



H2UpClose #5: Infineon

Inside the Minds Driving Hydrogen Innovation

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H2UpScale



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H2UpScale Project is happy to present the H2UpClose interviews' cycle.
Below the fifth interview with **Infineon**.

In one sentence, what problem are you obsessed with solving in this project?

At Infineon, we are committed to addressing the challenge of developing efficient and durable hydrogen leakage sensors, which are essential for the safe operation of high-output hydrogen fuel cell systems.

Finish this: "If we get this thing right, _____ will change for _____."

If we get this thing right, heavy-duty transport becomes truly zero-emission and safe at scale, transforming logistics and climate impact worldwide.

What's the most surprising thing people get wrong about Hydrogen?

Many underestimate the advancements in safety technology, thinking hydrogen is inherently dangerous without recognizing the rigorous safety protocols now being developed.

What's the "before vs after" story?

The before vs after story is one of transition from fossil fuel-based transport to sustainable, emission-free transport solutions, with our H2 leakage sensor playing a crucial role in ensuring the safety and efficiency of these systems.

Why does this problem matter now and not in five years?

This problem matters now because the transport sector urgently needs sustainable solutions to reduce emissions. With increasingly stringent environmental regulations (EU targets for near-zero emission heavy transport by 2030–2040) and public demand for eco-friendly technologies, the industry must innovate quickly.

What are the top two constraints that make this hard?

The top two constraints are the complexity of integrating high-power fuel cells into existing transport infrastructure and the need for significant reductions in production costs to make fuel cell technology competitive.

What happens if industry does nothing about it?

If the industry does nothing, we lock to higher emissions, missed economic opportunities in the growing hydrogen market, and face escalating carbon costs.

What is your role and what are your goals in the project?

Role and Goals: Infineon's role in the H2UpScale project is to develop an innovative H2 leakage sensor. Our goal is to provide a critical component that enhances the safety, reliability, and efficiency of next-generation Hydrogen fuel systems.

Unique Contribution: Our team is uniquely positioned to deliver this sensor due to Infineon's expertise in semiconductor solutions and sensor technologies.

Partnership: We are partnering with other consortium members to ensure our sensor is fully compatible with their components, facilitating the development of highly efficient and scalable Hydrogen fuel systems.

What added value does your activity bring?

Added Value: Our sensor innovation brings significant added value by pushing the boundaries of PEMFC technology, enabling higher power outputs and efficiency.

Innovation: Compared to the state-of-the-art, our sensor offers enhanced sensitivity and faster response times, critical for the safe operation of high-power fuel cell systems.

Optimization: We optimized the trade-off between performance and cost, ensuring our sensor is not only highly effective but also economically viable for widespread adoption.

What metric should people track to judge progress, and why?

Key trackers include sensor response time, detection sensitivity (ppm levels), false positive rates, and integration impact on overall Hydrogen fuel systems efficiency and uptime.

What external benchmark are you measured against?

We measure our progress against industry safety standards and performance benchmarks set by leading organizations.

Which society or market long-term goals will H2UpScale help achieving?

Long-term Goals: H2UpScale will help achieve society's long-term goals of reducing greenhouse gas emissions and transitioning to sustainable energy sources.

Beneficiaries: Heavy-duty OEMs and fleet operators gain safer, more efficient vehicles; ultimately, society via reduced emissions.

What is the next big milestone you're trying to hit?

Our next big milestone is the successful integration and testing of our H2 leakage sensor with other consortium partners' components.

Call to Action

We invite potential partners and stakeholders to follow our progress and consider collaboration opportunities to accelerate the development and deployment of sustainable fuel cell technology in the transport sector.

