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“We are building a system to keep people from dying in the dark. The underwater world doesn’t forgive mistakes and right now, we are relying on humans to go into environments where they simply do not belong.”

How a Zurich robotics team is pulling humanity out of the world’s most dangerous job and what it took to make the underwater abyss their proving ground.

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Interviewee: Michael Brehm, General Partner and Founder at Redstone

I. THE MOST DANGEROUS JOB YOU NEVER THINK ABOUT

Sitting down with the team at Tethys, the first thing that hit me was the raw reality of their mission. They are throwing everything they have into fighting the terrifying, claustrophobic conditions of commercial diving.

Commercial diving is one of the most lethal professions on earth. Imagine being dropped into a freezing river with zero visibility. You can’t see your own hand in front of your face. The flow is ripping, constantly trying to slam you into concrete pillars or drag you downstream. You have exactly 30 minutes of air. In that time, you have to blindly feel your way around massive

underwater structures, trying to find a hairline crack in a bridge foundation or a leak in a pipeline. Your adrenaline is spiking, your body is freezing, and if your tether gets snagged on a piece of debris, you don't come back up.

> *"Seeing a diver go through that changes how you look at the entire industry. We were, back then, sitting in an unpretentious room in Zurich, surrounded by prototype hulls and stripped-down sensor rigs."*
>
> — Jonas Wüst

It's barbaric that in 2026, we still send human beings into high-risk meat grinders just to take a look at a concrete wall. It is an environment built to break the human body. Robots need to take that hit first. They need to go into the dark, map out the danger, and do the heavy lifting before a human ever touches the water.

That is the core of Tethys. It started as an elite robotics project, but it quickly became an urgent mission to fix a massive, life-threatening blind spot in our global infrastructure.

II. THE CHOCOLATE MILK PROBLEM

We tend to think our world runs on clean software and radio signals. But the physical truth is much messier. The real backbone of our civilization: the pipelines that supply our cities, the fiber optic cables that keep the internet alive, the foundations of offshore wind farms, and the massive ports that drive global trade, lies entirely underwater. And right now, we are virtually blind to what is happening down there.

The market has chronically misunderstood this problem. For years, legacy players thought the solution was just adding a crisper camera to a traditional Remotely Operated Vehicle (ROV). But a better camera is useless when the water looks like chocolate milk and the current is spinning the drone like a top. The real bottleneck isn't the camera. It's the brutal, unyielding workflow.

Tethys took a fiercely counterintuitive bet. While the rest of the industry assumed you needed multi-ton naval ships, massive cranes, and a small army of specialized technicians to run a serious underwater mission, Tethys believed they could shrink that entire footprint into a compact, ultra-rugged system. By combining edge-computing autonomy with highly proprietary sensor fusion, they built a drone that handles raging currents and navigates completely without GPS. They called it the Tethys ONE. It's a system that a two-person team can deploy from a simple inflatable boat or a shoreline in minutes, turning what used to be a massive maritime

operation into a routine, repeatable task.

The Core Challenges of Underwater Inspection

Operational Dimension	The Legacy Standard	The Tethys Paradigm
Deployment Footprint	Large multi-ton support vessels, massive heavy-lift cranes, and multi-person specialized crews.	Ultra-compact, lightweight systems deployable by a two-person team straight from a small boat or shoreline.
Navigation & Positioning	Complete reliance on external acoustic transponders or dead reckoning, which drift instantly in currents.	Proprietary sensor fusion algorithms allowing centimeter-level autonomy and stabilization without GPS.
Data Pipeline	Raw video feeds that require days of manual review by specialized onshore technicians to identify anomalies.	Automated, integrated data capture, mapping, and instant reporting workflows built for immediate decision-making.

III. YOU CAN'T HOTFIX A SINKING DRONE

Rather than an award or a tech breakthrough, it was the intense stress of real-world accountability that marked Tethys's evolution into a high-stakes business.

> *"The shift happened when the conversations changed. Prospective clients stopped patting us on the back and saying 'cool technology'; they started looking at us with desperation and asking, 'Can you deliver two systems by next month? We urgently need to inspect an international subsea cable, and every day of delay is costing hundreds of thousands of dollars while increasing the risk of a public safety crisis."*
>
> — Jonas Wüst

In hardware, you can't fake readiness. If software bugs out, you push a hotfix. If an

underwater drone loses navigation in a harbor, it sinks into the mud or gets crushed by a freighter. Out here, customer safety hangs on every line of code, every hull seal, and every link in the supply chain. You know you're building a real enterprise when you stop wasting time convincing people the problem exists, and start sweating over how to scale fast enough to match their operational panic.

IV. OUT OF THE LAB, INTO THE FREEZING WATER

At Redstone, I see hundreds of deep-tech pitches per year. Most of them are looking for a problem they can solve with their shiny new technology. Tethys was different. They were staring directly into a multi-billion-dollar infrastructure crisis that everyone else was trying to ignore because it was too damn difficult and too dangerous.

Yes, Tethys has a world-class engineering team. But we invested because the problem they're tackling is an absolute emergency. Inspecting underwater infrastructure the old way is slow, prohibitively expensive, and puts lives at risk. Tethys completely changes the math by replacing human exposure with silicon and software.

Ultimately, it came down to how they build. Instead of staying insulated in academia, Tethys took their hardware straight into freezing lakes and zero-visibility rivers to prove their autonomy worked where it actually matters. They chose the mud over perfect theory. When you combine that kind of grit with the massive commercial pull we're seeing from the defense, energy, and maritime sectors, the opportunity becomes undeniable. They are fundamentally changing how industry operates underwater.

V. LEAVE THE DANGER TO THE MACHINE

Today, Tethys is a rapidly growing team of 20 builders in Zurich. The focus for the next three years is clear: industrializing the platform, securing repeatable supply chains, and building out an automated data layer that takes raw subsea sensor feeds and turns them into instant structural reports.

But when I ask them about the ten-year horizon, the conversation always circles back to the human element.

"Success means that ten years from now, sending a human diver down for a

blind, exploratory inspection will be viewed as an ancient, unacceptable risk."

— Jonas Wüst

The goal isn't to replace the veteran inspectors who know these underwater structures inside and out. The goal is to give them a shield. In a decade, that same highly experienced diver won't be risking a fatal pressure accident in the North Sea. That diver will be sitting safely in a control room, driving a fleet of autonomous Tethys units and making critical decisions based on flawless data.

The expertise stays with the human. The lethal risk stays with the machine. That is the future Tethys is building, and that is exactly why Redstone stands behind them.

Alpine SICAF (Euregio+ & Redstone Adviced) invested in Tethys because the company systematically solves the "first-mile problem" of maritime data acquisition: a structural, multi-decade bottleneck that has been continuously ignored even as global reliance on subsea infrastructure intensifies. Tethys arrives at the precise historical inflection point where physical AI and ruggedized autonomous systems transition from expensive experimental luxuries to absolute civilian necessities.

Redstone is one of the most active European early-stage VCs and holds top decile track record across the sector funds.