

## **HIGH-TECH PARTNER WHO WORKS WITH YOU**

Where can you find a high-tech and first-class company that understands that, as a start-up, you have to start small in order to end up big? At Thal Technologies, as Rail 1435 found out. Rail 1435 is a young consultancy in railway infrastructure. Name any rail project and these fellows are on it. They are also pioneers in innovative product development for a safer, digital and future-proof railroad.





### **SPOT ON MEASUREMENTS**

Roné van der Vliet, Head of Marketing & Sales at Rail 1435, is on a site visit at Thal and explains their decision. "With the concept 'this can be done differently and better', we developed a monitoring system that collects a vast amount of data on the condition of the track," he says. "Our IoT sensors in combination with Smart Asset Monitoring (SAM) measure, record and analyse data. Data on specific track problems such as the vertical displacement of the track (blind suspension), force and impact, temperature and expansion of rail ends. Everything you need to know as a railway manager for effective and cost-efficient track maintenance. We use our own IoT sensors for these measurements. We developed them ourselves, they are energy-efficient and they can take a lot of wear and tear. But things like that don't happen overnight."

#### **RELIABLE**

The road to a final product is long and full of challenges and obstacles. The question is, how long do you have to keep pioneering on your own? "In the meantime, there was a large order on the horizon, so we looked for a company that could help us with further product development. You see, if you want to protect innovations like ours, you don't choose to produce in China. A company in our network advised us to look at Thal Technologies and it was great to find a reliable partner in this niche, who offers high quality solutions, close to home."





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**Roné van der Vliet** Head Marketing & Sales



Eventually, the Gyro Gearlooses of railways walked into Thal Technologies. Although the sensor of Rail 1435 may be slightly different from the high-tech industrial LED modules that Thal specialises in, Thal has several rail-related customers and the development and production of this product fits in well with what Thal has focused on; developing high-end electronic products that will function under all circumstances. The sensor is therefore used under very heavy and challenging conditions and must always function without problems. "In addition, we can turn to them for smaller series such as prototypes. They are very flexible at Thal, so they understand that sometimes you have to start small in order to end up big."

#### THAL TAKES IT ONE STEP FURTHER

Thal helped develop a custom-made circuit board for the sensors, bought the materials, and assembled the board. But they also went a step further. Roné: "Despite our high-quality housing we discovered a condensation problem during the first tests. A slight amount, but too much. We asked ourselves: What do can we do? Together

with us, Thal started looking for the right insulating coating. We shared possible causes and solutions and they came up with ideas, and even put us in contact with their network. They are really pioneering developments with us."

# TASTE THE FUTURE

In the meantime, companies are already thinking one step ahead. Because the ambition is still to make travelling by train even more comfortable, the track even safer, and the maintenance of the track more predictable. Together we are making the tracks smarter through the application of high-tech electronics... Would you ever have thought that the capacity of the tracks was determined by a shortage of chips?



THIS IS THAL TECHNOLOGIES

For more than 20 years, Thal Technologies in Almere has been advising, designing, assembling and producing in the field of thermal management and LED lighting.

We supply heat conducting and electrically insulating materials for the most diverse applications within electronics. This makes Thal Technologies a specialist in solving challenging problems in the area of thermal management.



Thal Technologies also develops and produces customised industrial LED solutions. These high-quality LED modules can be used in the horticultural, aviation, offshore and wind energy industries. Thal Technologies stands for quality. We guarantee this with our ISO certifications and with certifications that conform to the standards of the different industries in which Thal Technologies is active. We also have extensive traceability of raw materials and (semi) finished products.





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# TECHNOLOGIES

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