Biosensors and electric actuators hit the jackpot in Venture Kick finale

Congratulations to IDUN Technologies and KOMP-ACT on each winning CHF 130,000 in stage 3 of Venture Kick. IDUN Technologies conceives easy on the skin, stretchable and highly conductive electrodes for wearable devices. KOMP-ACT develops small and affordable electric actuators for the automation industry. Both startups will use the funds to boost the production process of their devices.

IDUN Technologies, ETH spin-off - revolutionary biosensors for wearable devices

300 million wearable devices were sold worldwide in 2017, showing the high demand for data in diverse fields such as lifestyle and medical monitoring. [1] IDUN Technologies wants to take wearable devices to the next level with enhanced biosensors. Current electrodes used today still meet with certain drawbacks: human discomfort, such as skin irritations or skin marks, and limited accuracy for data collection. IDUN Technologies has developed an innovative solution: a new electrode, composed of silicon-based materials with conductive particles (silver and silicon-elastomer), soft, stretchable and easy on the skin while providing clinical grade signal quality without the use of a conductive gel. Inspired by nature, the biosensors’ surface mimics the structure of grasshopper’s feet to allow for glue-free adhesion, lowering motion artefacts. The result: more accurate data analytics and comfort for the user. Versatile, they can be used in a wide range of applications like monitoring underwater or long-term cardiac monitoring.

Since its foundation in 2017, IDUN Technologies has successfully concluded its first tests for the electrode prototypes allowing the team to pursue partnerships with clinics and private companies. Targeting first non-medical wearable devices for brain/sleep monitoring and brain-computer interfaces, the startup has ambitions of launching its first product to the market this year. Thanks to the Venture Kick funds, the startup will be able to industrialize its production process, find manufacturing partners and expand its team by 2019. Following the Venture Kick result, Simon Bachmann, IDUN Technologies CEO shared his enthusiasm: “Venture Kick believed in the project early on. The kicker’s camps and the jury sessions had a major impact on sharpening our vision and helped us to be ready for potential investors. The “kick” was incredibly efficient in moving us forward”.


KOMP-ACT, compact-size electric actuators for the automation industry

In the global world that we live in, packages are everywhere, from mails to the food industry. Grand scale packaging requires costly machines to assemble, fill, seal, label and code. KOMP-ACT wants to cut down the energy costs of the automation industry and reduce its carbon footprint by up to 49 millions of tons of CO₂ per year. The founders, aerospace engineers and the EPFL Prof. Jufer, observed that
today’s automated machine builders are unable to provide full electric solutions because of high costs for electric actuators, limiting their supervision over the whole packaging process. Actuators, the parts in charge of moving and controlling a machine system, are either pneumatic or electric. Today’s electric actuators are two to six times more expensive than pneumatic ones, furthermore they are two to three times bigger and up to five to six times heavier than pneumatic actuators. KOMP-ACT’s solution is a game changer. Its electric actuators, with a lightweight design, can provide similar performances as competitive products with a weight of only a few hundred grams versus 3 to 4kgs and at half of the diameter (only 30mm). [1] KOMP-ACT’s ambition is to produce fully integrated actuators within the same price range as pneumatics ones. This solution will benefit machine assembly, setup and tuning time. Fully computerized motion will allow for better quality control, improved safety measures as well as productivity increase.

Since the initial idea, KOMP-ACT has filed a European patent for its actuators and completed tests using a working prototype. The startup is currently discussing partnerships with electric motor providers and suppliers. Winning 130,000 CHF from Venture Kick will help boost the manufacturing process of the actuators and enable first sales by the end of 2019. Salvatore De Benedictis, CEO of KOMP-ACT explained what getting the kick meant for his company: “Venture Kick has transformed a team of engineers into the next generations of entrepreneurs, helping us focus on business plan and marketing aspects. We also had the opportunity meet key industry experts and leaders.”

[1] Comparative study done by the startup with other commercial actuators in the market. More information upon request.

Links:
IDUN Technologies website, team
KOMP-ACT website, team
Video of the winners

About Venture Kick

Started in September 2007, Venture Kick provides idea-stage startup projects with pre-seed capital, coaching and access to professional investors. Members from a jury pool (more than 100 leading startup experts across Switzerland) evaluate and support 16 spin-off projects in three sessions every month. Until today, more than 530 startup projects were supported with hands-on coaching and with CHF 21.66 million in pre-seed capital. This resulted in more than 414 active companies and 4,748 active jobs. The startups attracted investments of CHF 1.808 billion so far. In 2018, Venture Kick will pay out CHF 3.2 million to idea-stage startup projects and bring Swiss science to global markets. More in the Venture Kick annual report

Venture Kick was selected as a program line of digitalswitzerland’s startup enablement program.
digitalswitzerland is structured as an association and a foundation. The digitalswitzerland foundation, along with its independent foundation fund Venture Kick, is hosted by «Fondation des Fondateurs» (FdF). As an umbrella foundation, FdF is monitored by the Swiss Federal Supervisory Board of Foundations.

The Venture Kick Foundation gave a mandate to Venturelab Ltd. for the operation of the initiative. With its mandate, Venture Kick has an experienced management team with Beat Schillig and Jordi Montserrat from Venturelab Ltd. They report to the Strategy Board.

The Strategy Board defines the medium- and long-term goals and direction of Venture Kick. The Strategy Board consists of Igor Fisch (Selexis SA), Suzanne Schenk (ERNST GÖHNER STIFTUNG) and Pascale Vonmont (Gebert Rüf Stiftung).

The Venture Kick Foundation is supported by Gebert Rüf Stiftung, Ernst Göhner Stiftung, Fondation Lombard Odier, Debiopharm Group, Fondation Pro Techno, Rising Tide Foundation, European Space Agency, Engagement Migros, Swisscom, André Hoffmann, Hansjörg Wyss, Martin Haefner and Igor Fisch.

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