

Press release

irmos technologies awarded CHF 150,000 to revolutionize building maintenance with AI

St. Gallen/Zürich/Lausanne, April 12, 2023 — Venture Kick awarded CHF 150,000 to the Zurich-based startup irmos technologies to develop its intelligent platform for structural monitoring and predictive assessment. The combination of sensors and algorithmic processing extends the lifespan and improves the safety of buildings and bridges.

The earthquake in February claimed 30,000 lives and destroyed 10,000 buildings in Turkey alone, bringing the necessity and benefits of infrastructural monitoring into sharp relief.

Based on a decade of research at ETH Zurich, irmos technologies created a unique platform that revolutionizes the maintenance and preservation of buildings and bridges, maximizing safety and extending their operational life. It combines low-cost sensors with intelligent algorithms that translate vibrations from sources like traffic, wind, construction, and seismic events into structural condition metrics, providing real-time tracking of the global structural integrity, regardless of the construction materials.

The startup acquired and processed valuable datasets from healthy and damaged structures to develop its algorithms and has validated the algorithmic backend in over a dozen buildings and two highway bridges. The platform not only provides assessments of structural damage but also offers degradation analysis to support predictive maintenance. It also acts as an early warning system and rapid condition assessment in case of disasters and accidents. By extending the life of a structure, the platform can drastically increase the efficiency of structural evaluation and extend the amortization of real estate.

In Switzerland alone, where 50% of 1.1 million buildings have exceeded their design lifespan, the serviceable obtainable market is estimated to be worth CHF 100 million a year. Globally, the structural monitoring market is valued at around USD 4 billion by 2027, with a CAGR of 14.6%.

The startup's platform has been deployed in multiple pilot projects, including Bellevue Palace in Bern and the cantonal hospital in Glarus, and is engaged in a long-term monitoring project with ASTRA, the Swiss Federal Road Office. It has also initiated special collaborations for the monitoring of the Acropolis site in Athens.

The startup plans to use the CHF 150,000 to expand its market reach in Switzerland and develop a business plan for its international growth in 2024.

The team consists of Panagiotis Martakis, who earned his Ph.D. in AI for Structural Monitoring at ETH and has three years of corporate experience as a professional engineer; Yves Reuland, an expert in Monitoring infrastructure, who earned his Ph.D. in Structural Performance Monitoring at EPFL and led over 30 monitoring campaigns; and Christos Lataniotis, a senior software engineer who earned his Ph.D. in Data Science at ETH and has fifteen years of corporate and startup experience. Their advisory team includes Prof. Eleni Chatzi, a structural monitoring expert at ETH; Bruno Spicher, an infrastructural insurance expert on the executive board of SBB; and Dr. Clotaire Michel, an infrastructure risk expert at Risk & Safety AG.

"If our startup is a sailboat, Venture Kick has literally been the wind and the compass for our entrepreneurial journey. Beyond the massive financial support, the coaching kicks, and the network with investors and industry experts transformed our research idea into a valuable commercial offering," said Panagiotis Martakis.



[irmos technologies' profile on
VentureKick.ch](#)

Dr. Panagiotis Martakis and Dr. Yves Reuland

About Venture Kick

The Venture Kick philanthropic initiative provides up to CHF 150,000 in seed funding to Swiss startups and offers a well-structured entrepreneurial path toward building a winning business. Startups pitch to expert juries at three stages to obtain funding and gain direct feedback and access to an international network of 200 successful entrepreneurs and investors. Winners of Venture Kick are eligible for a CHF 850,000 investment from the Kickfund and an InnoBooster grant of an additional CHF 150,000.

Since its launch in 2007, Venture Kick has supported 917 Swiss startup projects with CHF 44.85 million. The financial support, training, and network program has created 718 companies and 11,362 jobs. Venture Kick counts a portfolio of 554 active high-tech companies and 62 exits. Venture Kick alumni companies have attracted a total of CHF 6.76 billion and represent 52 companies ranked in the TOP 100 Swiss Startups in 2022 (www.top100startup.swiss).

In 2023, Venture Kick will pay out CHF 6.3 million to idea-stage startup projects to bring Swiss science to global markets.

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