

Battery Analytics Startup TWAICE closes €1.2 mn Seed Funding Round

Munich, September 18th, 2018. The Munich-based startup TWAICE Technologies develops digital twins for companies along the battery value chain and receives € 1.2 mn seed funding from lead investor Unternehmertum Venture Capital Partners and Speedinvest shortly after spinning off from TU Munich. The financing is intended to foster product development and to expand the team as well as to accelerate market entry.

It is TWAICE's mission to enable reliable, long lasting and sustainable applications of Li-ion batteries. Although the battery system is the most expensive component of e-vehicles, the current condition and remaining lifetime can only be determined with great difficulty and uncertainty. By leveraging digital twins, TWAICE's software enables customers to analyze the condition of lithium-ion batteries in electric vehicles in real-time and to predict their lifetime. Furthermore, optimization of technical parameters on the basis of the proprietary software allows for a significant extension of battery lifetime.

This pays off: Total operational costs for operators of electric vehicle fleets can be decreased by up to 25%. But the software is also interesting for manufacturers of electric vehicles and batteries: They can use TWAICE for example to offer predictive maintenance services themselves. Additionally, the state of health and the remaining lifetime can be certified at any time enabling the reuse or resale of batteries.

“An automotive manufacturer with for instance 100,000 electric vehicles in the field has battery costs exceeding € 1 billion. Managing these assets will increasingly be essential and a decisive monetary factor. TWAICE delivers the corresponding solution to customers such as electric vehicle manufacturers or fleet operators.”, says co-founder and managing director Dr. Stephan Rohr.

TWAICE takes the concept of virtual expert systems, so-called “Digital Twins”, further and applies it to batteries. TWAICE merges sensor data and physical as well as data-driven battery models, not only closing the loop between product development and application but also enabling new opportunities such as predictive maintenance and extended warranties. “Our digital twins enable the digitalization of expert knowledge and entirely new into the performance and the state of health of batteries in the field”, adds co-founder and managing director Michael Baumann whose research forms the basis of TWAICE’s technology.

After four years of research and development at the Technical University of Munich, TWAICE was founded in 2018 as an independent provider of battery analytics software and algorithms in the form of digital twins for battery manufacturers, electric vehicle manufacturers and fleet operators.

During the founding process, the team was supported by multiple programs of UnternehmerTUM such as the incubator XPRENEURS and developed an interesting idea into a successful startup in an industrial environment. TWAICE has demonstrated the relevance of its solution by winning the main prize at the startup contest Digital Innovations of the Federal Ministry for Economic Affairs and Energy as well as being selected into the Top 30 Cleantech Startups by Climate-KIC.

Lead investor UVC Partners is experienced and well connected in the mobility industry. The Munich-based venture capital investor has already financed mobility companies such as Flixbus, Carjump, Vimcar, Blickfeld and FAZUA in the past. Portfolio

companies like TWAICE profit from good contacts to automotive manufacturers as well as to suppliers. “TWAICE delivers the specific know-how to determine and optimize battery conditions in real time for the strongly growing electric mobility market. This knowledge is of strategic relevance for battery and automotive manufacturers as well as fleet operators.”, explains Benjamin Erhart, Partner at UVC Partners. Co-investor Speedinvest invests from its recently launched industry fund which specializes in technology-oriented industry startups and is funded by around 20 industry partners.

The funding is used to expand the team for product development, market entry and the establishment of TWAICE as the leading company for digital twins of battery systems.

About TWAICE Technologies

TWAICE Technologies GmbH, a spin-off from TU Munich, develops battery analytics software in the form of digital twins. TWAICE's platform enables electric vehicle and battery manufacturers, fleet operators and financial service providers to accelerate product development, improve performance, ensure long-term reliability, extend life, and mitigate financial risks of batteries. Besides the economic benefits, this contributes to the sustainability of electric vehicles.

www.twaice.com

About Unternehmertum Venture Capital Partners

Unternehmertum Venture Capital Partners (UVC Partners) is a Munich-based early-stage venture capital firm that invests in technology-based startups in Germany, Austria, and Switzerland. UVC Partners focuses on investments in the areas of industrial technologies, smart enterprises and mobility. The fund typically invests between €0.5-3m initially and up to €12m in total per company.

Portfolio companies benefit from the extensive investment- and exit experience of the management team as well as from the close cooperation with UnternehmerTUM, Europe's leading innovation and business creation center. With over 180 employees and more than 100 industry partners, UnternehmerTUM can draw from many years of experience in establishing young companies. This cooperation enables UVC Partners to offer startups unique access to talent, industry customers, and other financial partners.

www.uvcpartners.com

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UnternehmerTUM was founded in 2002 by the entrepreneur Susanne Klatten. With more than 50 high-growth technology startups each year (such as FlixBus, Celonis and Konux) and its unique offering, it is the leading center for business creation in Europe.

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