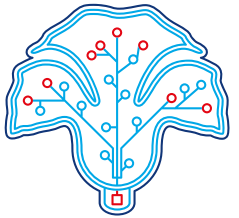
austria wirtschaftsservice aws

aws Seedfinancing

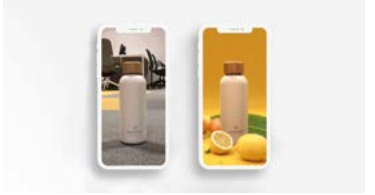
Projects supported in 2018

High Technology
Brought to Life









PICTOFIT

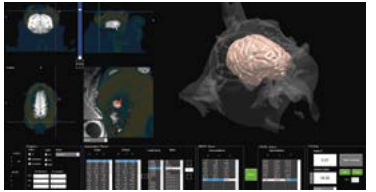


OCTOGON
MESSTECHNIK

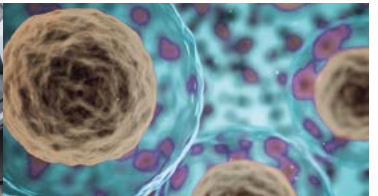
LOCALIZED
Load Path
Save Map
Save User Path


INFORMATION AS A SERVICE





austria wirtschaftsservice aws

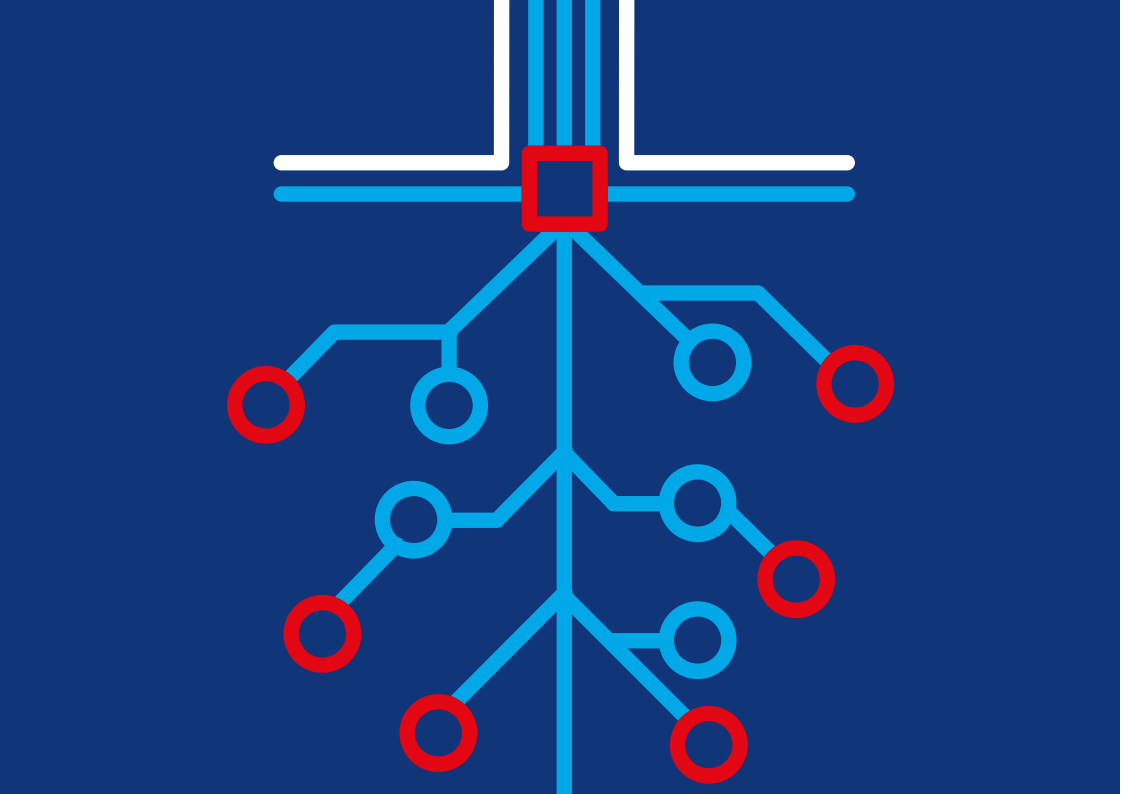
Federal Ministry
Republic of Austria
Digital and
Economic Affairs

Federal Ministry
Republic of Austria
Transport, Innovation
and Technology

Innovations are vital for the competitiveness of both individual firms and business location Austria in general. To be able to develop their innovative capacities, creative people and firms need frameworks that empower them to turn ideas into products and services. Austria Wirtschaftsservice (aws) accompanies and supports them on their pathways to entrepreneurship by mitigating the risks encountered in their ventures. Our PreSeed and Seedfinancing programmes are the central pillars of our high-tech funding schemes. They provide technology-oriented companies with crucial first-step funds during their planning and growth phases. Another decisive area backed by aws is the proper handling and professional management of industrial property rights, where aws again contributes its specialist knowhow. Moreover, aws encourages innovative ideas by offering consulting services and help in the search for investors. We believe in creative people and their visions. On the next pages, we are pleased to introduce you to the people and businesses we were able to assist in 2018.

Edeltraud Stiftinger
Managing Director aws

Bernhard Sagmeister
Managing Director aws



aws PreSeed

aws supports high-tech enterprises in their pre-founding stage.

In order to make an innovative idea marketable, an enterprise needs a viable, ambitious business concept as a sound basis on which to set up a company. aws PreSeed helps to fund costs incurred during the early phase of foundation. Our special focus is on digitalisation, ICT, physical sciences, clean tech, quantum technology and life sciences.

aws PreSeed finances costs incurred by doing scientific work for and preparing the commercial utilisation of an innovative project. Such costs include expenses for studies and concepts, for consumable supplies and personnel. The maximum grant is € 200,000. It is paid out in performance-related tranches on the basis of a milestone concept. Terms normally range from 18 to 24 months.

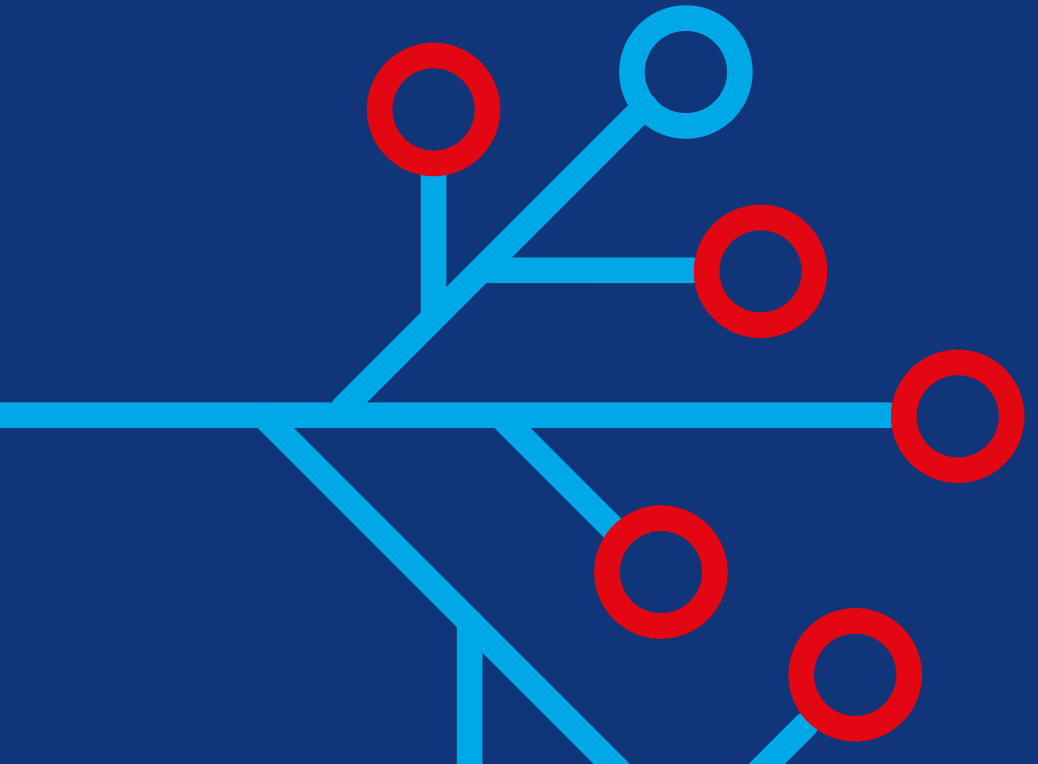
www.preseed.at

aws Seedfinancing

aws accompanies high-tech enterprises throughout their founding and company building phases. It supports all kinds of high-tech businesses, spinoffs of universities and non-university research institutions. The focus is on digitalisation, ICT, physical sciences, clean tech, quantum technology and life sciences.

Building up an internationally competitive enterprise takes knowhow, courage and capital. aws Seedfinancing wants to bridge the funding gap that emerges between the product idea and its marketability. The programme supports investments for founding and market development, external consulting and resources. In addition, startups are given individualised assistance. The maximum grant is € 800,000, repayable subject to conditions. Repayment at terms of up to twelve years is made from profits earned or from revenues from the sale or IPO of the company.

www.seedfinancing.at



Information and Communication Technology

Aeroficial

www.aeroficial.com

The company located in Graz is developing a cloud-based platform that analyses and records flight data in real time in order to provide forecasts for a wide range of uses such as taxi times and delays.

Aeroficial operates a cloud-based platform for flight data analysis designed for all stakeholders in operational aviation – airlines, airports and air traffic control. The platform encompasses a wide range of sources (flight tracking data, flight plan data, etc.) which can be analysed and mapped for a number of different applications, either live or post-flight. The company is considering a greater focus on integrating forecasts and AI in daily flight operations. The platform does not require any IT investment by clients and offers quick, variable and dynamic data analysis.

Room for improvement

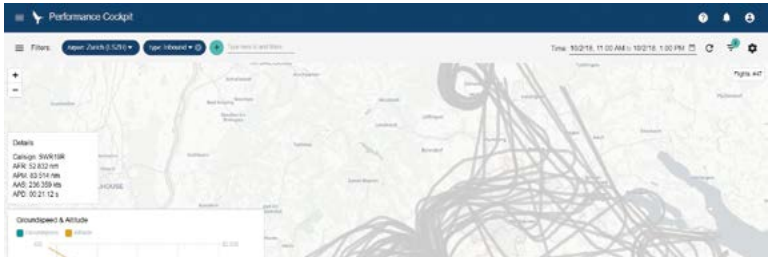
Aviation is generally viewed as a highly efficient and optimised industry. Founders Markus Stadlmair, Julian Jank and Johannes Schuster, who know the ins and outs of the sector due to their professional experience, found several points calling for further improvement. Their objective is to turn the current practice of data analysis, which is still partly based on Excel tables, into a more efficient digital data service. In its software, Aeroficial deploys innovative and intelligent analytical methods to furnish new insights from straightforward data and use them for the benefit of its clients. The focus of its current development work

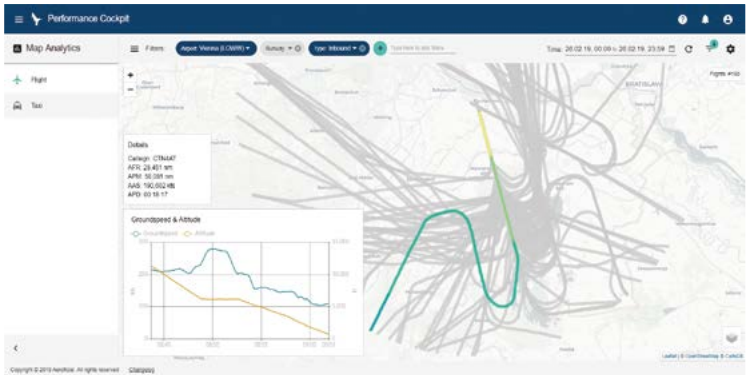
© Aeroficial Intelligence GmbH

Aeroficial Intelligence GmbH
Stremayrgasse 16, A-8010 Graz

Founded in 2018
Management: Johannes Schuster, Markus Stadlmair, Julian Jank

www.aeroficial.com





is increasingly moving towards forecasts and artificial intelligence that aim to make planning and implementing operational processes in aviation more accurate and effective. In the long term, the technology will reliably detect potential delays and reduce or avoid them by an early response.

Partnerships

Jointly with international partners, Aeroficial plans to develop its platform sustainably and as a long-term commitment, with a view to establishing it in the aviation industry. It aims to strengthen performance-driven decision-making in flight data analysis and to facilitate more precise forecasts for operational processes.

AQT

www.aqt.eu

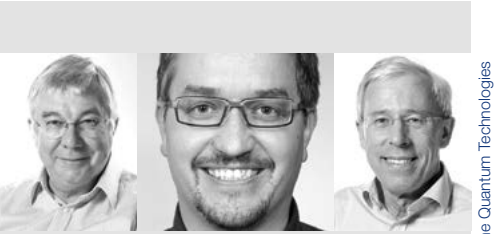
Three scientists in Innsbruck are developing the first commercially viable quantum computer with a view to powering digitalisation in business and science.

Rainer Blatt, Thomas Monz and Peter Zoller, quantum physicians in Innsbruck, have founded Alpine Quantum Technologies (AQT), a university spinoff set up to build a general-purpose quantum computer. They aim to “drive and harness established research in quantum technology”. Quantum computers are seen as supercomputers of the future which by far outperform their classical counterparts in tasks such as searching through extremely large databases or handling factoring processes. Another objective of AQT is to further enhance Austria’s top standing in quantum research.

First product sales

The three scientists are spearheading quantum physics on an international level. Based at the University of Innsbruck and the Innsbruck Institute for Quantum Optics and Quantum Information (IQOQI) of the Austrian Academy of Sciences, they have for years been working on the new technology which is set to fundamentally change the computer world. The purpose of AQT is developing, constructing and selling ion traps, experimental ion trap sets, atomic clocks and quantum computers. The first products were scheduled to be sold already in the first year of the company’s life. A “demonstrator”, acting as highly visible proof of concept for the planned general-purpose quantum

aws PreSeed



© Alpine Quantum Technologies

Alpine Quantum Technologies GmbH
c/o Greiter Pegger Kofler & Partner, Maria-Theresien-Straße 24,
A-6020 Innsbruck

Founded in 2017
Management: Thomas Monz

www.aqt.eu

computer, is expected to be ready two years after the first injection of new capital. A large portfolio of patents will guard AQT's key technologies and protect the value created within the company.

Target groups
Quantum computers have many uses, including process optimation (logistics, energy distribution, portfolio management, etc.), chemistry and quantum-extended machine learning. The ion traps and individual modules designed by AQT are already much in demand from scientists driving research in the areas of spectroscopy, quantum information and atomic clocks. The ongoing redefinition of the International System of Units (kilogram, metre, etc.) by the use of frequency measurement and optical frequency standards has already led to some preliminary discussions with potential customers.

BehaviorQuant

www.behaviorquant.com

BehaviorQuant offers innovative software for the systematic and quantitative analysis of human behaviour traits and risk performance of professional financial and investment decision-makers.

BehaviorQuant is a financial software company in Vienna founded by Thomas Oberlechner and Gerlinde Berghofer in 2018. Its concept draws on years of experience acquired by its founders in developing financial technology ("fintech") in the Silicon Valley and their application-oriented expertise in behavioural finance. Their scientific career – a habilitation thesis in financial market psychology, research and teaching at Harvard and MIT, as well as Columbia and Webster universities – yielded research cooperations between the founders, leading banks across the globe and other renowned financial and investment institutions. This research in turn gave rise to BehaviorQuant's business idea: behavioural fintech.

aws PreSeed

Forecasts for investors

BehaviorQuant offers an entirely novel decision-making model for the financial and investment sector. The software provides an objective take on the behavioural bias shown by financial decision-makers, whether individually or in teams. The key is the combination of behavioural finance, decision-making psychology, psychometrics and artificial intelligence. Clients of BehaviorQuant receive solid recommendations and valid predictions on financial preferences, decision-making bias, inherent risks and expected success rates,

behavior quant

BehaviorQuant Behavioral Finance Technologies GmbH
Kolingasse 6/XI, A-1090 Vienna

Founded in 2018
Management: Thomas Oberlechner, Gerlinde Berghofer

www.behaviorquant.com

all in a fully automated process. Currently BehaviorQuant is offering two types of tools that are of relevance for different groups of professional financial decision-makers: BQ Advisory supports banks and wealth managers by a fully automated process that analyses relevant behaviour and preferences of individual investors, while BQ Selection assists institutional investors with behavioural data and predictive analyses with a view to optimising investment decisions.

The trust of decision-makers

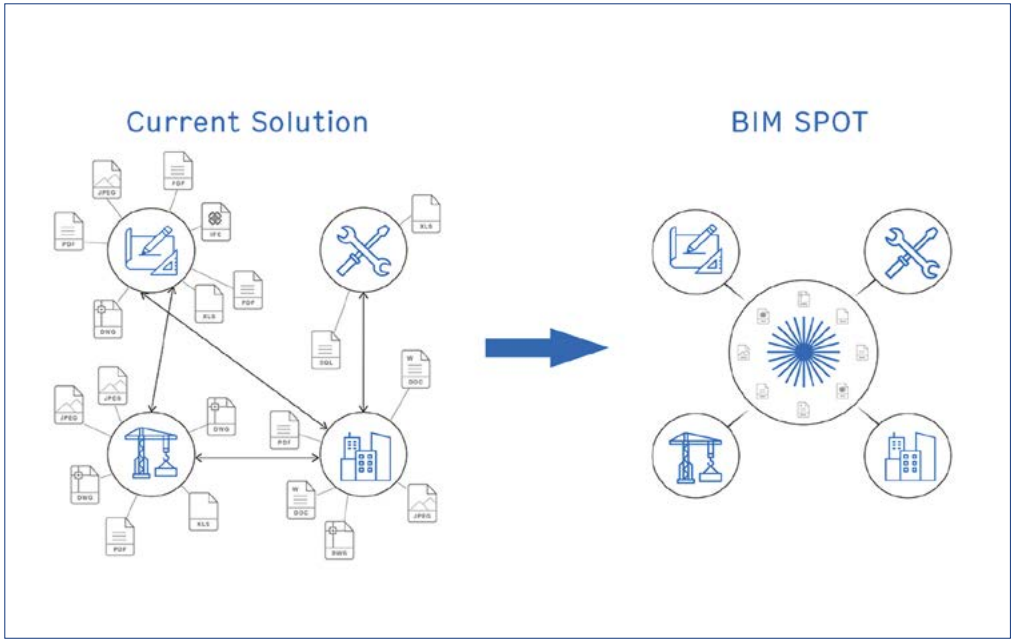
BehaviorQuant concentrates on individual behavioural traits and typical bias in decision-making. The software uses this information to predict characteristics and risk-taking behaviour of financial and investment decision-makers, including professional fund and portfolio managers as much as investors and clients of banks and investment advisers.

BIM Spot

www.bimspot.io

The Viennese company is developing a cloud-based building information modelling (BIM) software which is the first to depict digital building models regardless of the types of software used by stakeholders.

The digital revolution in the construction industry comes in the form of BIM: Building Information Modelling is the complete digital collection of all data generated during the lifetime of a building – united in a single virtual model that can be used by all authorised parties. A prerequisite is that all services and works providers use the same data language in their designs and documentations. This is where BIM Spot comes into its own: the startup from Vienna is developing a cloud-based method that allows online access to a centrally managed building data model which links up all programs used by the parties involved. This solution enables all stakeholders to continue using their



aws PreSeed

accustomed software while a “single point of truth” is created that encompasses the continuously updated building information model across the entire lifetime of the building.

Extreme flexibility

The founders around architect Christoph Degendorfer find their greatest challenge in linking up the different software solutions used by the parties involved, which each have their own methods, model structures and qualities. BIM Spot collects the data throughout the entire value-adding chain

BIMspot

BIM Spot GmbH
DC Tower, 29th floor, Donau-City-Straße 7, A-1220 Vienna

Founded in 2018
Management: Christoph Degendorfer

www.bimspot.io

of a building, from its conception to its demolition.

Target sector

The main target group of BIM Spot are developers of buildings and civil engineering projects which, ideally, also act as operators of the buildings, as they will already at the planning stage be interested in preparing the building for efficient utilisation. BIM Spot services become economical when the building costs exceed the 1 million € threshold, as is the case with office buildings, schools and research centres, utilities, infrastructure projects and health-care buildings, etc. A secondary target group is the housing sector, specifically (general) contractors for major projects (such as architects, building technicians and building engineers) and operators of complex buildings (e.g. hospitals, stadiums or airports).

linx4

www.linx4.io

linx4 is a digital platform that processes production-related data for banks, insurers and machine builders to assist them in developing new products and services.

The Industrial Internet of Things (IIoT) is not a thing of the future. It is revolutionising all fields of production and service provision already here and now. The IIoT links things: mechanical and digital machines, objects, people – they all exchange information on themselves and their environment in an open network without human interaction. The linx4 technology makes these data available: the startup's platform processes data for banks, insurers and machine builders to provide them with precisely the information they need for new data-based products and business models. In this way, banks and insurers can, for example, offer flexible products, and machine builders can sell their machines along a pay-per-use model.

These new products have the capacity to thoroughly stir up markets.

Talking creates visions

Founders Paul and Michael Bruckberger are experienced in processing production data. A chance discussion with financing experts on data-based financing options, followed up by some groundwork, quickly showed them the enormous potential to be accessed by handling processed data. Production data made available to the right addressees create many new business models, and demand for these data is enormous.

Automated interaction beyond individual businesses

Machine data hold much valuable information for banks, insurers and industrial enterprises. In order to process and understand this information, businesses need an independent technical platform that can collect, standardise and interpret relevant data as a neutral third party. linx4 wants to be this platform and thereby facilitate the generation of new, market-changing business models. One field the founders find particularly enticing is the sale of machines by pay-per-use models, where the cost depends on the time of actual use. In the machine building sector, this model may well cause a complete redistribution of the market.

© linx4

linx4 GmbH
Eitzenbergerstraße 4–6/B 06, A-2544 Leobersdorf

Founded in 2018
Founders: Christoph Rößner (CFO), Paul Bruckberger (CEO), Michael Bruckberger (IIoT expert)

www.linx4.io

Njinn

www.njinn.io

Njinn, a startup from Vienna, is developing highly efficient automation software which gives SMEs access to a technology currently reserved to large-scale businesses.

Automating repetitive processes is one of the determinants revolutionising the modern production and services sectors. Access to the requisite technology is not open equally to all enterprises. Founders Christopher Hejl and Stefan Leitich are developing a modern workflow automation solution that closes the gap between open source frameworks and excessively sophisticated IT process automation tools, in this way offering a professional solution for process automation to all companies regardless of their size.

Great solutions for small enterprises

Njinn's software is the first to provide SMEs with an alternative to high-input customised solutions and high-price products. The online IT process automation platform run by Njinn allows:

- automating day-to-day operational routines and maintenance processes,
- developing consistent, repeatable processes for effective change management,
- automated troubleshooting,
- automation at the touch of a button for business users, and
- a well-defined and documented process library.

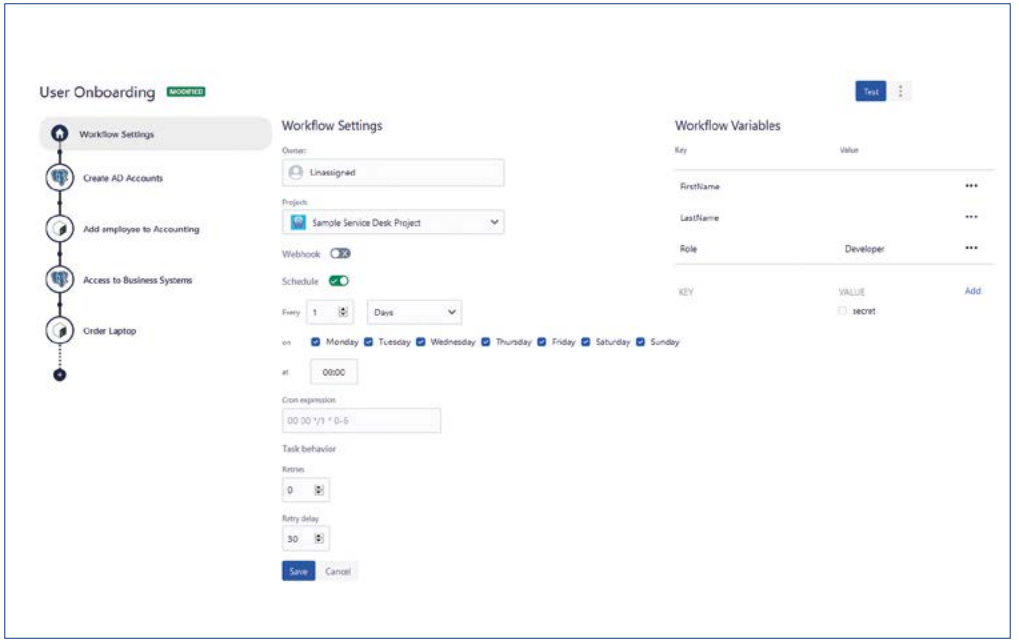
aws PreSeed

© Njinn Technologies GmbH

Njinn Technologies GmbH
Mooslackengasse 17, A-1190 Vienna

Founded in 2018
Founders: Christopher Hejl (CEO), Stefan Leitich

www.njinn.io



Bringing democracy into automation software

The automation sector is dominated by products tailored to large-scale companies. Such products, dating back to the mainframe era, have much to offer in terms of stability and sophistication, but their large scope of functions implies complexity, proprietary technologies and – most of all – high costs. Njinn considers it a key element of the digital transformation process to provide serviceable automation solutions for SMEs which typically have few spare human, technical and financial resources for implementing and servicing such projects. Njinn's solution aims to make software implementation as simple as setting up an e-mail account: no more complicated sales and consulting processes. The pricing model is transparent, non-binding and risk-free.

Symbiotic

www.symbioticeda.com

Symbiotic EDA is developing a software that helps makers of semiconductor chips verify and improve their chip design much more efficiently than is possible at present.

Symbiotic, a startup from Vienna, has an illustrious circle of prospective clients. Symbiotic EDA (with EDA short for Electronic Design Automation) targets its software chiefly at semiconductor chip producers in Silicon Valley. Its tools help producers identify and eliminate faults in the design of their chips. In the longer range, Symbiotic intends to make its expertise in quality assurance (QA) tools available to chip producers in India and Taiwan.

QA to fight chip bugs

Founders Edmund Humenberger and Clifford Wolf furnish tools and verification services for enterprises that use or develop in-house RISC-V cores for their chip designs. The software tools made by Symbiotic EDA supply users with detailed information on the quality of their design. The software looks for and finds hidden bugs in the chip design. Using it dramatically reduces the effort chip manufacturers have to put into debugging.

Debugging tools get much cheaper

Symbiotic EDA tools increase productivity, accelerate writing and refactoring of designs and facilitate the discovery of faults, which in turn improves confidence in the design's functionality. Formal methods are used to check existing and new digital logic designs, thereby complementing simulation. Currently

aws PreSeed

© Symbiotic GmbH

Symbiotic EDA

Symbiotic GmbH
Alaudagasse 11/107/6, A-1100 Vienna

Founded in 2018
Management: Edmund Humenberger

www.symbioticeda.com

marketed tools are too expensive to be used by any other than financially strong companies, but since 2018 Symbiotic EDA has been offering to the entire chip sector a much lower-priced category of design tools along with the training required to use them.

New pathways

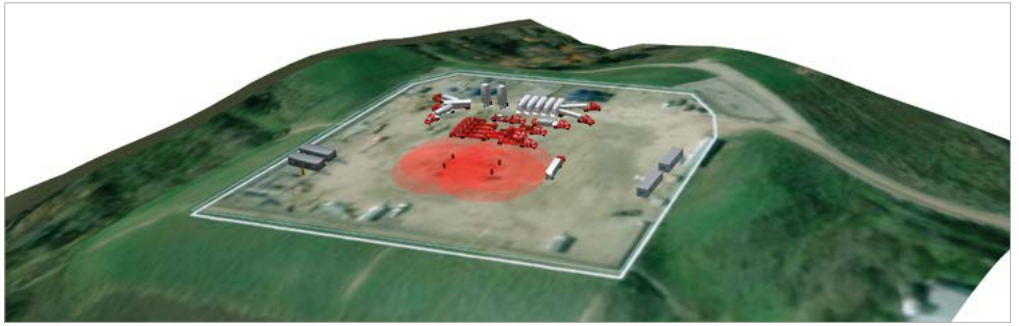
The approach used by Symbiotic is a novel method of quality verification. In order to make the most of it, chip designers need to apply new skills but, given the hectic schedule of their business, have little time for acquiring them. CEO Edmund Humenberger is putting considerable effort into convincing clients of the benefits of the new method through hands-on experience.

XLO

www.xl-operations.com

XLO is creating an integrated planning platform that ensures smooth and efficient planning for major shale gas projects while minimising the enormous encroachment on land required for well pads.

The idea to found XLO came when Hasnaa Lamik and Mathias Mitschanek flew from Houston to Las Vegas during an excursion, where the two students of the Austrian University of Mining got an instructive view of the vast expanse of land extending across tens of thousands of square kilometres dedicated to developing shale gas pads. The two (almost) graduates of petroleum engineering aim to reduce this wastage of land and resources by creating an integrating planning platform. XLO, their company founded in 2017, developed a software-as-a-service platform that collects, integrates and optimises information from various sources in the planning process, with a view to ensuring



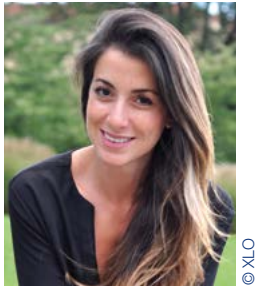
© XLO

aws PreSeed

smooth and efficient planning for major crude oil and natural gas projects. XLO promises to cut land use by up to 45%.

Reducing planning times

XLO's approach is the first to combine information from above and below ground in a single platform. Optimising algorithms are used to improve the whole process flow, which makes the work of engineering teams such as GIS engineers, drilling engineers, production engineers and all other crew involved in the drilling much more efficient. Project planning, which



© XLO

XL-Operations GmbH
Edlastraße 15, A-3300 Amstetten

Founded in 2017
Founding team: Mathias Mitschanek, Hasnaa Lamik

www.xl-operations.com

would normally take weeks, can be cut to a few days or even hours. The environment benefits because the drilling pads can be made smaller, less space needs to be dedicated to equipment and drilling is optimised. In this way, material needs for setting up the pads can be reduced, and savings can also be made on expensive operating hours.

Further applications
The XLO solution is primarily targeted at the US market, but initial results have identified further applications in cooperation with Austrian geothermal energy and construction companies.

zerolens

www.zerolens.com

zerolens is a virtual photo studio for smartphones. The camera software enables enterprises to create professional photos for marketing purposes in their own offices.

Producing photographic material for marketing purposes is quite a challenge for small and medium-size enterprises. While five new advertising images per month sufficed in former days, enterprises nowadays need more than 30 new ad images to effectively advertise their goods on all channels including social media – a costly (€ 100 or more per image) and time-consuming exercise. zerolens has found the solution for this problem. The camera software developed by the Viennese startup makes it easy to create photos of objects and products in a wide variety of different virtual photo sets.

Resolving their own problems
During their studies, the three founders

© zerolens

aws PreSeed

Lukas Fechtig, Mirko Vodegel and Nikolaus Redl met at icons, a management consultancy operated by students, in 2016. While running their own webshop projects they noted that producing image material is enormously important for the web presence of businesses, but also enormously expensive. Experiments with Photoshop did not yield the desired results. The idea for zerolens was born in the course of many late nights.

Significantly lower production costs

Enterprises using zerolens can now produce

© Julia Domig

zerolens

zerolens GmbH
Praterstraße 1, Space 15, A-1020 Vienna

Founded in 2019
Founders: Nikolaus Redl, Lukas Fechtig, Mirko Vodegel

www.zerolens.com

high-quality photos 10 to 100 times cheaper. The images are available immediately and marketing managers can creatively express themselves in the countless virtual photo sets. The primary target group are businesses with a strong web presence offering physical products that lend themselves to visualisation in all kinds of variations.

From digital to virtual photography

The company's current focus is on further improving the technology and validating its business model. Photography has hardly changed since the invention of digital cameras and the transition from analogue to digital images. zerolens wants to move on from digital to virtual photography, turning it into a creative process that is not limited by finite, locally available resources. The startup's aim is to enable users to create photos in any environment, anytime and anywhere.

BSB AI

www.oscar-collision-avoidance.com

The Upper Austrian company is developing a fully automated anti-collision system for boats that detects objects floating on the water surface and automatically avoids them.

The idea to build a system for collision avoidance is related to what founder Raphael Biancale learned on his first transatlantic passage from the Mediterranean to the Caribbean, namely that containers floating in the sea are very dangerous for small to medium-size boats. Being on the lookout for hours in November in pitch-dark nights, in cold and rain, was exhausting and, for the most part, futile. After his trip and numerous discussions with other skippers, manufacturers of electronics and experts, Raphael Biancale, a seasoned founder with an automotive engineering background, started looking for a solution that would significantly improve onboard safety. The idea for Oscar was born.

© bsb-ai

Oscar – Optical System for Collision Avoidance
Oscar is a fully automated anti-collision system for boats that ensures round-the-clock detection of objects floating on the water surface and their automatic avoidance. The system combines optical sensors as well as image and data analyses such as mapping and tracking with artificial intelligence. This arrangement enables Oscar to interpret the whole area around the boat to avoid collisions with other ships, buoys, animals, wreckage or other obstacles.

Founding history of BSB Artificial Intelligence
The project started when Raphael Biancale founded bsb driveline solutions GmbH, a company specialising on automotive engineering, in mid-2014. The groundwork

aws Seedfinancing

© bsb-ai

BSB Artificial Intelligence GmbH
Commerz Park West 1, A-4061 Pasching

Founded in 2017
Management: Raphael Biancale

www.oscar-collision-avoidance.com

laid for Oscar included developing another core competency, i.e. image processing by artificial intelligence, and hiring more employees. In order to establish the new sector as an independent mainstay, the two lines were turned into separate companies at the end of 2017 and BSB Artificial Intelligence was founded.

Tested by the best of the best

The system was developed in close cooperation with professional offshore yacht racers and skippers (François Gabart, Armel Le Cléac'h, Vincent Riou, Jean Le Cam) who also provide testimonials for the company. To avoid focusing solely on one aspect of application, other partners such as animal welfare organisations, fisheries companies and shipyards have been involved. The first high-end product – Oscar – has been on the market since April 2019.

Kontrol

www.kontrol.tech

The virtual co-pilot Kontrol is based on a mathematical method developed to cost-effectively check safety-critical autonomous systems for their conformity with standards and laws.

Kontrol is a virtual co-pilot for autonomous driving and flying systems. The software constantly checks whether the system adheres to the rules and laws governing the traffic area in which it operates. For example, in a car Kontrol acts as a driving instructor who persistently monitors all systems. This is a prerequisite for getting autonomous vehicles certified because conformity with rules and laws can be established with mathematical precision.

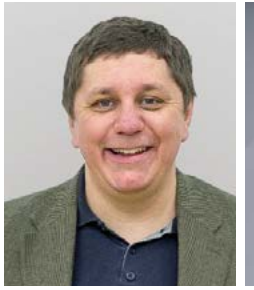
Checking system specifications

Michael Naderhirn from Perg in Upper Austria, who occasionally works in the USA, and Andreas Lauringer, a native of Linz, have launched Kontrol, a mathematical method that makes autonomous vehicles

and other systems certifiable. The test software ensures that the controls of the autonomous devices act in compliance with the respective laws, standards and safety regulations. The patented method furnishes mathematical proof that a system meets a required specification. It makes sure that a vehicle or an aerial drone adheres to legal provisions such as road traffic regulations or rules of the air. It is the first approach worldwide to impose a behaviour specified in a law on an autonomous device. Hence, and differently to machine learning schemes, Kontrol is the first mathematically proved method. For programmers and safety inspectors this type of quality assurance means hands-on progress.

Cost reduction for developers

Kontrol considerably shortens the time required for developing autonomous control systems. Cost savings may reach up to 70% by the time the product is ready for serial production. Moreover, the use of mathematically proved algorithms improves product safety. This is the only way to make sure that the safety and product standards for autonomous devices are uniformly obeyed and checked. Messrs Naderhirn and Lauringer see the certification of autonomous systems as an important future market.



© Kontrol GmbH

Kontrol GmbH
Marienhöhe 25, A-4391 Waldhausen

Founded in 2017
Management: Michael Naderhirn, Andreas Lauringer

www.kontrol.tech

MoonVision

www.moonvision.io

MoonVision's software recognises camera images in real time and triggers predefined actions such as entering the orders into the cash register when the dishes leave the restaurant's kitchen.

MoonVision's solutions for visual object recognition are substantially faster and more user-friendly than conventional object trackers. Business clients get a unique tracking approach that works with a camera and artificial intelligence. Unlike standard solutions, the cloud-based platform does not require a sensor but is directly controlled via the camera.

The areas of application are manifold. The food service industry uses the software to tally up dishes ordered and served by waitressing staff. At Munich's Oktoberfest, dishes were recognised with 98.2% accuracy. Known as Dish Tracker, the software originally designed for the food service industry has proved very effective in other areas as well: it is used to detect defects on surfaces in the automotive industry and recognises containers and parcels in logistics.

Fast and straightforward

Instead of laboriously generating thousands of images, MoonVision has found an efficient and cost-saving way to teach machines to see. The software filters the images from the video material and uses artificial intelligence to continuously train the system. Unlike previous solutions, automated learning based on MoonVision

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© MoonVision

MoonVision

The MoonVision GmbH
Ballgasse 6/1/7–10, A-1010 Vienna

Founded in 2017
Founders: Florian Bauer, Alexander Hirner, Kamil Kula (CEO)

www.moonvision.io

technology also works in everyday life settings and not just in specific laboratory environments. A method that used to take several weeks now takes just a single day. Clients pay a monthly lumpsum for using the platform. The price is contingent on the complexity of installation and the number of cameras.

The team gathered by the founders of the Vienna-based company, i.e. Florian Bauer, Alexander Hirner and operative manager Kamil Kula, has developed the technology to reduce the expertise required from end users. This approach will make individual object recognition fit for the market and mass use. The startup already has a staff of 10 and plans to gain a stronger foothold in the automotive (supplier) industry. The first contracts have already been signed.

Reactive Reality

www.reactivereality.com

The software developed by Reactive Reality lets online customers try on clothes by virtually putting them on their bodies. The technology raises online sales and lowers return rates.

Two out of three customers still prefer to buy their clothes offline. This is partly due to the fact that they cannot try on the items before buying them. Besides, over half of all garments ordered online are returned. The Graz-based company Reactive Realty wants to solve the problem by its Pictofit software. Using an augmented reality (AR) app on their smartphones, customers can virtually try on clothes or check whether a piece of furniture fits into their home. However, systems for virtual try-ons often scale poorly because they require time- and cost-intensive CAD models of the apparel. The technology developed by Reactive Reality automatically converts ordinary product photos into 3D models and

PICTOFIT

combines them with the user's photos. This method yields higher-quality results and is much faster and cheaper than conventional, much more expensive CAD modelling.

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Market success

Stefan Hauswiesner, Philipp Grasmug and Philipp Pani, the founders of Reactive Reality, met at the Graz University of Technology. Graz University professor Dieter Schmalstieg acts as scientific mentor to the three founders who already researched and worked on topics such as virtual try-ons, machine learning and AR when they were students. They have filed several patent applications and published more than 20 papers on the topic. Their Pictofit is successfully used by several clients and tested in user studies. The technology lowers

Reactive Reality GmbH
Stremayrgasse 16, A-8010 Graz

Founded in 2014

Founders: Stefan Hauswiesner (CEO), Philipp Grasmug (CTO), Philipp Pani (COO), Dieter Schmalstieg (Chief Scientist)

www.reactivereality.com

return rates, drives sales conversion by turning more prospects into customers and thus increases sales. Target clients are large e-commerce businesses who can integrate the technology into their own app or website with Pictofit's software development kit.

Scalability

Pictofit is the most scalable technology on the virtual try-on market. It converts conventional product photos into three-dimensional augmented-reality objects that adapt to the user's body. The process has been largely automated. It also works with broad fashion ranges comprising more than 100,000 items. The webshops of most stores such as Zalando, H & M, Topshop or Zara already feature suitable product photos which can be used for a virtual try-on with the Pictofit app (for iOS and Android).

SLOC

www.sloc.one

SLOC is developing smart solutions that supply instantly useable information for Industry 4.0 applications and the Industrial Internet of Things (IIoT), thereby supporting processes automation and productivity maximisation.

The solutions offered by SLOC combine sensor technology, connectivity and energy efficiency with onboard intelligence. Information processed with SLOC software can thus be provided directly as a service in Industry 4.0 productions. Instead of a flood of data, clients get accurate, useable information in order to customise control of their logistics system. They do not have to make risky upfront investments and only pay for the information they actually need. Exact data accelerate process optimisation, render automation more efficient and maximise productivity. Moreover, SLOC technology is flexible. The modular system offered by the Graz-based startup is ideal for exploring new application areas quickly, simply and without long lead times.

Smart waste containers

In waste management, the app can optimise transport routes and improve safety warnings. The devices, simply called SLOCs, provide real-time information on fill level, lid opening and position, fires and movement patterns such as emptying. This information helps waste disposal firms optimise their trucks' itineraries and thus lower their logistics costs, reduce traffic

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© SLOC GmbH

SLOC GmbH
Waltendorfer Gürtel 2, A-8010 Graz

Founded in 2017
Management: Alec Essati

www.sloc.one

jams and make a valuable contribution to CO_2 efficiency. As SLOCs can detect fires at an early stage, they can also be used in fire protection.

Intelligent load carriers

By fitting their containers with SLOC devices, manufacturers can, for the first time, offer their customers digital smart services. SLOC devices may, for example, be used to continuously monitor the cold chain when transporting perishable food such as meat or sausages. This information enables clients to automate their internal logistics and move products faster, more efficiently and at lower cost. SLOC devices make parameters transparent and identify optimisation potentials.

Successful projects

First projects with renowned clients and partners from the intralogistics and the waste industries such as T-Mobile Austria, Saubermacher, Lufthansa Industry Solutions and Gebhardt Logistic Solutions have already been successfully implemented.

talentify

www.talentify.at

talentify supports peer-to-peer learning across schools, nurtures young people's talents, guides them on their career paths and facilitates their transition to the labour market.

The Tulln-based company offers an online platform and an app for peer-to-peer learning. talentify not only supports buddy learning but also fosters young people's individual talents by providing future skills training. These offers are supplemented by innovative guidance to steer them into the world of work.

Peer-to-peer method

More than 10,000 students aged 9 to 19 have regularly used talentify.me since October 2015 (as of March 2019). Peer-to-peer learning has several advantages: the mostly older students offering peer teaching benefit by developing their social skills, learning to take on responsibility and deepening their knowledge on the subject matter. The younger students learn without pressure, find role models and gain new perspectives. More than 400 partner schools use talentify.me to encourage social learning. The online platform can also handle significantly larger numbers of users.

Support in the transition from school to work

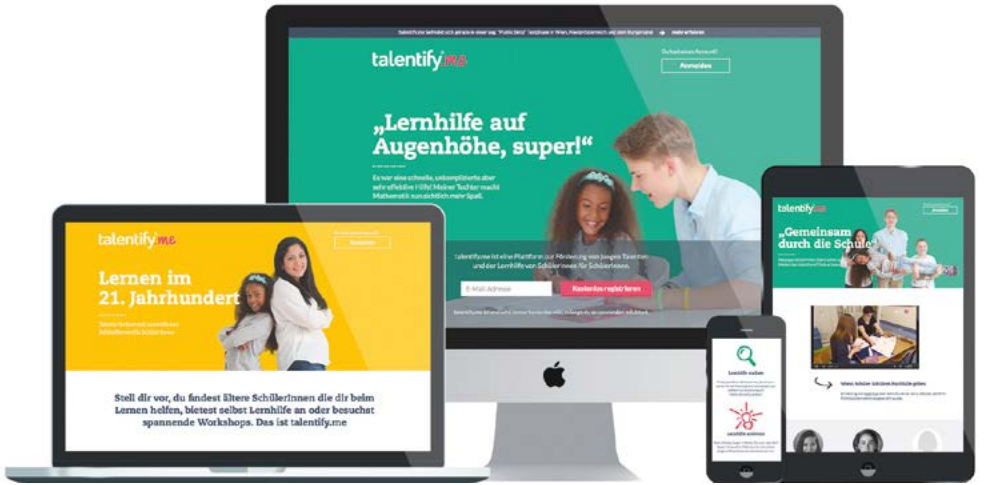
talentify assists students in the transition from school to work and helps them identify their strengths and talents. Moreover, it playfully highlights their alternatives for future gainful employment. An interactive strengths

© talentify GmbH

talentify GmbH
Technopark 1, A-3430 Tulln an der Donau

Founded in 2014
Management: Bernhard Hofer

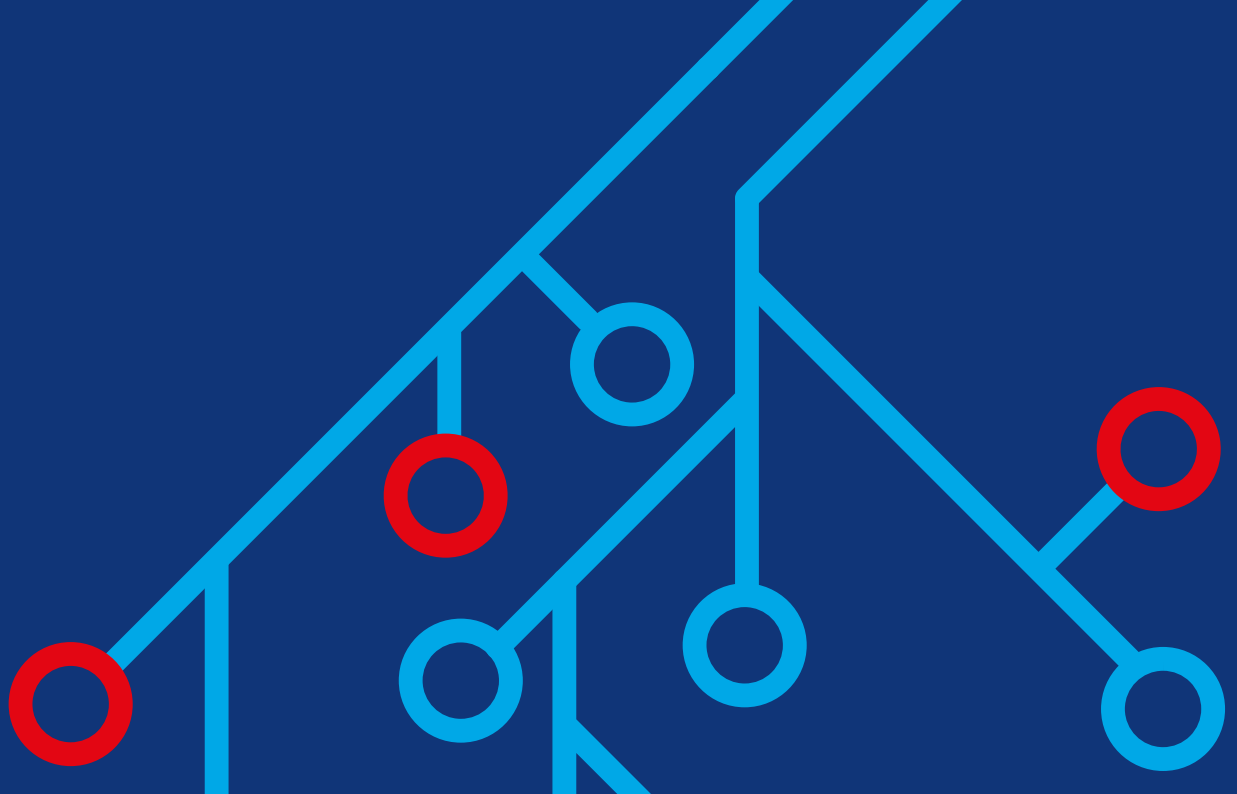
www.talentify.at



profile (cv 2.0) for collecting and presenting acquired skills points out users' pathway options. On the one hand, talentify offers young people just starting their careers an innovative access to the job market by linking them with suitable enterprises. On the other hand, talentify.works facilitates targeted online matchmaking for employers and is an appropriate channel for recruiting new talents.

Empowering

talentify emerged from a student project run by founder Bernhard Hofer. More than 15 years ago he started a buddy learning scheme for students along the lines of talentify. With this background experience, Bernhard Hofer, a seasoned IT expert, founded talentify as a social enterprise jointly with his wife Doris to empower young people by innovative technologies and to help them find their place in the world.



Physical Sciences

Diffratec

www.diffratec.at

The Innsbruck-based spinoff explores options for the commercial production of moiré lenses, a type of lens that allows precise and quick focusing of objects across a wide focal length at very high luminous intensity.

A moiré lens works similarly to a human eye, as it can focus on objects at varying distances. Contrary to our eyes, however, it can withstand extremely high luminous intensities, responds much more quickly to movements and can be adjusted much more accurately. For these reasons, it has the capacity to revolutionise 3D laser processing and 3D microscopy. It can potentially be downsized to pinhead dimensions which should open up the path to high-quality zooming in smartphones.

University spinoff

Founder Martin Bawart first came across the moiré lens technology during his doctorate studies at the Institute of Biomedical Physics of Innsbruck Medical University. He immediately recognised its enormous advantages over other variable lenses and started to develop its function. He is convinced that the technology has a great economic future and aims to market it through Diffratec.

Precision-making in the micro range

The greatest challenge on the road to marketing moiré lenses is the exacting manufacturing process. For a satisfactory performance, they need to be made to

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diffratec

Diffratec Optics OG
Sonnenstraße 14, A-6020 Innsbruck

Founded in 2016
Management: Martin Bawart, Stefan Lanker

www.diffratec.at

a tolerance of just a few thousands of a millimetre and must have a service life of many years of continuous operation.

For infrared cameras and virtual reality glasses

Diffratec plans to market moiré lenses across a wide range of optical uses. Potential areas of application are zoom systems for infrared cameras and lenses compensating for ametropia in virtual reality glasses. Moreover, Diffratec plans to use the technology in microscopes for live cells and in smartphones. In addition to developing moiré lenses, Diffratec has invented several other variable optical elements. By marshalling its capacities, Diffratec aims to become a global leader in optical tuning.

Dreamwaves

www.dreamwaves.io

Dreamwaves is developing an audio navigation system to help guide the blind and visually challenged to find their way in an unfamiliar environment. The app draws on augmented reality to embed virtual waypoints and three-dimensional audio in the real world.

The startup from Vienna employs augmented reality to offer an intuitive navigation and orientation tool for the blind and visually challenged. The app identifies the individuals' actual outdoors location and computes their route to the desired destinations. Virtual audio sources are automatically placed along the route. Users navigate intuitively by listening to the sounds that point them towards their direction. Moreover, particular sounds may be allocated to dangerous obstacles or specified destinations so that users can either avoid risky zones or decide on how to respond. This grants them more independence, safer mobility and thus a higher quality of living.

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Acoustics points the way

Founder Hugo Correia Duarte Furtado once was told of a blind Spanish surfer who could locate the beach and obstacles thanks to his perfect sense of direction. After losing his orientation by overturning next to a rock he heard a friend calling from afar and his sense of orientation immediately returned to him. For Furtado this is a perfect story to explain how his product can help.

User-friendliness trumps

The app consists of a sophisticated high-tech method designed for individuals

© Harald Jagos

Dreamwaves GmbH
Ernst-Melchior-Gasse 11/1/G1, A-1020 Vienna

Founded in 2019
Management: Hugo Correia Duarte Furtado

www.dreamwaves.io

© Harald Jagos

who are beset by many challenges in their everyday routines. The challenge for Dreamwaves will be finding the right balance between technical features and user-friendliness. Dreamwaves needs to work reliably and at the same time be extremely easy to use.

More than an aid for orientation

Furtado is currently preparing the first prototype, which features just the navigation function. Future versions are intended to recognise obstacles, objects, faces and similar features. The goal is not just to furnish blind and visually challenged users with a sense of direction but to enable them to interact. Dreamwaves is investigating whether the augmented reality app might also be helpful for a larger target group of mobility-impaired users.

EQTEC

www.eqtec.at

EQTEC is developing a novel technology for the industrial production of artificial stone panels from silica sand (“engineered quartz”) in a double belt press.

Founder Wolfgang Johann Horvath has built a double belt press prototype to make high-quality quartz stone panels by industrial methods. Production costs for such panels are substantially lower than in conventional processes. The aim is to get engineered quartz stone panels in a single-plant continuous production process on an industrial scale.

Greater efficiency at lower cost

The new EQTEC technology is a significantly more efficient method to produce quartz stone panels than the currently used batch method. Depending on the thickness and composition of the panels, the new production plant and associated processes will double output and reduce production costs by up to a third. Moreover, panel quality will be greatly improved in terms of homogeneity, compactness, warping and appearance. The novel technology will considerably reduce the consumption of resources and energy per unit produced. For the first time, it will allow the production of panels of just five millimetres in thickness – considerably thinner than the current industrial standard – which opens up new options for use.

One-stop technology

EQTEC’s technology is to be sold globally

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© EQTEC

EQTEC Engineered Quartz Technology GmbH
Hartiggasse 20/24, A-2700 Wiener Neustadt

Founded in 2017
Management: Wolfgang Johann Horvath

www.eqtec.at

as a one-stop plant. Further sales proceeds will come from servicing and spare parts.

Customers and market

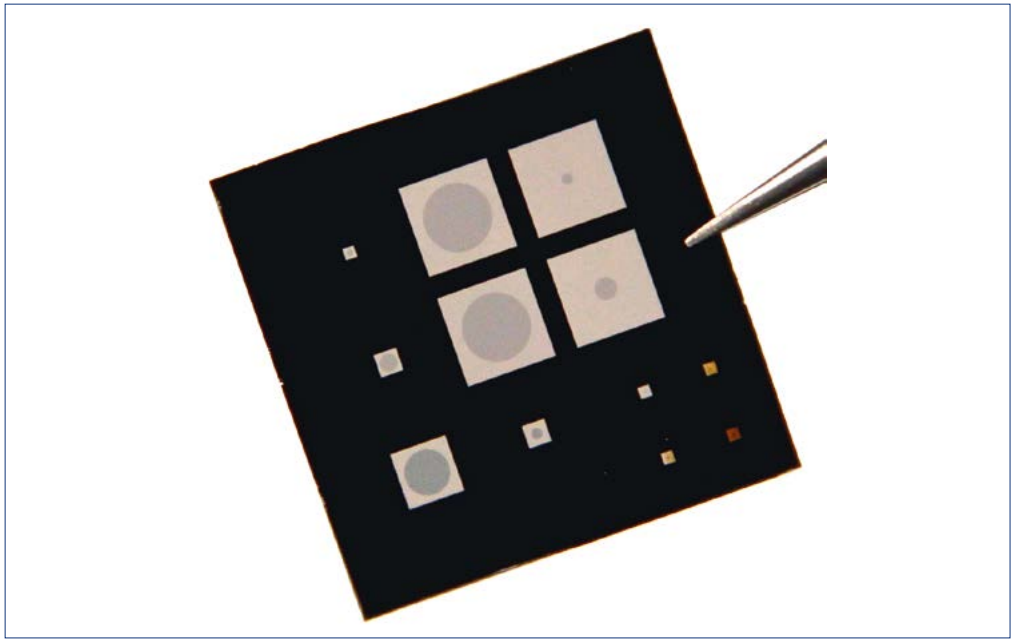
The company chiefly targets innovation-driven SMEs which want to wean themselves off established plant manufacturers and their expensive, high-maintenance technology. The target market, currently controlled by an Italian engineering company, is rapidly growing and not exposed to cut-throat competition. Thanks to its new technology, EQTEC intends to play a game-changing role in the production of quartz stone panels.

Invisible-Light Labs

www.invisible-light-labs.com

Invisible-Light Labs has developed a detector to measure infrared- and terahertz-range light on a nanomechanical basis with unparalleled sensitivity and without the need for cooling.

Many modern technologies require the precise measuring of light. Infrared (IR) and terahertz (THz) are parts of the electromagnetic spectrum which are of interest for many applications: material sciences, astronomy, security technology, etc. Since photons in the IR and THz range are less energetic than those in the visible range, it is very difficult to detect them, especially at room temperature. Founders Josiane Lafleur and Silvan Schmid set up in Vienna in order to translate their vision of ultrasensitive spectroscopy from academic research at the Vienna University of Technology (TU) into commercial practice. They have developed a novel detector which uses nanomechanics to measure IR and THz



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radiation at an unprecedented sensitivity and without the need for cooling.

Extremely rapid analysis

Highly sensitive detection methods are of importance for product characterisation in the making of pharmaceuticals. Current detectors typically need several hours of measuring in order to characterise certain drugs. Such time-consuming methods make it impossible to carry out process analysis in real time. Yet a real-time feedback of the course of chemical processes would not just minimise the reject rate but also cut down

© Romana Maalouf Photography

INVISIBLE-LIGHT LABS

Nanomechanical Infrared Detectors

Invisible-Light Labs GmbH
Floragasse 7, A-1040 Vienna

Founded in 2019
Management: Josiane P. Lafleur

www.invisible-light-labs.com

on input products and energy consumption required. Moreover, it would greatly facilitate quality assurance of pharmaceuticals.

Quality control for food products

The detector created by Invisible-Light Labs will spawn new research in ultrasensitive IR and THz spectroscopy. In addition to speeding up the analysis of biomolecules for the pharmaceutical industry it will accelerate quality control for food and agricultural products and improve its accuracy. The detector technology developed by the TU spinoff also promises to effectively detect even small amounts of environmental poisons and improve public safety by a reliable method to trace hazardous substances.

LIStrat

https://listr.at

LIStrat uses pulsed laser sources for a spectrometric analysis of metallic or ceramic composites, thereby greatly accelerating material analysis for quality assurance purposes.

Located in Vienna, LIStrat was founded as a spinoff of the Department of Physical Chemistry at the University of Vienna. The team centring around Tristan Nagy employs pulsed laser sources as a quick, automated and depth-resolved tool to analyse the chemical composition of workpieces regardless of their shape. While specimens traditionally needed to be cut and prepared for quality control, LIStrat has developed a microinvasive method to create virtual metallographic cross-sections, thus effectively reducing the quality assurance cycle from several days to just a few minutes. The information thereby obtained provides key data for process development and quality assurance in fields such

as automotive, aircraft and medical engineering.

New applications

LIStrat originally was short for laser-induced stratigraphy – an indication of its original use to analyse the surface of coated materials – but the company has meanwhile been exploring new avenues. Its founders consider their process, initially primarily used for galvanised materials and ceramically tempered protective coatings, to be especially suited for analysing additively produced nabla materials: powdered materials of varying compositions, melt-applied and compressed into a component – a young industry which is still lacking a simple and quick in-line testing procedure such as the one now offered by LIStrat.

Real-time production monitoring

An ever greater number of high-tech industries makes use of additive production processes from a range of powders. The method developed by LIStract monitors composition and changes in real time, so that defects such as wrong insertion or mixtures can be promptly rectified, thereby minimising the reject rate and cutting down on production times.

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© LIStrat GmbH

LIStrat GmbH
Währinger Straße 42, A-1090 Vienna

Founded in 2017
Founders: Ulrich Pacher, Morris Weimerskirch, Tristan Nagy (CEO)

https://listr.at

octogon

www.octogon.org

octogon, a startup based at Leoben, has developed a novel type of strain gauge sensor which, unlike conventional units, need not be glued onto the component to be checked.

Currently available strain gauges need to be glued onto the component with the greatest possible care and accuracy. The slightest inaccuracy can seriously distort the measured results. So far, measuring components has required specially trained staff, with the consequence that strain gauges are typically not used, except in test and lab series.

Daniel Eisl and Matthias Ottlinger, octogon's founders, clearly had in mind to develop a new strain gauge sensor which is easy to handle and produces precise elongation data. Moreover, octogon designs special sensors tailored to the needs of its customers for a wide range of industries and applications, and offers a broad array of standard sensors (such as weighing cells) plus the attendant electronics (such as amplifiers) and services around strain measurement.

Exact strain measurement without gluing

Contrary to customary strain gauges, the StrainPad™ sensor developed by octogon is simply press-fitted onto the component, making do without the work-intensive application process that includes cleaning, grinding, more cleaning, precise gluing

© octogon GmbH

OCTOGON MESSTECHNIK

octogon GmbH
Peter-Tunner-Straße 19, A-8700 Leoben

Founded in 2018
Management: Daniel Eisl, Matthias Ottlinger

www.octogon.org

© octogon GmbH

and sealing. Measuring uncertainties are eliminated and users can substantially cut down on their time and cost input.

Applications

So far, octogon's sensor has been used mostly in two fields: materials testing and injection moulding. Thanks to octogon sensors, testers can check the alignment of any test specimens, thereby excluding the risk of faulty measurement due to strains caused by clamping. The Align Meter developed by octogon will check such strains at a minimum of time. The results are processed with a specially designed amplifier. In developing its StrainPad™, octogon aims to greatly expand the use of strain gauges and open up entirely new fields of business.

SuessCo Sensors

www.suessco.com/sensors

The innovative sensor technology created by the Lower Austrian startup monitors changes and cracks in buildings and infrastructural facilities. This greatly improves user safety while significantly cutting down on the cost of surveys.

The SuessCo Sensors team has developed a novel sensor technology to carry out expansion measurements and positionings by RFID (radio-frequency identification) based on magnetoelastic metals and magnetic field sensors. In this way, expansions and positions can be measured by either a fully passive (i.e. no batteries, environmentally friendly and long-life) or semi-passive method through UHF RFID tags (at 865–869 MHz in the European frequency band) which transmit across several metres, and HF RFID tags (shortwave at 13.56 MHz) which have a range of a few centimetres. When operated at passive functionality (i.e. the sensor is wirelessly energised by the electromagnetic field of the reader), the sensors offer a considerably longer working time since the battery no longer acts as limiting component. Altogether, the technology provides a superior sensor system, as well as data and their analysis, modelling, visualisation and digital documentation.

Greater safety by structural monitoring

The devices offered by SuessCo Sensors register and indicate shifts and cracks in building structures. The data are collected

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SUESSCO SENSORS

SuessCo Sensors GmbH
Rathausplatz 18, A-3130 Herzogenburg

Founded in 2018
Management: Dieter Süss (CTO, founder), Herbert Heigl (CFO, co-founder), Ernst Windhör (CEO, co-founder), Roman Windl (senior engineer)

www.suessco.com/sensors

© foto-hoefinger.at

by an app and can be sent to a central point as necessary. The sensors' small size (about 130 x 80 x 30 mm) is a further advantage compared to customary systems (about 800 x 800 x 800 mm). Tragic incidents such as the collapse of the motorway bridge in Genoa in August 2018 could at last be a thing of the past.

Cost reduction through digitalisation

The system offers many advantages especially when used in structural health monitoring of "critical" infrastructure, opening up new opportunities for monitoring old buildings, structures in the near vicinity of urban civil engineering projects, public and religious buildings, and all types of infrastructural facilities. The digitalisation of monitoring work significantly cuts down on the required input and costs.

Accelerating building progress

SuessCo sensors furthermore present a practical use on building sites, where progress often depends on the hardening rate and temperature development of the concrete. Both can be optimally determined thanks to the novel passive sensor technology offered by SuessCo Sensors.

UpNano

www.upnano.at

A spinoff of the Vienna University of Technology, UpNano has devised an innovative high-resolution 3D printing method for the efficient serial production of microcomponents, which makes micrometre-size models feasible.

Already during their studies at the Vienna University of Technology the team of founders collected by Bernhard Küenburg investigated a high-resolution 3D printing method that can be used for cellular and tissue applications. UpNano offers a high-speed method for printing parts that are small enough to fit onto the point of a pencil. The company's speciality is printing with live cells. As biocompatibility and speed are basic prerequisites for working with cells, the founders faced a large number of challenges.

The new dimension in 3D printing

UpNano's patented method significantly reduces processing times at a continuously high rate of resolution. The throughput rates achieved are unique in the high-resolution printer market, opening up new approaches to cell research. The system's edge in terms of speed combined with the use of optimised biocompatible materials makes it possible to print with live cells (so-called bioprinting) to produce sterile support structures for tissue regeneration. The cells can be admixed to the material before printing or sited on the printed component.

Industrial application

The team's scientific success excited the

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upnano
small · fast · powerful

UpNano GmbH
Modecenterstraße 22/D36, A-1030 Vienna

Founded in 2018
Management: Bernhard Küenburg

www.upnano.at

industry's interest, which in turn spawned the idea of commercial exploitation. After all, the ongoing trend towards miniaturisation has produced ever smaller and more effective products over the years. In order to keep up with this development, the industry needs efficient and economical production methods. Conventional tool-based methods such as microinjection moulding typically are inadequate to achieve the ever smaller tolerances and/or complex shapes of the components. High-resolution 3D printers provide the requested resolution but are not economical due to their low throughput rate.

The NanoOne desktop 3D printer is the first system on the market that makes the production of high-resolution microcomponents economical for batch sizes starting at 1. In addition to biocompatible applications, the system can be used in electronics, micromechanics and microoptics.

usePAT

www.usepat.com

soniccatch by usePAT is a method to measure particles in liquids directly in-line to obtain production data for Industry 4.0 processes in real time.

usePAT is a spinoff of the Vienna University of Technology, where the technology was developed in years of research. Today, the startup makes add-ons for in-line probes. soniccatch is an ultrasonic trap for particles to be fed to probes. Since a “virtual sample volume” is built up in the liquid, the particles are returned to the production process once they have been measured. This continuous check enables processes to be controlled and optimised in real time.

Simplifying production quality assurance

The soniccatch technology makes for a remarkable simplification of quality assurance and monitoring in many production processes, as it works without any cumbersome sampling and its attendant disadvantages (costs, delays, etc.). Solutions for in-line measurements are consequently growing in importance.

Real-time data for Industry 4.0

Industry 4.0 processes, production optimisation and other digital developments all very much depend on real-time data; and the market for them is growing. usePAT is in the forefront of the trend, targeting its add-ons not only at industrial users such as the pharmaceutical industry, the food and beverage industry, bioengineering, life sciences, waste water engineering, the

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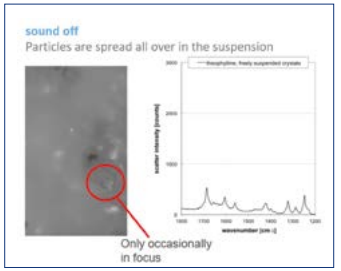
© usePAT

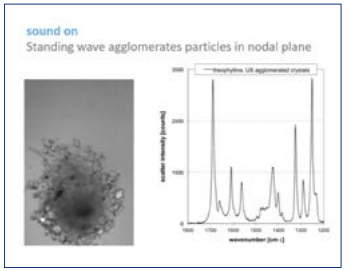
soniccatch
accurate measuring solutions
by usePAT

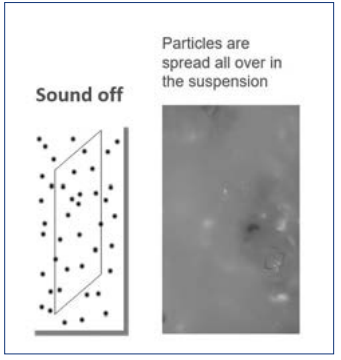
usePAT GmbH
Penzinger Straße 80/4, A-1140 Vienna
(office: Floragasse 7, A-1040 Vienna)

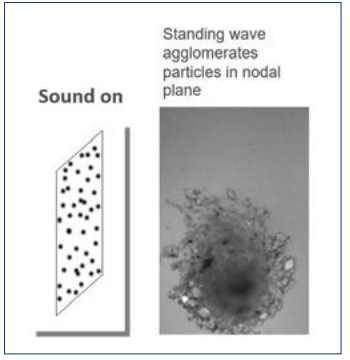
Founded in 2018
Management: Georg Heinz, Stefan Radel

www.usepat.com









© usePAT

petrochemical industry, the metal-working industry, the refrigerating and lubricant industry, but also at producers of probes. For the latter, the combination with soniccatch by usePAT is particularly interesting because it opens up new applications which, in turn, address totally new customer groups.

Rapid marketability

Thanks to the pre-commercial development work at the Vienna University of Technology, usePAT is in a position to market a practically mature product just one year after its foundation. However, the sheer novelty of a technology which brings a previously unknown level of precision to process control requires further efforts to develop the market in order to convince potential customers of its range of applications. This phase has made a good start, and a team of 22 staff is envisaged to be in place by 2022.

VitreaLab

www.vitrealab.com

VitreaLab uses three-dimensional waveguide structures in glass to reduce energy consumption of displays. The method substantially extends the battery life of mobile devices.

Novel light channels of a microscopic scale embedded in glass offer new opportunities for innovative ideas. These waveguides are just a few micrometres in width. They spread light between them and can be inscribed directly in thin glass platelets in any required shape. The production process is cheap and quick, which makes it suitable for mass production.

More contrast and less energy consumption

Three-dimensional waveguides were the subject investigated by young scientists Chiara Greganti and Jonas Zeuner for their theses as part of the quantum research group at the University of Vienna. In going beyond applications in integrated quantum optics they investigated other uses of the multifaceted technology, gathering quite a quantum of ideas. The most promising was a screen technology that uses waveguides to produce monitors which offer a much higher contrast and consume substantially less energy. The waveguides are used to direct light solely to the point where it is actually needed on the monitor. Moreover, lasers are ideal light sources because they can depict a much broader colour spectrum than conventional sources.

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© INiTS Demo Day

VitreaLab GmbH
Boltzmanngasse 5, A-1090 Vienna

Founded in 2018
Management: Jonas Zeuner, Chiara Greganti

www.vitrealab.com

Displays in any shape
Considering that the display is the biggest consumer of electricity and consumers expect to enjoy ever better colour brilliance and contrast, the technology is of great importance for smartphones.

Between Vienna and Milan
After filing the patent, the founders concentrated on starting up their company. At present, the two scientists work in labs in Vienna and Milan together with a staff member. A first prototype is envisaged to be completed by the end of 2019 and presented to prospective partners in the display industry. Next, VitreaLab can complete its development of the first model and license the patent rights to partners.

Eightpins

www.eightpins.at

Eightpins is a novel telescopic seatpost for mountain bikes. It uses the single-tube design which makes do without a tube and saddle clamp.

Lupaan, a startup based at Enns, has developed an integrated telescopic seatpost named Eightpins. The patented system created by Lukas Eberlberger, Andreas Haimberger and Patrick Buchberger, all from Upper Austria, markedly differs from other solutions by directly integrating the seatpost in the bicycle frame. The integrated Eightpins seatpost improves reliability and stability while cutting down on weight. In 2017, Eightpins was the first integrated telescopic seatpost placed on the premium market for mountain bikes. Conventional two-tube telescopic seatposts are too weak for the typical biker's weight and their hydraulic gas pressure springs are prone to failure.

Stronger guide tube
The Eightpins system makes do with one

© Stefan Voitl/Lupaan GmbH

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tube less by using the bike frame as guide tube. As a result, the telescopic tube can be given a much larger and constant diameter. In this way it is ensured that the seatpost is stable enough to meet the static requirements of mountain bikes and, in particular, e-bikes. Moreover, the system can be easily adjusted to customers' needs in terms of body size.

More stroke

Eightpins is the first integrated telescopic seatpost to substantially enlarge the stroke, permitting bikers to lower the seatpost to

EIGHTPINS

Lupaan GmbH
Kristein 2, A-4470 Enns

Founded in 2016
Founders: Patrick Buchberger (CFO), Andreas Haimberger (COO), Lukas Eberlberger (CEO)

www.eightpins.at

give them more freedom of movement. Another novelty is the new Integrated Seatpost Standard (ISPS) which comprises a scheme for seatpost sizes that covers 99% of all bikers without the need to replace the seatpost.

Vision

The Eightpins seatpost can be lowered quickly, which is a major advantage in urban stop-and-go traffic situations because bikers can lower the seatpost just before stopping and raise it again to continue their journey, thereby improving their safety and comfort. Eightpins intends to use the high-performance segment as a starting point for becoming a provider of urban and trekking bikes, thereby contributing its share to future mobility.

Jarolim Fasertechnik

http://jarolim-fasertechnik.com

The startup has developed a process plus equipment for manufacturing nanocellulose in industrially relevant quantities and brought it to serial production.

Michael Jarolim from Upper Austria has invented a process to mass-produce nanocellulose and constructed a pilot plant ready for serial production. A key advantage of nanocellulose is its enormous specific surface which makes it an excellent partner in reactions. The nanofibres are used to improve the properties of paper, as food-proof floating agents, as gas-tight barrier in the packaging industry, in sustainable fibre compounds, in paints and lacquers to enhance their properties, as a substrate for other chemical substances, enzymes, etc.

Stronger fibres

When fibres are reduced to nano range, all macroscopic faults which clearly weaken

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the fibre disappear. In this way, the material can be improved to achieve its theoretical strength potential. In the paper industry, even a minute dose of the fibre significantly increases the module of elasticity, a key parameter in materials engineering. Paper becomes more tear-resistant, and in the lacquering industry nanofibrilated cellulose provides brushing paints with better coating properties at a lower solids content.

Economically scaleable

The greatest obstacle to the mass-use of nanocellulose has been the very high cost

JAROLIM FASER TECHNIK

Jarolim Fasertechnik GmbH
Kaiserfeld 14, A-4673 Gaspoltshofen

Founded it 2016
Management: Michael Jarolim

http://jarolim-fasertechnik.com

of production. Michael Jarolim's process dramatically lowers the efficiency threshold: the large volume of nanofibres to be produced with the process causes the price to drop to a level that allows many new applications, i.a. in the painting and paper industries.

Rollout

After patenting the process and homogenisation machine, Michael Jarolim is set to construct an industrial plant for manufacturing nanocellulose. The planned capacity is 600 tons per year.

Michael Jarolim has already gathered prospective customers and investors so that commercialisation is on its way.

My Esel

www.my-esel.com

My Esel is the world's first individually designed and customised timber bike which can be industrially produced at low cost.

A production method that is new to the bike industry combines biometric software with a flat frame design. The production data are defined by the software: an algorithm computes the frame dimensions and bike geometry specifically for each buyer before the bike is actually made. The result is customisation in spite of serialisation – mass customisation. The bike is tailored exactly to the buyer's body proportions and riding style, a process that has previously been possible only by hand and at great cost, and was typically limited to racers' bikes. The frame is made of innovative materials formerly unknown in bike-making: sandwich materials from timber and carbon such as are used in the aviation industry.

High potential

The My Esel concept is a total novelty in

© My Esel

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the bike sector because it results in bikes produced locally when and as needed. Compared to typical production methods, it requires little capital and offers high margins, and it can be easily scaled up.

Orthopaedically perfect

A biometric software tailors the frame to the buyer's specific physical features, exactly to the millimetre. All it needs is the person's size, shoe size and length of lower leg. Each My Esel promises its rider precise power transmission, exactly the riding performance desired and an orthopaedically perfect

© My Esel

MY ESEL

My Esel GmbH
Holzbauernstraße 20, A-4050 Traun

Founded in 2017
Founders: Heinz Mayrhofer, Christoph Fraundorfer (CEO)

www.my-esel.com

© My Esel

seat position. This fends off otherwise widespread physical pain, especially at the knee and back, typically caused by faulty bike ergonomics. The My Esel concept also allows customising the frame design, paintwork and accessories for each bike. In April 2019, an e-bike model of My Esel was launched on the market.

Founding history

For his architectural studies, Christoph Fraundorfer, all of 6' 5" tall, used his bike every day to get to university. With his knees and back hurting from the exertion, he conceived the idea of developing a concept for affordable “customised bikes”. In Heinz Mayrhofer he found the ideal partner for his project. The former chief developer at Fischer Skis contributed the idea to use timber for the bike frame.

Robo Wunderkind

https://robowunderkind.com

The startup from Vienna has developed a programmable robot whose modular system familiarises children with robotics and programming.

Robo Wunderkind is an Austrian education technology (edtech) company that offers innovative strategies to foster learning in children. The playset of founders Anna Iarotska and Yuri Levin consists of cubes with rounded corners, packed to the hilt with processors, sensors, motors and linking technology. The colourful modules can be joined to make small multifunctional robots. An easy-to-use app enables pre-school children to program their very own modular robots and combine them with Lego bricks to their heart's delight.

Products made by Robo Wunderkind are found in more than 200 schools and thousands of households worldwide. The company's mission is to provide easy-to-understand yet sophisticated MINT solutions for early-childhood education, currently an undersupplied market segment. Its products are suitable for kids from age five, and can furnish educational experience throughout elementary school thanks to their high degree of differentiation.

Early access to the IT world

Robo Wunderkind targets kids at their early stage of development, so that they learn about their surrounding, are confronted with the concepts of robotics

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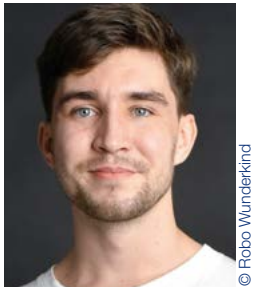

© Robo Wunderkind

Robo Technologies GmbH
Marxergasse 24/2, A-1030 Vienna

Founded in 2013
Founding team: Anna Iarotska, Yuri Levin

https://robowunderkind.com

© Robo Wunderkind

and acquire the basics of programming. The methods and contents used by Robo Wunderkind are among the rare innovative strategies that start already at an early age, during a phase that has an enormous impact on the child's cognitive capacities.

Competences for the future

Anna Iarotska and Yuri Levin founded the company on the vision to develop a solution for future labour market requirements. Solid programming skills and interaction with robots will be of great importance in the future. Accordingly, children should be given a chance to develop these skills already at an early age. Robo Wunderkind is currently preparing to enter the US market.

Seven Bel

www.seven-bel.com (under construction)

The startup from Leonding is developing acoustic cameras to visualise noise. Its products are more accurate, handier and cheaper than their conventional equivalents.

Products and processes need to meet ever more stringent criteria when it comes to the noise they make. Noise is a key parameter in product development.

The noise or, more generally speaking, sound emitted by a device rates high in the customers' evaluation of its quality. Acoustic cameras can pinpoint and analyse noise problems. Same as infrared cameras for heat imaging, they produce a colour-coded image of the depicted object, with red indicating loud and blue denoting quiet. Current cameras that yield good image quality are expensive (from € 40,000 upwards) and typically weigh ten kilos or more. Mobile solutions, available at about € 10,000 and three kilos, are inadequate for many industrial applications. Thomas Rittenschober, inventor from Upper Austria, has developed and applied for a patent on a technology that provides better image quality and significant ergonomic advantages for many industrially relevant uses, while costing only a fraction of the price of existing products.

Technological kick-off

Already as a junior engineer, Thomas Rittenschober developed solutions for noise problems generated by devices and processes. An acoustic camera greatly

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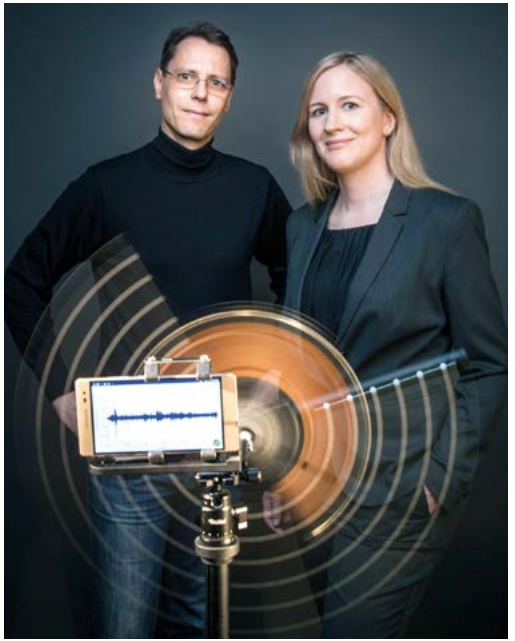
seven bel
SOUND IMAGING. FOR EVERYONE.

Seven Bel GmbH
Forsthausstraße 12e, A-4060 Leonding

Founded in 2018
Founders: Thomas Rittenschober, Barbara Rittenschober

www.seven-bel.com (under construction)



© Andreas Balon

helped him implement his solutions. Fifteen years later, he found that digital progress had just about scratched the surface of the acoustic camera segment. Good-quality cameras are still cumbersome, heavy and expensive. He aimed for small, handy units that deliver excellent quality and are cost-effective. With the dMAC (dual Microphone Acoustic Camera), Seven Bel intends to deliver a completely new solution to the target group.

Damping down noise

The technology evolved by Seven Bel supports engineers working in product development, spatial or architectural acoustics and production engineering. Thus, dMAC can locate the source of a noise in machines and vehicles, and help make devices with controlled sound quality.

Rapid commercial viability

Market entry for the dMAC is envisaged for 2020. Initially, the focus will be on establishing the dMAC in product development, but in the medium term it is targeted for use in architectural acoustics, production quality control and production machine monitoring.

Tec-Innovation

www.tec-innovation.com

The company is developing an ultrasound-based warning system fitted onto the wearer's shoes which greatly enhances the quality of living for blind, visually challenged and motor-impaired persons.

The population of Europe includes about 10.5 million blind and severely sight-impaired persons plus 40 million people with reduced mobility for whom moving around independently poses a challenge in their everyday lives. It is for this group of people that founders Markus Raffer and Kevin Pajestka have developed a warning system that makes getting around easier. The system, integrated in the shoes, recognises obstacles at ground level in good time, alerting the wearer to them. The first pairs of shoes to reach marketability and sold under the Innomake brand are fitted with ultrasound sensors and sensors that register foot movement. A haptic and/or acoustic signal warns the wearer of an obstacle ahead. The user is given further help by a specially developed app that allows regulating such features as the range covered by the system. Innomake shoes register obstacles from a distance of up to four metres.

Wearer-friendly

All obstacles that the wearer needs to be aware of are registered and processed (eliminating interference sources, signal enhancement, etc.) and then sent to the smartphone via Bluetooth. The wearer can use the app to choose the range and type

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© Tec-Innovation GmbH

TEC innovation

Tec-Innovation GmbH
In der Au 5, A-2123 Hautzendorf

Founded in 2014
Founders: Markus Raffer, Kevin Pajestka

www.tec-innovation.com

© Tec-Innovation GmbH

of feedback (acoustic sounds on bone conduction hearing device, vibrating shoe, or no feedback) in real time. The electronics is fitted into a unit added to the front of the shoe. For the wearer this eases the financial investment needed because the detachable unit can be clipped onto any of the models offered by Tec-Innovation. The technology can thus be used sustainably and offers customers a choice of different shoe styles.

New camera technology in the pipeline

The business idea pursued by the startup is a personal mission of Manager Markus Raffer who is visually impaired and is in charge of the legal, economic and marketing aspects of the business. Innomake is the brainchild of Kevin Pajestka who is responsible for its technological development. The two founders are about to launch Innomake on the market and advance to the next version which will incorporate a camera. There are also plans to develop a design for rescue organisations.

TETAN

www.tetan.at

The mechanical engineering company located at Gmunden in Upper Austria has developed a machine that straightens bent bars and tubes, regardless of the type of metal used and suitable even for thin-walled products.

Established in 2016, TETAN, a startup based at Gmunden, is about to market a new engineering product that straightens bars and tubes made of steel, stainless steel, non-ferrous metals and aluminium. Its development focuses on improving production flexibility in the company and increasing the surface quality of twisted goods.

Precisely straight

Straightening machines used to unbend bars and tubes need to meet ever more stringent criteria in terms of accuracy, surface quality and range of use. Founders Friedrich Moser and Ulrich Strasser have developed a totally novel method called SFFS (shear force free straightening) for straightening severely bent bars and tubes with great precision because the bent piece is gripped only at the ends and does not pass through any narrow points. The machine also accepts thin-walled tubes since no process forces liable to deform the tubes act on their surfaces.

The new method is highly energy-efficient because straightening is quick and very effective. It neither requires expensive wear parts such as straightening rolls nor ancillary substances such as oil. Altogether, the TETAN

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TETAN GmbH
Bräuhausstraße 21, A-4810 Gmunden

Founded in 2016
Founders: Ulrich Strasser, Friedrich Moser

www.tetan.at

straightener is cheap to operate, quick to adjust to other dimensions and highly effective.

Turnkey for customers

The founding team is known for its turnkey solutions: it offers not just a machine but adds the full plant, ready for operation. Design, engineering, automation, construction and installation are all supplied by TETAN as a one-stop solution. The current team of five gets support from partners in the region, enabling TETAN to implement customer projects efficiently and at top quality. In addition to launching the first straightening machine on the market, the team is currently working on another development – a new machine that is about to be presented.

tofmotion

www.tofmotion.com

The Viennese startup is developing and producing industrial 3D cameras based on Time-of-Flight (ToF) technology, which let machines experience sight.

The cameras made by the Viennese enterprise tofmotion give eyes to machines. Thanks to the Time-of-Flight technology, also known as 3D Flash LIDAR, cameras furnish quicker and more precise images for controlling tasks. Cameras by tofmotion provide the prerequisites for automated production: equipped with them, autonomous transport vehicles or manufacturing robots achieve much better results than when customary laser scanner technology is used. Founders Christian N. Neufeld (CEO), Robert Hranitzky (CTO) and Franz Duregger (CSO) intend to turn tofmotion into the world's number one manufacturer of ToF camera systems that are fit for mass production and certified for industrial applications.

aws Seedfinancing

Images at 100 times the speed

ToF cameras are 3D cameras that resolve the distance by measuring the round-trip time of an artificial light signal. Compared to competitors, tofmotion cameras supply up to 100 times faster images in real time. The data produced by integrated image processing are directly transferred to control and automation systems of machines and plants, enabling immediate interaction. Autonomous transport vehicles fitted with tofmotion cameras are not bound to control systems and can avoid obstacles on their own. Moreover, tofmotion technology

© tofmotion GmbH

tofmotion GmbH
Euro Plaza, Am Europlatz 2, Building G, A-1120 Vienna

Founded in 2017
Founders: Robert Hranitzky (CTO), Franz Duregger (CSO), Christian N. Neufeld (CEO)

www.tofmotion.com

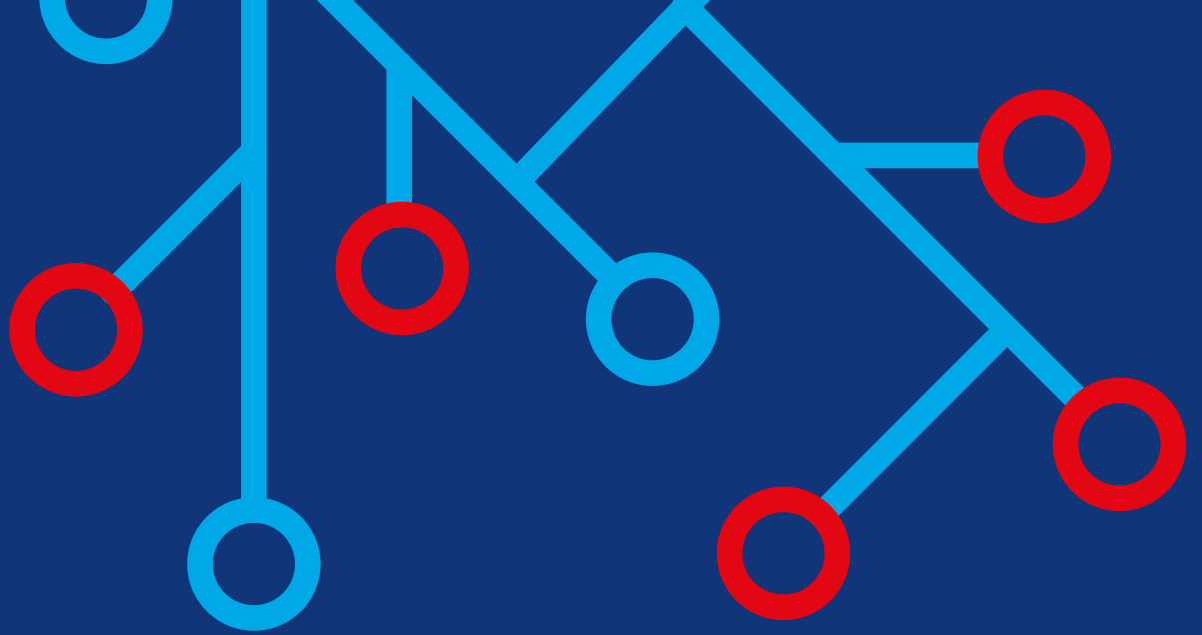
© tofmotion GmbH

endows production robots with the ability to recognise human gestures and obey instructions.

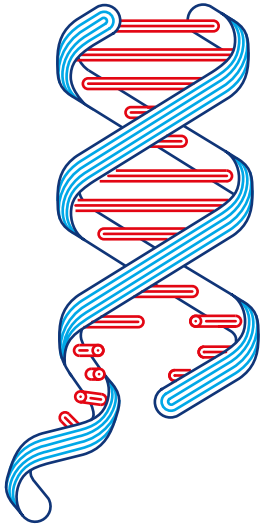
Easy to implement

The founders use standardised interfaces to ensure that the technological potential is fully utilised and the 3D cameras from Vienna are suitable for mass marketing. A simple-to-use software development kit makes the camera system easy to implement and integrate into the customer's software. The tofmotion developers advise customers how to get the system operative as quickly as possible.

The Vienna startup is perfectly clear about its intentions: tofmotion wants to become the global market leader for industrial 3D system solutions.



Life Sciences



aws LISA – Life Science Austria

Bringing life sciences from the lab to the market

Austria as a business location will benefit from the most innovative ideas only once they have made it from the lab to the market. Austria Wirtschaftsservice (aws) has established Life Science Austria (LISA) as a one-stop shop that spans the entire value-added chain of startups in the life sciences. LISA provides customised support at every stage of a startup's development.

www.lifescienceaustria.at

Aelian Bio

http://aelianbio.com

Aelian Bio combines the revolutionary technologies of gene scissors known as CRISPR and the genetic analysis of individual human cells in a new tool for pharmaceutical research.

A substantial drop in the cost of DNA sequencing in the past few years has turned this technology into a common tool in research and industrial applications. It generates huge amounts of human genome sequencing data, which help us decode the genetic causes of diseases and/or understand how drugs work. However, the purely descriptive analysis of genome data often reaches its limits as it is unable to establish a cause-effect relationship. Hence, Aelian Bio's mission is to elucidate the function of individual genes.

Understanding the properties of genes

For this purpose, genes are inactivated with CRISPR scissors in high-throughput screens and the functional consequences are read out at the highest possible (i.e. single-cell) resolution. By means of this technology, it is possible to identify new approaches to therapeutic agents and/or uncover the cellular causes of diseases. Moreover, the method can be used to gain insights into the mechanism of available or potential drugs.

Experienced founders

It all started with a discussion: Christoph Bock, scientific co-founder of Aelian Bio and principal investigator at the Research

© Aelian Biotechnology

AELIAN BIOTECHNOLOGY

Aelian Biotechnology GmbH
Campus Vienna Biocenter 3, A-1030 Vienna

Founded in 2018
Founders: Thomas Moser (CEO), Tilmann Buerckstuemmer (CSO), Christoph Bock (Scientific Adviser)

http://aelianbio.com

© Aelian Biotechnology

Center for Molecular Medicine (CeMM) of the Austrian Academy of Sciences had published an important paper on single-cell screening in the scientific journal “Nature Methods”. His interlocutors Thomas Moser and Tilmann Buerckstuemmer were convinced that this technology would make great advances and thus become commercially interesting within the next years. In view of the fact that Messrs Moser and Buerckstuemmer have already succeeded in founding and selling a biotech company, their judgement has considerable weight. Both of them are now managers at Aelian Bio; Christoph Bock provides the innovative ideas for the startup.

Cooperations

Aelian Bio collaborates with various international pharmaceutical and biotech companies to utilise its technology in research partnerships. Moreover, Aelian Bio has filed intellectual property rights in the areas of genetic screening, cell and gene therapy.

Antiviral Peptide

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© Barbara Zemann

Viennese researcher Hanna Harant is investigating a peptide that exhibits antiviral activity against common pathogens such as the herpes simplex virus.

Certain viral infections can be treated with antivirals, although there are limitations due to the toxic effect of some compounds or resistances developed against the active substance. Most of these special drugs are only effective against one specific virus or one group of viruses. As no broad-spectrum antiviral drugs are available to date, there is a need to develop new antivirals that may be used to fight larger groups of viruses.

No chance for foreign DNA

The research project run by founder Hanna Harant is based on the insight that one specific peptide inhibits the gene expression of so-called foreign DNA that penetrates the cell. The peptide reacts to different types of herpes viruses and, inter alia, inhibits the reproduction of herpes simplex viruses resistant to the standard treatment with aciclovir. The adenovirus is another representative of the double-stranded class of DNA viruses that reacts to the peptide. It causes various infections ranging from conjunctivitis and gastrointestinal manifestations to respiratory tract diseases. At present, medication against this virus is not available.

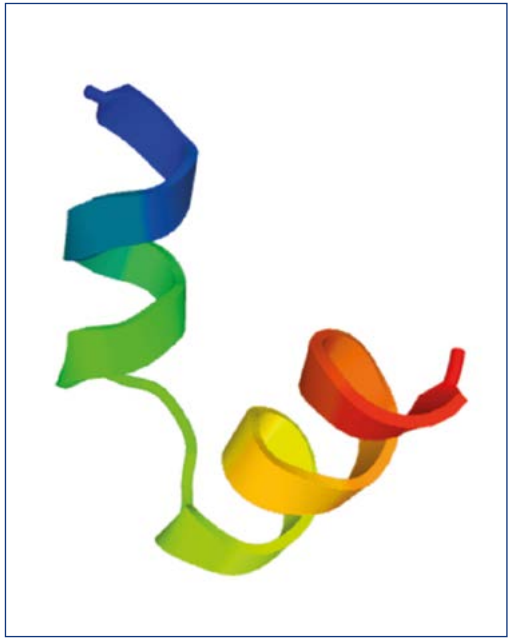
Patented idea

Biotechnologist Hanna Harant founded the company as a one-woman business in 2017 in order to develop the peptide as a

Antiviral peptide
Dr. DI Hanna Harant

Hanna Harant (sole proprietor)
Fenzlgasse 54/8, A-1140 Vienna

Founded in 2017
Management: Hanna Harant



substance for clinical use and filed a patent application for the substance in the same year. Currently the peptide is further modified to determine the link between sequence and activity. Moreover, the company works on elucidating the exact mode of action and, in particular, researches the topical effect based on a relevant herpes simplex virus model. First steps have been taken to set up a limited liability company.

cortEXplore

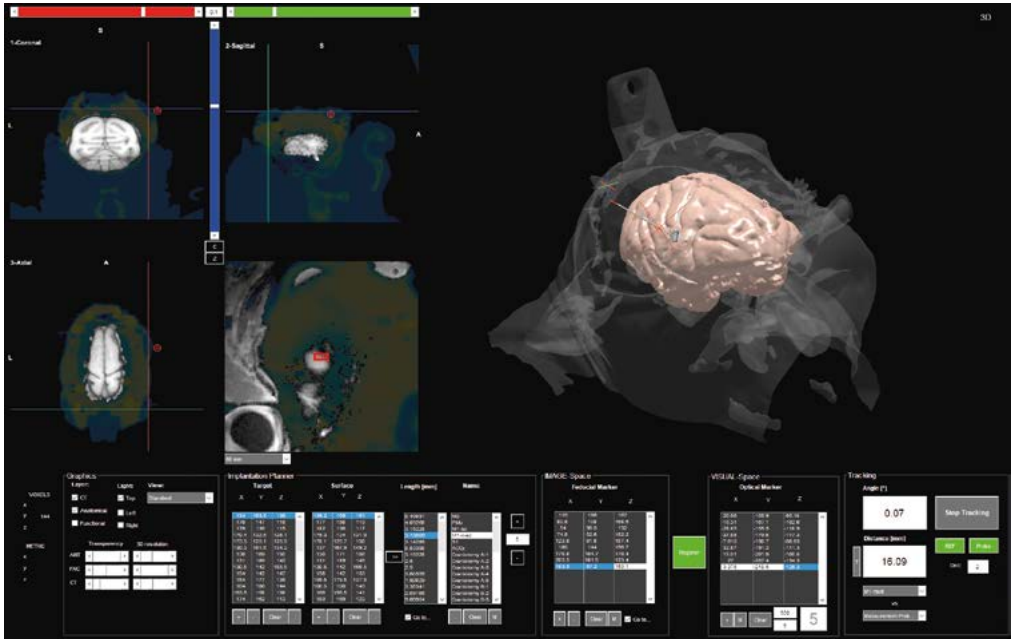
www.cortexplore.com

The Linz-based medical scientific startup is developing a highly innovative surgical navigation system for precise, safe and efficient interventions on the brain.

The high density of functional tissue and blood vessels renders brain surgery particularly difficult. Imprecisely positioned and guided instruments may injure blood vessels as well as highly specialised brain tissue, which may result in serious consequences or even death for the patients. It is cortEXplore's mission to eliminate these risks by means of its technology.

Planning the surgical intervention

cortEXplore uses a neuronavigation system to plan, simulate and perform complex surgical interventions. The software of the Linz-based company fuses images of the patient obtained with various imaging techniques (such as computed tomography, (functional)



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magnetic resonance imaging) to compute a detailed model of the skin, skull, brain tissue and blood vessels. This computer model serves two purposes: it is used to virtually plan the surgical intervention, and it constitutes the template for a 3D print model of the patient's anatomy, which can be utilised to simulate interventions before actual surgery.

Positioning the tools

However, the most important features of the company's technology are monitoring and navigation during surgery. When

Benjamin Lamplmair, © cortEXplore GmbH

CORTEXPLORE

cortEXplore GmbH
Industriezeile 35, A-4020 Linz

Founded in 2018
Founders: Bernhard Großwindhager, Stefan Schaffelhofer (CEO), Robert Prückl, Josef Kramer

www.cortexplore.com

the surgical intervention is performed, several high-resolution cameras monitor the patient's head and thus establish a link to the previously generated computer model. Thanks to this link, the position of surgical tools, which are also recorded by the camera system, can be depicted to the submillimetre and in real time relative to the patient's anatomy. In other words, surgeons virtually see the underlying anatomical structures and can therefore optimally position and guide their tools.

Time schedule

By 2020, cortEXplore expects to offer its system to neuroscientific research facilities to enable invasive interventions on the brain in pharmacological and electrophysiological applications. In cooperation with the university hospitals in Linz, the company hopes to have received approval for use on patients by 2023.

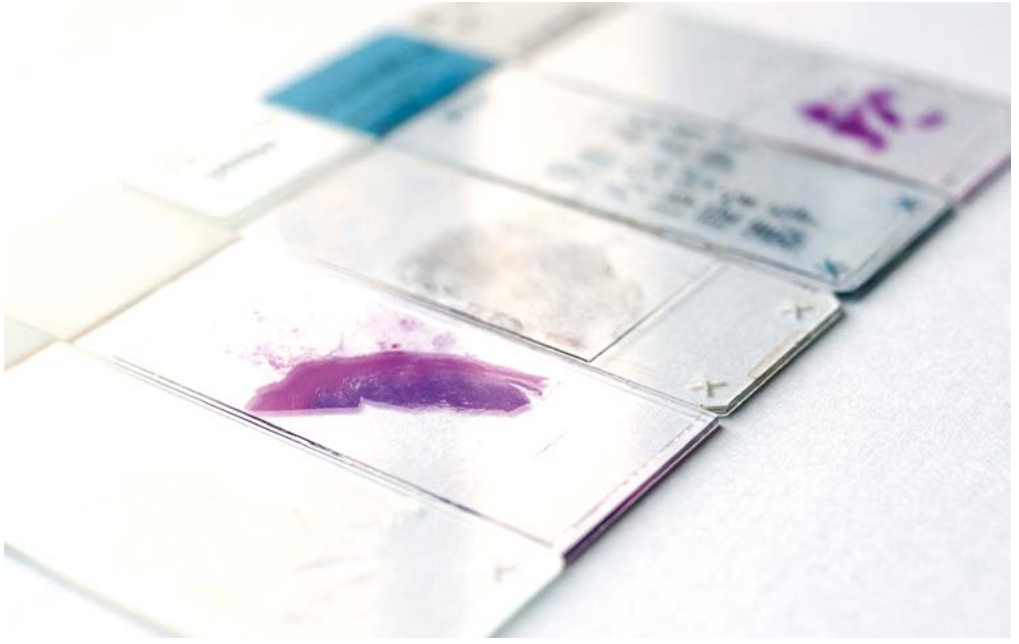
KML Vision

www.kmlvision.com

By developing the image analysis platform IKOSA®, KML Vision has created a tool for the fast and cost-effective automated analysis of big image data.

Visual inspections are a routine task in life sciences (e.g. biomedicine, pharmaceutics) and industry. The daily examination of numerous samples plays an important role in these routines. It frequently involves inspecting extremely small structures such as cells, bacteria, defects or similar minute items through the microscope. The manual evaluation of extremely enlarged and frequently huge numbers of images takes an enormous amount of time. Moreover, purely subjective evaluation may reduce or eliminate reproducibility.

The IKOSA® platform developed by the KML Vision team is a software solution which facilitates the fast, precise and reproducible automated analysis of images.



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Online platform for automated image analysis

With its IKOSA® platform, KML Vision offers customers a tool for fast, reproducible and cost-efficient image analysis. The platform permits simultaneous and collaborative management, viewing, annotation and evaluation of images of any size. The analytic applications are based on deep learning (artificial intelligence) and include such features as recognition, categorisation and measurement of objects. Thanks to IKOSA®'s modular design, new applications required by the customer can easily be

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KMLVISION

KML Vision GmbH
Nikolaiplatz 4/II, A-8020 Graz

Founded in 2018
Founders: Philipp Kainz, Michael Mayrhofer-Reinhartshuber

www.kmlvision.com, www.ikosa.ai

integrated into the system. To ensure its seamless combination with the entire digital value chain, the platform also has a flexible interface (API) to simplify its integration into third-party products. IKOSA® may be used online and or licensed for on-site operation.

Heading towards a clinical decision support system

Once the first basic version of IKOSA® has been launched in 2019, KML Vision plans to continuously expand the platform by new analytic applications. As there are several applications for potential clinical use in the development pipeline, KML Vision's mid-term goal is also to obtain Medical Devices Act certification, so IKOSA® can be used as a clinical decision support system in the future.

OncoOne

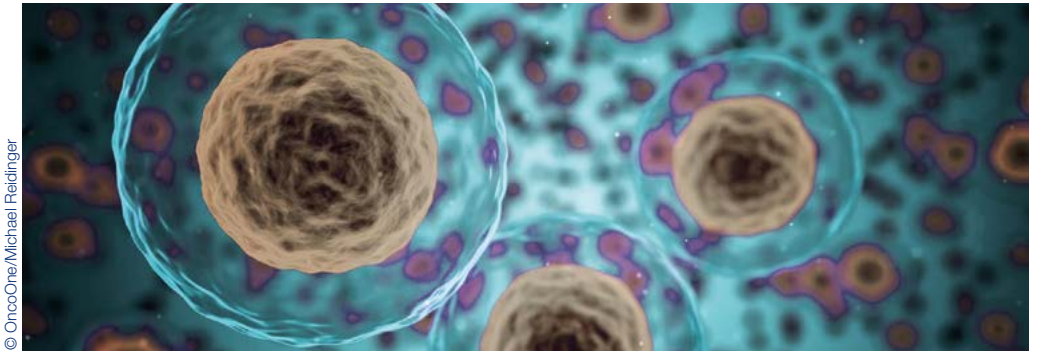
www.oncoone.com

The biotech company is developing innovative, potent therapeutics with a novel mode of action to fight malignant cancers.

The startup aims to develop innovative therapeutics for patients with solid tumours and limited treatment options. OncoOne was founded by Randolf Kerschbaumer, Michael Thiele and Alexander Schinagl in June 2018. All three of the founders have a long history in industrial drug development and have gained extensive experience with protein therapeutics. Each team member has successfully contributed to the development of GMP-grade substances in pharmaceutical companies and to the publication of numerous patents and scientific papers. The OncoOne team combines experience in science management, in heading innovation networks and in performing first-class laboratory work.

Novel mode of action

OncoOne is developing innovative, potent



© OncoOne/Michael Reidinger

therapeutics with a novel mode of action. According to the current schedule, the company anticipates to identify its first drug candidate suitable for entering clinical studies within the next four years.

Licence marketing

OncoOne will focus on tumour indications with high unmet medical needs and great market potential. The startup wants to license individual projects to pharmaceutical companies, preferably after concluding clinical study phase 1. The licence fees will be earmarked for financing additional research and development projects to sustainably position OncoOne as an R&D business.

Looking for talents

Even though OncoOne is a new startup, it has a scientific advisory board and is linked with renowned contract research organisations. Moreover, OncoOne employs researchers and laboratory staff and is constantly looking for talents.

© OncoOne/Michael Reidinger

OncoOne Research & Development GmbH
Höhenstraße 19/2, A-3400 Klosterneuburg

Founded in 2018
Founders: Randolf Kerschbaumer, Michael Thiele, Alexander Schinagl

www.oncoone.com

P4T

www.p4-t.com

The bio-tech company P4 Therapeutics (P4T) is developing a novel, improved platinum-based cancer drug that kills cancer cells more selectively than currently approved platinum compounds.

Recent clinical studies have shown that immunotherapeutics are massively more effective when they are combined with cancer drugs such as cisplatin or carboplatin. The founding team, consisting of Nadine Sommerfeld, Petra Heffeter, Christian Kowol, Walter Berger and Bernhard Keppler, has developed a novel, improved platinum anticancer drug (Albuplatin) that preferentially and specifically accumulates in malignant tissue and therefore kills cancer cells more selectively.

Trojan horses for the tumour

Albuplatin is a prodrug that carries an initially inactive platinum agent in its core. In the patient's blood, Albuplatin very efficiently binds to albumin proteins, one of the most important sources for the tumour cells' enhanced need of nutrients. As the excessive growth of cancer cells leads to the formation of "leaky" vasculature, proteins such as albumin preferentially accumulate in the tumour. The albumin acts as natural nanocarrier for the Albuplatin. Moreover, the fact that Albuplatin binds to albumin significantly increases its residence time in the blood, thus preventing rapid clearance from the blood circulation as is the case with cisplatin and carboplatin. Having bound to albumin, Albuplatin

aws PreSeed

© Gerald Timelthaler (MedUni)

P4 THERAPEUTICS
because life is precious

P4 Therapeutics GmbH
Währinger Straße 42, A-1090 Vienna

Founded in 2019
Founding team: Walter Berger, Christian Kowol, Bernhard Keppler, Nadine S. Sommerfeld (CEO), Petra Heffeter

www.p4-t.com

infiltrates the tumour cells undetected like a “Trojan horse” and is metabolised there. This, in turn, releases and activates the platinum compound in the cancer cells, which kills them by interacting with their DNA.

On the threshold of clinical studies

The Viennese spinoff is currently concluding its very advanced preclinical studies and subsequently plans to do first clinical studies with Albuplatin at Viennese hospitals. P4T wants to take the next generation of platinum-based anticancer drugs to clinical use as soon as possible. The focus is on tumours showing elevated albumin absorption.

RehaBuddy

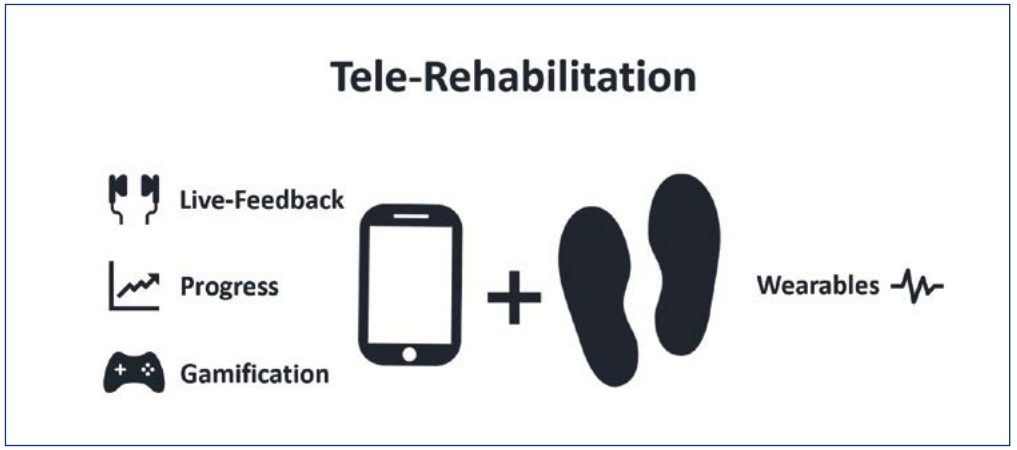
www.rehabuddy.at

The Viennese startup is developing software and intelligent sensors that assist patients undergoing rehabilitation in resuming their social lives at a faster pace.

Due to demographic and social developments, the number of people suffering from chronic diseases such as orthopaedic or neurological conditions is continuously rising. Patients are medically well attended while they are hospitalised, but the situation changes when they are discharged. Once the patients are back home, they have to motivate themselves to do their prescribed exercises regularly and correctly. In most cases, however, there is nobody to monitor their adherence to the regime. This fact may diminish the long-term success of their rehabilitation or even cause a relapse or additional diseases.

In-home therapy support

The four founders of RehaBuddy are developing a telemedicine system that



actively supports patients who have to train their musculoskeletal system at home. Sensors worn on the body, e.g. in insoles, record the movements of the lower limbs. The collected data are utilised to quantify the rehabilitation progress made at home, design playful exercises and give feedback on the success of the exercises. They enable physicians and therapists to trace, evaluate and, if necessary, correct the regime. The exercises can be adapted throughout the therapy without the patients needing to come to the hospital. RehaBuddy will also develop applications for specific problems, e.g. a helper app that provides live feedback to support compliance with partial weight bearing prescriptions.

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© Igor Tkachenko Bril/RehaBuddy

Promising research results

The idea for RehaBuddy emerged during many years of research on assistive technologies for elderly persons and people with disabilities. Important conclusions could, for instance, be drawn from work

RehaBuddy (limited liability company currently being established)
Ernst-Melchior-Gasse 11/1/G1, A-1020 Vienna

Founded in 2019
Founders: Andrés Igor Tkachenko Bril, Dietmar Rafolt, Harald Jagoš (CEO), Paul Kressnik

www.rehabuddy.at

on a system for mobile gait analysis, which was, inter alia, used for evaluating therapeutic progress and the risk of falling. Promising research results and the very positive response from users and healthcare professionals convinced the founders to embark on the road towards commercialisation.

Professional commercialisation

RehaBuddy is now facing the challenge to develop a minimum viable product (MVP), i.e. a kind of prototype, along with a sustainable business model. The next step will then be to devise a utilisation concept and a potential reimbursement model for the medical device.

UmYummy FOODLABS

www.umyummy.com

UmYummy manufactures natural, organically certifiable food ingredients as substitutes for declarable additives. The taste-intensive and healthy ingredients are obtained by refining regional raw materials. These ingredients are created for the respective use in industrial and commercial food production.

Modern consumers increasingly tend to rely on processed food. As evidenced by double-digit growth rates, convenience food has become a major boom segment in the food industry. Most convenience products do not support a healthy lifestyle due to flavour enhancers and other additives. Convenience products without or only a few additives and/or enhancers are often perceived as bland in taste. This explains why customers often refrain from buying healthy alternatives despite the fact that two thirds of all EU citizens are concerned about additives.

The call for clean labelling is getting urgent. The “clean label” subsumes all

foods produced without any additives and labelled as such. UmYummy is developing a platform technology that can produce organically certifiable food ingredients with a wide variety of properties from regional raw materials.

Experienced founders

The founding team's vision is to revolutionise the processed food market and it thus endorses the customers' call for a change of values in nutrition. The team consists of Jens Pontiller, a food- and biotechnologist as well as a passionate serial entrepreneur, Stefan Beyer, a marketing expert with a background in high-end gastronomy, and Emmerich Berghofer, former head of the Institute of Food Science at the University of Natural Resources and Life Sciences in Vienna.

The platform offers more of everything

Contrary to traditionally used monofunctional single components, UmYummy aims to combine several factors in its products to improve the respective food. The innovative platform technology currently developed by the company relies on a generic basic process. It pools properties that enhance flavour, texture and consistency, as well as nutritionally valuable, health-promoting and antioxidant properties. Using them to refine regional raw materials will facilitate the efficient and economical manufacture of food products at the commercial and industrial level.

© Markus Rössle

UmYummy FOODLABS GmbH
Mitterweg 11, A-3422 Altenberg

Founded in 2019
Founders: Jens Pontiller, Stefan Beyer, Emmerich Berghofer

www.umyummy.com

AVVie

www.angelvalve.com

AVVie is developing a minimally invasive implant that corrects mitral regurgitation and prevents persistent cardiac overload.

A mitral valve that is leaking because its chordae are damaged causes the blood to flow back from the left ventricle into the left atrium of the heart. Mitral regurgitation is one of the most common cardiac valve diseases worldwide. It persistently overloads the heart muscle and, in the worst case, may lead to death. In Europe and the USA around eight million people suffer from moderate to severe mitral regurgitation. Although open heart surgery is the current method of choice, this intervention entails high risks. Fifty percent of affected patients remain untreated due to advanced age or comorbidities.

Cardiothoracic surgeon Werner Mohl from the Medical University of Vienna founded the startup AVVie (Angel Valve Vienna) to offer a much gentler therapy to patients suffering from mitral regurgitation: Mitral Butterfly® is an implant that can be inserted into the heart via a catheter in a minimally invasive procedure. The defective valve is repaired in a single step, which considerably reduces the duration of the intervention and the risk for patients.

Valves close tightly again

The mitral valve is one of four cardiac valves, and it may become leaky. In case of mitral valve prolapse (i.e. a special type of severe impairment of the valve's function) major

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avvie
Advancing Transcatheter Mitral Valve Repair

AVVie GmbH
Lazarettgasse 12/19, A-1090 Vienna

Founded in 2018
Management: Werner Mohl

www.angelvalve.com

© AngelValve

open-heart surgery is usually performed, but this is no option for many patients because of their advanced age or other diseases. Hence, minimally invasive surgery via catheter is considered the method of the future. The issue is that, at present, a reliable method for such a valve correction is not available. AVVie's aim is to offer a novel solution for all affected patients by developing its cardiac valve implant Mitral Butterfly® specifically for this purpose.

Testing first samples

Mitral Butterfly® is currently in the preclinical test phase. The first clinical study is scheduled for 2021.

BHS Technologies

www.bhs-technologies.com

BHS Technologies is constructing an operating microscope that ergonomically adapts to the surgeon rather than vice versa – as has been the case to date.

In microsurgery, the operating microscope is the surgeon's most important tool. The currently used technology is based on a concept developed in the late 1950s and has never been substantially refined. Markus Hütter and Michael Santek, the founders of BHS Technologies, consider this to be an omission. Their Innsbruck-based startup is developing a novel surgical microscope technology. Up to now, surgeons have had to put down their tools whenever they wanted to view the operating field from a different angle, thereby briefly interrupting their surgical intervention. In the future, view changes will be handled swiftly and intuitively by simple head movements thanks to the novel operating microscope.

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Noticeable improvements

The operating microscope developed by BHS Technologies substantially improves work ergonomics and surgical procedures. It lets surgeons do interventions with a robotic arm and a 3D camera without having to put down their tools. The robot's arm serves as their third arm. The intervention is visualised on micro screens which are worn as headset and allow full view – and thus full control – of the operating field.

In addition, the new technology lets surgeons work in more ergonomic positions

© Fabio Cracolici

BHS Technologies GmbH
Dr.-Glatz-Straße 25, A-6020 Innsbruck

Founded in 2017
Management: Markus Hütter (CEO), Michael Santek (CTO)

www.bhs-technologies.com

and helps to prevent back pains typically suffered by these professionals. As a result, surgical interventions can be done faster, better and more ergonomically. A functional surgical microscope constructed by BHS Technologies from standard components was tested in several hospitals in collaboration with the users. The feedback was overwhelming.

Getting fit for the market

Markus Hütter and Michael Santek see great development potential in the areas of digital image processing and robotic assistance systems for medical technical equipment. These developments entail numerous opportunities and advantages for surgeons. The company's current target is to successfully launch the high-tech medical device by offering it at a competitive price. The founders plan to bring the first BHS microscopes to the market by mid-2020.

contextflow

http://contextflow.com

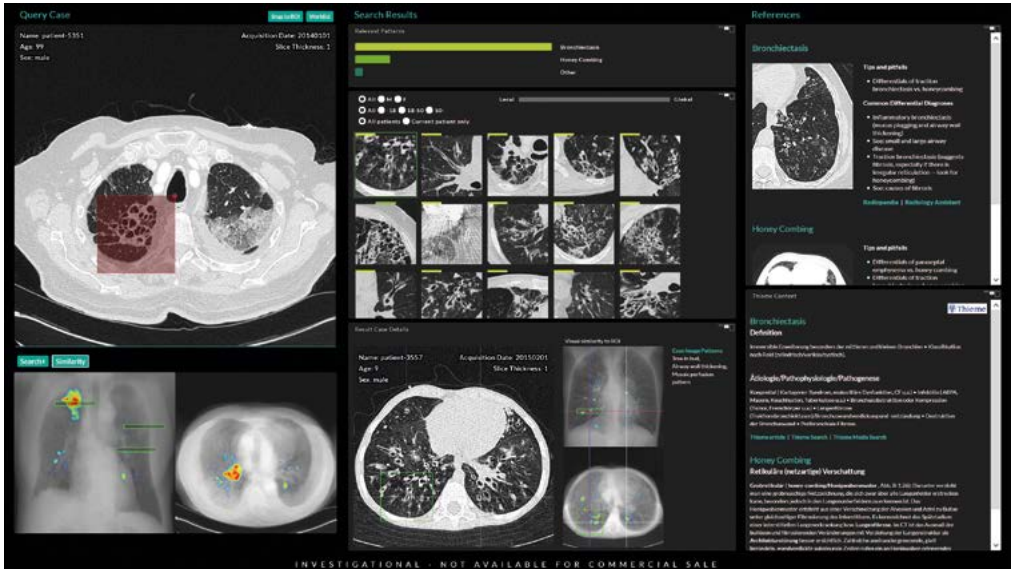
The startup has developed a 3D image-based search engine for radiologists that is powered by deep learning, a type of artificial intelligence (AI).

contextflow helps radiologists make more precise diagnoses in less time. The software of the Viennese startup provides fast and direct access to relevant comparable cases during diagnostic reporting. The comparison of 3D images yields case-relevant information, references and statistics for radiologists' work.

If additional information is required for a medical report – i.e. on average in 20% of all cases – the software also displays all suitable data by simply selecting the respective area of the image. Radiologists no longer need to consult books or colleagues and the accuracy of diagnostic reports improves.

Unique selling point

The contextflow software is designed as



© contextflow

search engine and not as specific solution for certain pathologies. When writing diagnostic reports, radiologists already rely on text-based internet search engines. They can easily integrate contextflow in their reporting procedure. Unlike the standard method, which is based on machine learning, the unique selling point of contextflow's search-engine approach is scalability: the search range can be extended to the entire human body without any major development effort or manual marking of large numbers of images. The current software presents the results within seconds.

© contextflow

contextflow

contextflow GmbH
Floragasse 7/7, A-1040 Vienna

Founded in 2016
Founders: René Donner, Georg Langs, Allan Hanbury, Markus Holzer (CEO)

http://contextflow.com

Company history
The company was founded in July 2016 by a team of AI and engineering experts. It was voted “Most Promising Startup” at the BSC Search Industry Awards and received the Digital Innovation Award of the Austrian Federal Ministry of Education, Science and Research in 2017. In 2018, contextflow acquired its first private investors and was selected for the Philips HealthWorks Accelerator Program as one of 19 startups from more than 700 candidates. The company is currently testing its 3D image software in collaboration with five partner hospitals and is scheduled to take on other hospitals at an international level already this year.

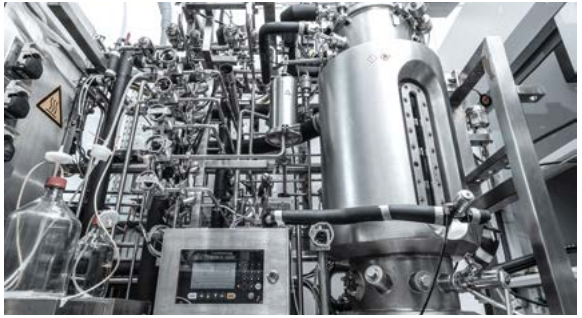
Evologic Technologies

www.evologic-technologies.com

The bioreactor designed by the company is the first to cheaply produce a symbiotic fungus that will help farmers all over the world increase their yields with fewer resources.

Symbiotic arbuscular mycorrhizal fungi (AMF) are a biostimulant that can increase the yield of arable land in a natural and ecologically sustainable way. If grown in symbiosis with a crop plant, AMF increase the latter’s root volume. The finely threaded mycelium enhances the soil volume the plant can access by 5 to 14 times. It stores water and actively transports nutrients into the plant’s roots.

The data obtained in 170 field studies worldwide document that the use of AMF increases yields by an average of 16%. However, commercial products are too expensive to be reasonably applied on the field. Evologic Technologies, a spinoff of the Vienna University of Technology, has set itself



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the task of developing a novel production method that makes the fungus economical to use.

Production problem

The fungus grows slowly and needs a host plant for reproduction. Evologic Technologies is the first company worldwide to develop a scalable production process for cultivating differentiated plant tissue (hairy roots). For the first time, hairy roots and AMF can be grown at an industrial level in a high-tech bioreactor specifically developed for this purpose. By relying on technologies from

© Michael Gizicki

Evologic Technologies GmbH
Thaliastraße 7/20, A-1160 Vienna

Founded in 2016
Management: Wieland Reichelt

www.evologic-technologies.com

the pharmaceutical industry, Evologic Technologies is in full control of product quality. Unlike competing methods, the company's manufacturing process can be scaled up to a production level of several cubic metres per reactor load. The improved efficiency gained by this scale-up lowers production costs to a level that makes using the AMF economically highly attractive for farmers.

Establishing symbiosis

To ensure maximum efficiency, the fungus is directly applied onto the seeds. Compared to conventional delivery into the seed furrow, coated seeds are ten times more efficient. The AMF concentrate is supplied to seed merchants as ready-to-use product to ensure high-quality dressing of seeds.

HeaRT

www.heart-regeneration.com

The spinoff located in Innsbruck is developing a treatment based on shockwave therapy to stimulate the regeneration of infarcted heart muscle tissue.

HeaRT was founded as spinoff of the Medical University of Innsbruck in 2016 to bring the results obtained in the heart surgery research lab to clinical use. The company wants to use shockwaves, a therapy well established for other indications, to stimulate wound healing in damaged cardiac tissue.

Johannes Holfeld, heart surgeon at Innsbruck University Hospital, founded the startup jointly with his doctoral supervisor Michael Grimm and physicist Christian Dorfmüller, with the aim to apply this well-tested method to the heart. To do so, a small transducer had to be developed. This single-use product can be sterilised and is suitable for direct

© Martin Vandory Fotografie

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cardiac application during cardiac bypass surgery.

Regeneration of the heart muscle

Survivors of heart attacks often face serious consequences and limitations. Although novel medication has permitted stabilising treatment, it is still impossible to regenerate the infarcted heart muscle. Stem cell therapy as well as attempts to solve the problem with the help of gene therapy have invariably failed at the heart. This is probably the reason why the researchers have been awarded

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HEART REGENERATION TECHNOLOGIES

Heart Regeneration Technologies GmbH
Kaiser-Josef-Straße 3/2, A-6020 Innsbruck

Founded in 2016
Management: Johannes Holfeld (CEO), Christian Dorfmüller (CTO), Gregor Holfeld (CFO)

www.heart-regeneration.com

numerous national and international science prizes for developing their cardiac shockwave therapy in the past years.

Fruits of their own research

The development of cardiac shockwave therapy led directly to the foundation of the HeaRT spinoff. The company can exploit the research results and turn itself into the industrial partner in the label-enabling trial. The startup's first target is to bring the medical device to general use in a large clinical study. Such attempts to translate basic research to clinical application are seldom crowned with success, but if the preliminary results can be confirmed in the current study, HeaRT's medical device may obtain the final approval in around two years.

PhagoMed

www.phagomed.com

PhagoMed is developing alternatives to antibiotics that are based on natural viruses called phages, which can fight multi-resistant germs.

A growing number of bacterial strains can no longer be treated with antibiotics because they have become resistant. In 2015, nearly 33,000 people in the EU were killed by germs against which standard antibiotics failed to help. Moreover, many patients suffer from chronic bacterial infections that cannot be healed with antibiotics. The problem might be solved by phages, i.e. viruses that exclusively attack bacteria. They multiply by infecting bacteria with their DNA and reprogramming the bacterial cell to produce new phages. The special enzymes they express burst the bacterial cell walls and lead to bacterial cell death.

It is the mission of the Viennese biotech startup PhagoMed to use phages to




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solve the antibiotics crisis. The founding team of German orthopaedist Burkhard Wippermann together with Alexander Belcredi and Lorenzo Corsini, two former Boston Consulting Group advisers, is developing pharmaceuticals based on phages. The company is currently in the preclinical research phase.

New treatment approaches for infected implants

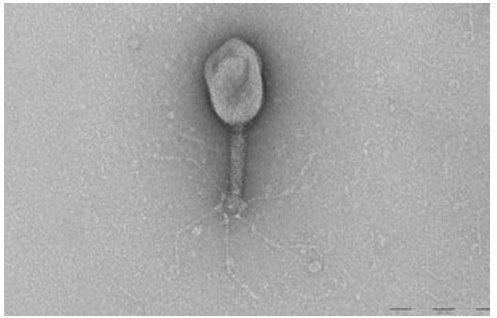
Phages are natural viruses that do not cause any known side effects. Former Eastern Bloc countries have been using

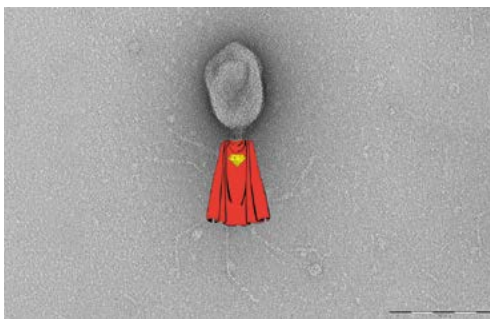
© PhagoMed, Anna del Alcazár

PhagoMed Biopharma GmbH
Vienna Biocenter, Viehmarktgasse 2, A-1030 Vienna

Founded in 2017
Founders: Lorenzo Corsini (CEO, Research & Development), Burkhard Wippermann (Medical Adviser), Alexander Belcredi (CEO, Business & Finance)

www.phagomed.com





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phages for decades, because they had hardly any access to antibiotics from the West during the Cold War. PhagoMed has specialised in developing pharmaceuticals based on phages for treating chronic bacterial infections, e.g. those associated with biofilms. Infected implants are a prospective application field. The antibiotics crisis has already increased the risk of infection for such surgical interventions as hip and knee replacements or urinary catheters. Studies show that 5% of all knee and hip implants become severely infected within ten years. Phages could be an option for cure because they fight the bacterial biofilms that form on infected implants much more effectively than antibiotics do.

Targeted growth

The founders expect approval of the first phage-based pharmaceuticals in Europe by around 2025. Messrs Belcredi and Corsini are confident that their therapy approach will have secured them a share of the multi-billion-dollar market for alternatives to antibiotics by 2030. Besides implant infections, the company also studies infections of the bladder and vagina. PhagoMed has succeeded to convince not only the jury of the Austrian Phoenix award but also various investors and supporters of the company's approach.

Rewellio

www.rewellio.com

The company based at Bad Ischl has developed a therapy app which uses a tablet PC and virtual-reality headsets to make rehabilitation of stroke patients significantly more effective.

Every year, 15 million people around the world have a stroke. About one third of them must cope with long-lasting impairments, primarily in their arms and hands. Having worked as a physiotherapist specialising in stroke patients for ten years, founder and trained software developer Georg Teufl noted that conventional therapies have remained essentially unchanged for decades, are outdated, inefficient and expensive. In early 2017, he started to experiment with low-priced entertainment electronics (primarily virtual reality headsets) which were packed with the latest technology to explore new therapy approaches, thereby laying the cornerstone for Rewellio.

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Therapy platform for therapists and patients

The Upper Austrian startup offers a software designed to support rehabilitation after strokes. It can be accessed via the Rewellio app by both therapists and patients. The app's core element is the "patient engine" which generates optimised therapy modules and sessions. Numerous sensors in the terminal devices capture each of the patient's movements as a dataset.

These data are processed using proprietary algorithms and artificial intelligence and

© Rewellio GmbH

rewellio
empowered by you

Rewellio GmbH
Technoparkstraße 3/16, A-4820 Bad Ischl

Founded in 2017
Management: Georg Teufl

www.rewellio.com

made available to patients and therapists in the form of recommendations regarding the choice, intensity and frequency of exercises throughout the therapy. If used regularly and across all therapy lines (hand, visual, cognition and speech therapy), the “patient engine” learns to better understand the patient and is thus able to individually adapt specific therapies to his/her needs and abilities, which, in turn, ensures the optimal use of therapy time.

An international company

With an office in Los Angeles and certificates for medical products in the USA (FDA) and in Europe (CE), Rewellio has the prerequisites to enter the international market. Certifications for Canada and Australia are expected to be issued soon.

Ribbon Biolabs

www.ribbonbiolabs.com

The Viennese startup is developing a method that facilitates automated, high-throughput production of very long, complex DNA molecules for biotech research.

Synthetically produced DNA is needed for and/or used in various R&D areas, be it in medicine, agrobiotechnology or other fields of application. Using conventional methods, DNA strands with up to 2k base pairs can easily be manufactured in the laboratory by automated synthesisers. However, as there are still technological limits to producing longer DNA molecules (5k-10k base pairs), such molecules must be manually assembled or cloned. It has not yet been possible to synthetically produce the more complex and/or longer DNA molecules (up to 100k base pairs) that would be needed for many applications.

The company, founded in 2018 by Harold P. de Vladar und Wladimir Labeikovsky, wants to fill this gap. Ribbon Biolabs has developed and filed a patent application for a technology which permits the cost- and time-efficient automated production of long and/or complex DNA molecules. The method is based on an automated biochemical workflow and an algorithm for calculating the optimal synthesis process.

On the threshold to the market

Ribbon Biolabs is the first company on the market to specialise in high-throughput production of complex DNA. This unique selling point provides Ribbon Biolabs with

© Ribbon Biolabs

Ribbon Biolabs GmbH
Brehmstraße 14a, A-1110 Vienna

Founded in 2018
Founders: Harold P. de Vladar (CEO), Wladimir Labeikovsky

www.ribbonbiolabs.com

a decisive edge over its competitors. The first DNA molecules containing around 10k base pairs are envisaged to be produced in 2019, the production of subgenomic-length DNA is set to start in 2020.

Market

Around one in three biotech companies needs synthetic DNA for research and development purposes. Approximately half of these firms need DNA molecules containing several thousand base pairs. In view of this demand, Ribbon Biolabs targets the global synthetic biology market, which comprises numerous fields of application such as biopharmacy, biomedicine, biofuels, nanotechnology or bioinformatics. Demand is skyrocketing at annual growth rates of more than 50%. Ribbon Biolabs plans to either offer its products directly online or to market them in cooperation with established biotech companies.

Saphenus

www.saphenus.com

Saphenus is developing a novel prosthesis featuring a sensory feedback system that helps people who have lost a limb get phantom pain under control.

Phantom pain is a great challenge for people whose limbs have been amputated. It arises because the brain continues to seek information about the missing limb after the amputation. In this futile attempt, the brain switches to highest sensitivity – a phenomenon of phantom pain. Another category of pains frequently affecting amputees is neuroma pain. The founding team, consisting of Rainer Schultheis, Aaron Pitschl, Sylvia Brayley-Schultheis and business angel Toni Innauer, thinks that Saphenus can solve both problems. A novel leg prosthesis stimulating the nerves in the stump lets the wearer feel his/her lost leg again.

Information for the brain

The pain recedes if the brain is once again

fed with sensory information. The first step is to rewire the remaining lateral foot nerve endings from a patient's stump to healthy tissue in the thigh, placing them close to the skin surface, in a reconstructive surgery called targeted sensory reinnervation (TSR). It takes the nerves around six months to restore the feeling of the lost foot. Sensorially, the patient feels like having a foot again and being complete once more – a highly emotional experience. In the next step, the quality of walking with the prosthesis is improved by a sensory feedback system. Patients can feel the ground again.

Rewiring nerves as state of the art

Saphenus' aim and vision is to firmly establish the rewiring of nerves as state of the art in hospitals. In the future, surgeons will already pave the way for sustained pain relief during planned amputations. This calls for rethinking surgeons' workflow and for a dialogue with various disciplines. Amputation is not the end, but the beginning of therapy.

Innovative care

Founders and managers Rainer Schultheis and Aaron Pitschl as well as investor Toni Innauer bet on a breakthrough innovation in the prosthetic care of amputated patients. Saphenus wants to change the amputation technique to get a grip on pain from the very beginning and give amputees a new chance at life.

© Saphenus

Saphenus Medical Technology GmbH
Magnesitstraße 1, A-3500 Krems

Founded in 2016
Founding team: Rainer Schultheis (CEO), Aaron Pitschl (CTO), Anton Innauer, Sylvia Brayley-Schultheis

www.saphenus.com

surgebright

www.surgebright.com

surgebright makes the world's first human bone screw graft that does not require metal to connect bone fragments securely and stably, thus eliminating the need for a second surgery to remove the metal.

Time and again, orthopaedists and trauma surgeons must cope with the disadvantages of metal implants. The fact that conventional implants often have to be removed in a second surgical intervention makes the practice expensive and stressful for patients. This motivated Linz orthopaedist Klaus Pastl to look for alternative methods. He developed a human bone graft that can securely and stably connect bones.

The Shark Screw® allograft is made of sterilised human donor bone, which is pervaded by endogenous tissue within six weeks. Connecting bones with these allografts is gentle on patients because the grafts do not have to be removed in a second surgical intervention. Shark Screw® allografts are not only used for fractures, nonunions and attritions but also for correcting deformities, e.g. in bunion surgery.

Market penetration

Klaus Pastl founded surgebright in 2016 jointly with Stefan Doboczky, CEO of Austrian cellulosic fibre producer Lenzing. Also on board are his two sons Lukas and Thomas, both of them managers of the startup. surgebright is a licensed tissue bank and has already grown to 13 staff.

© surgebright

surgebright
brighter ways for surgery

surgebright GmbH
Gewerbezeile 7, A-4040 Lichtenberg

Founded in 2016
Founders: Klaus Pastl, Lukas Pastl, Thomas Pastl, Stefan Doboczky

www.surgebright.com

© surgebright

At Neulichtenberg near Linz, the bone screws are milled from donor bones in a complex procedure carried out in clean rooms (sterile environment, filtered air, etc.), and subsequently sterilised by a partner company in Germany.

surgebright has already been awarded numerous founder's prizes and is the operating centre for the production and worldwide market penetration of the Shark Screw®. The innovation enjoys patent protection until 2028. surgebright products are already utilised in more than 50 different areas, chiefly in the foot, hand, knee and shoulder in orthopaedic and trauma surgery. In Austria, Shark-Screw® allografts are used in 45 hospitals.

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Projects supported in 2018

P4T	PreSeed	Life Sciences	162
PhagoMed	Seedfinancing	Life Sciences	191
Reactive Reality	Seedfinancing	ICT	55
RehaBuddy	PreSeed	Life Sciences	165
Rewellio	Seedfinancing	Life Sciences	196
Ribbon Biolabs	Seedfinancing	Life Sciences	200
Robo Wunderkind	Seedfinancing	Physical Sciences	120

Saphenus	Seedfinancing	Life Sciences	203
Seven Bel	Seedfinancing	Physical Sciences	124
SLOC	Seedfinancing	ICT	60
SuessCo Sensors	PreSeed	Physical Sciences	92
surgebright	Seedfinancing	Life Sciences	206
Symbiotic	PreSeed	ICT	34
talentify	Seedfinancing	ICT	64

Tec-Innovation	Seedfinancing	Physical Sciences	128
TETAN	Seedfinancing	Physical Sciences	132
tofmotion	Seedfinancing	Physical Sciences	136
UmYummy	PreSeed	Life Sciences	169
UpNano	PreSeed	Physical Sciences	96
usePAT	PreSeed	Physical Sciences	100
VitreaLab	PreSeed	Physical Sciences	104

XLO	PreSeed	ICT	37
zerolens	PreSeed	ICT	41

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Boosting key technologies

On behalf of the Austrian Federal Ministry for Digital and Economic Affairs and the Austrian Federal Ministry for Transport, Innovation and Technology, Austria Wirtschaftsservice Gesellschaft mbH (aws) helps high-tech companies locate and set up business in Austria. A special focus is on supporting technological areas with high growth potential and innovative strength such as life sciences, information and communication technology, and physical sciences.

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