Science Park
The High Tech Incubator
Graz

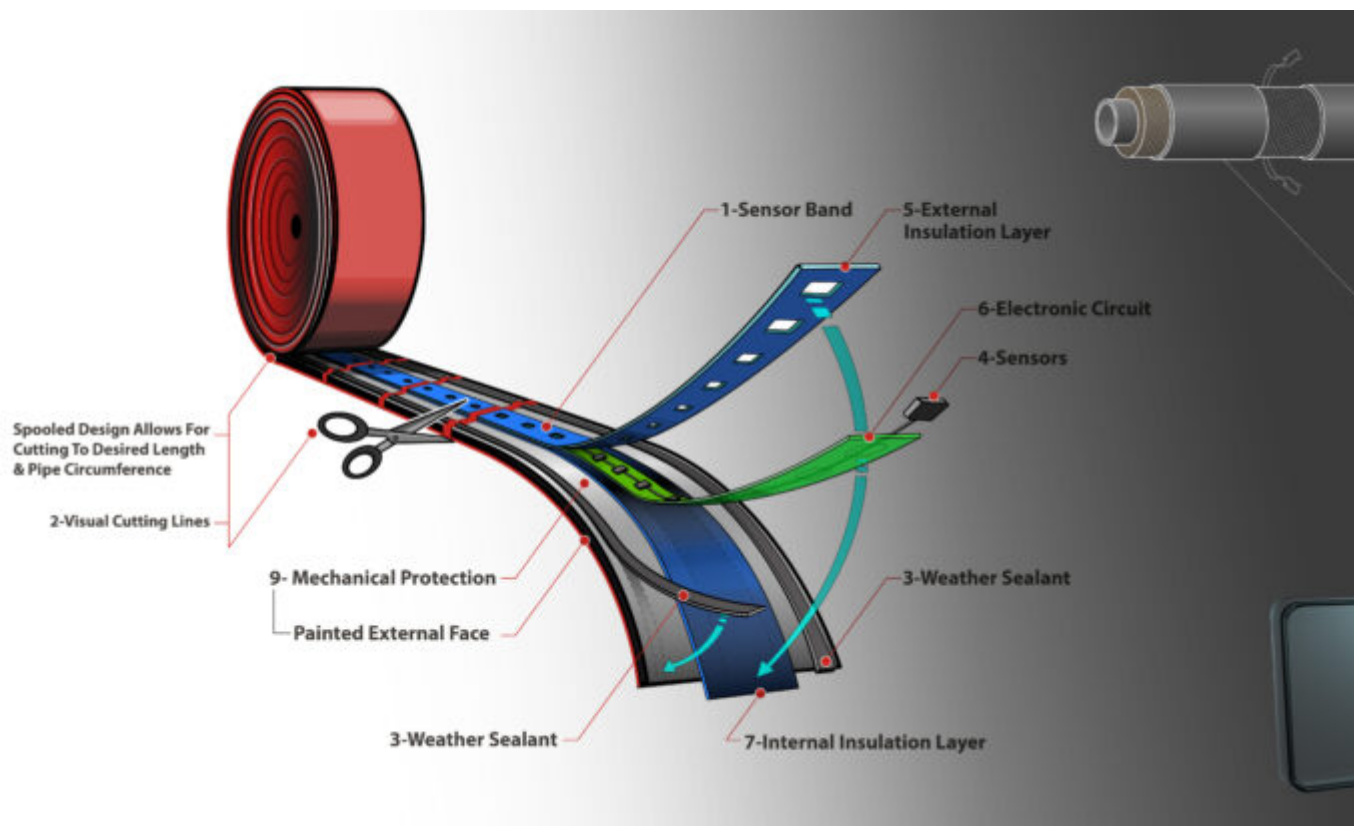esa space solutions

Austria esa-bic.at

Vabelmat

At Vabelmat, we aim to revolutionize industrial insulation monitoring in Austria and the EU by using IoT devices, AI-driven insights, and thermal satellite imagery to minimize energy loss and CO? emissions across multiple industries through a targeted, predictive approach.

Vabelmat's goal is to revolutionize industrial thermal insulation monitoring by leveraging our novel IoT technology, machine learning, and thermal satellite imagery to provide a comprehensive and predictive efficiency overview on an all-in-one platform. Traditional energy audits fail to deliver real-time insights, resulting in €8.5 billion in energy losses and 45 million tons of CO? emissions annually in Europe.

Spooled Design Allows For Cutting To Desired Length & Pipe Circumference

2-Visual Cutting Lines

9- Mechanical Protection

Painted External Face

3-Weather Sealant

1-Sensor Band

5-External Insulation Layer

6-Electronic Circuit

4-Sensors

3-Weather Sealant

7-Internal Insulation Layer

Our IoT network continuously monitors insulation performance, integrating machine learning, digital twins, and thermal imagery to generate actionable insights via a cloud-based platform. Unlike periodic audits, The Vabelmat platform enables real-time detection of inefficiencies, optimizing energy use and extending insulation lifespan. In Austria alone, the emissions reduction potential for improving insulation is as high as 885 kilotons of carbon dioxide annually, with millions of euros wasted in lost energy.

USP

Our unique selling position is that we offer real-time, AI-driven industrial insulation monitoring through IoT technology and thermal satellite imagery, reducing energy losses and CO_2 emissions with a predictive, all-in-one platform, while current market methods only offer reactive measures and infrequent monitoring.

Target market

Our solution targets industrial sectors such as Power Plants, Oil & Gas Refineries, Food & Beverage Plants, LNG/Natural Gas, and other manufacturing facilities with insulated pipelines in Austria and the EU.

Space connection

Vabelmat will integrate cutting edge, high-resolution thermal satellite imagery to enhance insulation monitoring and energy efficiency, and identify target areas within large plants.

Team

Alex Torres - CEO and Founder

Mónica García - CFO & Founder

Peter Corey - CPO & Co-Founder

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