this is that these signals are easier attenuated and can't be used for long communication distances. They are also more prone to interference from buildings and objects in the nearby environment. This means there must be more antenna stations positioned in closer proximity to each other in order to cover areas that might struggle for connection. This also increases the demand on the radomes, which cover the antennas, not to lose signal strength.

You use ROHACELL® foam as the core material for your 5G radomes (antenna covers). What makes it stand out from other material options in the core material market?
TB: ROHACELL® allows Corebon to create a product that conforms to the incredibly tight tolerances demanded by our customers. The qualities of the foam are crucial in creating the distance required in a radome core to provide mechanical strength for protection of the sensitive equipment it covers while reducing interference with signals. The result is a truly disruptive product.

What's next for the future of communication and 5G?
TB: Once "real 5G" (anything above 5Ghz) is adopted, this will create an ongoing need for further adoption of the technology by people and organizations not currently connected. 5G networks will affect all areas of our lives. For example, the only way that a growing fleet of autonomous vehicles will be able to function safely will be by using the 5G network to communicate the exact location of a vehicle to those around it. Connected factories of the future will need the high-speed connections to allow them to adopt Factory 4.0 standards. Every industry and every aspect of our lives will be impacted by the arrival of full 5G.

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