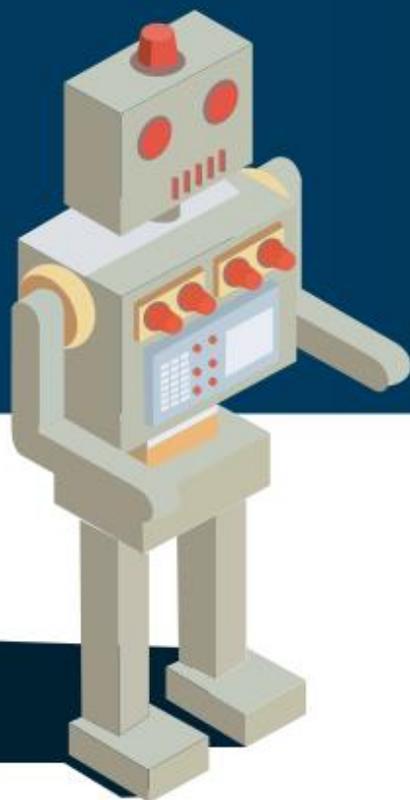


ROBOTUNION

VENTURE JURY DAY



PARIS 

5 December 2019

Robotics is booming, new applications emerge on a daily basis in every industry: in the air, in the water, in the cities or in our homes. Investment in robotics start-ups has never been so high.

The European Commission is supporting the development of robotic technologies, as well as the entrepreneurs with the ambition to take the leadership in this growing sector.

The RobotUnion acceleration program, funded under the H2020 instrument by the European Commission has the mission to detect and support scale-ups in this sector.

Among the 10 following companies' finalists of the RobotUnion Acceleration program, **4 scale up companies will receive 100k€ to further support their access to funding.**

Your point of view on the selection of the 4 winners is very important to us to ensure that selected companies reach interest from private investors and to further define the European Commission investment strategy.

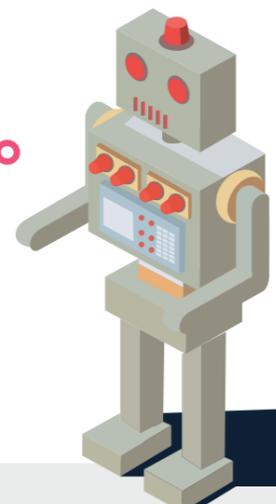
On the behalf of the European Commission and its partners, we thank in you advance for your support and active contribution.



Régis Hamelin
CTO
BLUMORPHO



www.robotunion.eu



CLIIN APS

The World's first on board Hull cleaning Robot for shipping industry efficiency while reducing its environmental impact.



Company Description

CLIIN ApS has invented a robot that can assist ship's crew in cleaning the cargo holds of a ship and are developing an extensive patented world's first on-board autonomous Hull Cleaning Robot (HCR). The HCR is able to keep the hull of a ship clean from microorganisms, algae and animal fouling (biofouling) at all times.

Problem

Biofouling invokes significant costs on the shipping industry. Annually the shipping industry is consuming 400 billion tons of heavy fuel oil/1.4 trillion USD, contributing to more than 1 trillion tons of CO2. In addition, ships are carrying invasive species on its hull introducing those to local marine eco system representing a threat of extinction to local marine life.

Solution

The HCR solution consists of a permanently installed on-board mobile docking station and an autonomous cleaning robot. It navigates the ships' hull in a predefined pattern and cleans the hull surface every 2-3 weeks keeping the hull clean at all times. The robot is equipped with cameras, and can document the cleanness of the hull. The HCR solution target all ships globally above 5.000 dwt (app. 90,000 ships).

Market

It's a global market and large. Initially we target all major shipowners globally. Total market size is app. 90.000 ships with one or more robots pr. Ship.

Business Model

CLIIN is leasing out the robots with a downpayment and monthly fee. We are looking for strategic partners in US, Japan and Australia, where dialog with candidates have already begun.

USP & Differentiation

First of its kind proactive cleaning solution. No other similar solution in the market today. Significant fuel savings, significant reduction of Greenhouse gas emissions, avoid transportation of invasive species on the hull of the ship and improved safety (compared to diver cleaning).

Soborg, Denmark
www.cliin.dk
Founded in 2016
20 Employees

Field of Activity:
Maritime

Capital raised:
EUR 4m

Investment need:
EUR 3m

Give your feedback

NIDO ROBOTICS

Making Underwater Exploration Accessible to Everyone and Anytime



Murcia, Spain

www.nidorobotics.com

Founded in 2016
20 Employees

Field of Activity:
Maritime

Capital raised:
EUR 0.2m

Investment need:
EUR 1.5m

Watch 3min pitch

Give your feedback

Company Description

NIDO was founded in 2016 with the mission of making underwater robots that help us (humanity) achieve our greater goals. Since then we have acquired more than 150 clients worldwide, ranging from small diving companies to utility giants like ENEL. We have good market traction, are growing rapidly and on track to realize our vision of becoming a global leader in robotics.

Problem

Underwater robots have been used for inspection, maintenance and repair in the oil & gas and military industries since the 60s, but are huge, expensive machines that require complex logistical support. In coastal waters, companies like utilities have been relying on divers for these tasks. Sadly, diver fatalities is a growing trend, mainly due to an increase of overall jobs to be done underwater, which is a result of stricter compliance requirements and more underwater assets.

Solution

We make underwater robots (Sibiu Nano & Sibiu Pro) that can be used for inspections, maintenance and repair of underwater assets. They are robust, easy to deploy, and expandable that can easily be adapted to changing business needs.

Market

The Unmanned Underwater Vehicle (TAM) market is estimated to reach \$4 billion in 2020, with a CAGR of 7.7% over 2016-2026. The mini- and micro-ROV market (Current niche) will reach \$400 million in 2020.

Business Model

We are in a Contractual Business Model, based on: Unit sales with a 60% + gross margin (production capacity of 900 minutes per unit).

In addition, we follow the Whole Product Model: Training – Maintenance contracts – 3rd party payload integrations – Inspection services – Robotics as a service.

USP & Differentiation

Our robots are meant to be available at each plant, they stand out for being easy to deploy and use, meaning that the asset manager, our real customer, can know exactly what is going on underwater, in less than an hour, at any time. We have great software that allow for automatization of the report generation, which is where the real value lies for our customers.

KEWAZO GMBH

Empowering on-site construction logistics through robotics and data analytics

KEWAZO

Company Description

KEWAZO offers a smart robotic logistic system, which provides autonomous transportation of materials on construction sites. The first area of application is scaffolding assembly. An intelligent robotic solution offers flexible, cost-efficient and safe transportation of scaffolding parts during scaffolding.

Problem

Today the scaffolding industry experiences severe problems, such as understaffing – young generations in developed countries are not interested in this field, poor safety rates - more than 6000 accidents per year occur in Germany only, and inefficiency of the scaffolding assembly process - 80 % of the assembly time is spent on logistics.

Solution

KEWAZO offers an intelligent construction transportation solution - a robotic system empowered by the data analytics platform. The solution improves efficiency, addresses labor shortage and saves at least 30% of installation costs.

Market

The first application of KEWAZO technology is the scaffolding assembly – a € 23 B global market and the first customers are scaffolding assembly companies and industrial service providers (service of chemical / power plants).

Business Model

KEWAZO provides a robotic system empowered by the data analytics platform. The customers have an option of buying and renting the system. The platform is offered on the SaaS basis. In the year 2021 the company will introduce RaaS business model.

USP & Differentiation

KEWAZO decreases the assembly costs by 30 %, increases flexibility (plug & play installation / battery operation / compact size) and safety of the scaffolding assembly process. The robot has autonomous navigation and control, combats labor shortage and delivers data analytics behind the process.

Munich, Germany
www.kewazo.com
Founded in 2018
16 Employees

Field of Activity:
Construction

Capital raised:
EUR 3.6m

Investment need:
EUR 5.5m

Watch 3min pitch

Give your feedback

SMOOTH ROBOTICS APS

Connect your Craft to the Machine



Odense, Denmark
www.smooth-robotics.com
Founded in 2016
4 Employees

Field of Activity:
Manufacturing

Capital raised:
EUR 685.000

Investment need:
EUR 1m

Watch 3min pitch

Give your feedback

Company Description

Smooth Robotics is a spin out from the University of Southern Denmark and Danish Robotic Cluster based on the idea that complex robot programming can be eliminated. We make a robot as easy to use as using a smartphone - and give full control back to the end user with the product SmoothTool.

Problem

Manufacturing SMEs can increase flexibility, productivity and profitability significant by automatization in the manufacturing process. But the SMEs are facing two major challenges 1) with current robots on the market, changeover between batches requires offline programming based on a CAD model and; 2) SMEs usually do not have the in-house skills needed for programming and changeover, so they must hire an external integrator which adds further adds costs.

Solution

SmoothTool is a unique software for path generating that enables simple, fast and intuitive programming of robots. Currently the technology is focused on Universal Robots but in the near future, we will integrate the platform with other collaborate robot brands and classic industrial robots. By using SmoothTool the SME will be able to significantly reduce changeover time and to have an agile and flexible production.

Market

In Europe more than 2,2 million manufacturing SMEs are potential customers as automatization within welding, soldering, gluing and dispensing are challenges that have to be handled. The potential value in Europe will be app. 1,2 billion € as it is estimated that more than 50% of these companies will have the need for automatization. As the product is scalable worldwide the business model is based on distribution partners all over the world to handle local sales, distribution and support.

Business Model

B2B sales. We have already signed with two major partners who are present in more 100 markets worldwide. And we are in the process of becoming UR+ certified and hereby be accessible to more than 200 potential distributors worldwide on the UR+ platform. The business model will in the future be based on SaaS (subscription) and XaaS (pay per use). Smooth Robotics has helped these partners to overcome the limits for manufacturing SMEs to use robot automatization.

USP & Differentiation

Easy, fast and intuitive path generation for manufacturing robots, that makes the robot workable as a tool in the hand of the end user

SPRINGA

Bring digital manufacturing to every workshop and construction site



SPRINGA

Milano, Italy

www.springa.tech

Founded in 2016

7 Employees

Field of Activity:

Manufacturing

Capital raised:

EUR 175.000

Investment need:

EUR 5m

Watch 3min pitch

Give your feedback

Company Description

Springa aims to give more power to craftsmen and professionals, enhancing jobs and new market opportunities through easier access to digital fabrication technologies. Their first product launched is Goliath CNC, the first portable and autonomous CNC machine. By now, Springa has raised EUR 820.000 in Crowdfunding.

Problem

In the USA more than 16.8 million households do woodworking, which is the hobby #4 in the country. For hobbyist, craftsmen and carpentries, the most affordable automated tools are CNC desktop milling machines, which work area is as wide as an A4 paper sheet, so unable to realize medium/big size projects as a chair or a pair of skis. On the other hand, professional automated tools (CNC work centers) allow manufacturing wider surfaces, but they have a high footprint, are bulky and expensive.

Solution

Goliath CNC is a portable and autonomous robotic machine tool that can be positioned directly on the work surface: this innovative mode of operation removes the stationary boundaries of CNC machines, allowing craftsmen and SMEs to create human-scale projects, where they want. Automation and user-friendly workflow allow high quality manufacturing (0,1mm repeatability) also with low competences. Thanks to the portability of the tool the process is not limited to the workshop space.

Market

TAM is estimated about €32.3 billion, based on the aggregate market value of the Power Tools (€28B), CNC work centers (€3.4B) and CNC desktop markets (€890M). Springa made an international market validation with a Kickstarter campaign pre-selling 560 units in 45 days. The 43% of backers are interested in DIY, while the 47% will use Goliath CNC for their job (10% other answers).

Business Model

Sell a range of autonomous robotic tools and accessories for digital fabrication. By launching production in Q3 of 2019 we estimate to manufacture 2500 units in 2020 and reach full capacity of 3500 units in 2021 (Goliath CNC price is €2490).

USP & Differentiation

Portable tools at an affordable price that doesn't impact the size of the workshop. Autonomous and user-friendly, they help customers to increase productivity and grow market opportunities inside the workshop or directly at the construction site. Custom-developed technology (6 patents), team experienced with R&D and product development.

UNIT DOSE ONE

Making sure the right drug gets to the right patient at the right time. Every time.



Lodz, Poland
www.unitdoseone.com
Founded in 2012
40 Employees

Field of Activity:
MedTech / Health

Capital raised:
EUR 2.7m

Investment need:
EUR 5m

Watch 3min pitch

Give your feedback

Company Description

Our mission is to drive drug errors to zero through automation.

The company is run by Jakub Musiałek (co-founder of #1 radiology imaging platform in Poland (200+ hospitals)) and Stanislaw Radominski (co-founder of a leading Polish medical and pharmaceutical wholesale company).

Projected 2019 revenue: 2M EUR

Problem

Drug distribution process is inefficient, insecure, and error-prone and puts patients and communities at risk. Our goal is to minimize patient non-adherence and non-compliance which cost lives of thousands and accounts for billions in financial losses each year.

Solution

UnitDoseOne is an innovative modular and scalable robotic system that takes care of medicine sorting, repacking and distribution and keeps track of every single dose. It makes drug distribution more efficient and secure, saving millions of euros each year while improving the quality of care to patients.

Market

Our end users are pharmacies, both hospital and retail. Thanks to the design and flexibility of our solution, we can work with any sized facility. The estimated market size is 4 billion euro.

Business Model

Besides regular sales of the system our disruptive business model emphasizes annual recurring revenue with flexible pricing options with Hardware as a Service (monthly subscription) and Drug Distribution as a Service (pay per dose).

USP & Differentiation

Our solution virtually eliminates medication errors, prevents drug theft and reduces human interaction with drug inventory.

We offer our own technology (so there is no need to rely on any external machines), mail order delivery automation, which can be done directly by hospitals or retail pharmacies (we supply them with the hardware, so they can service patients they already have) and we automate the whole process (so there is no manual drug preparation, thus more time can be devoted to patients).

SOMNOX

Somnox creates soft robotics to help the world sleep better



Delft, Netherlands
www.meetsomnox.com
Founded in 2016
23 Employees

Field of Activity:
Consumer & Health

Capital raised:
-

Investment need:
EUR 2m

Watch 3min pitch

Give your feedback

Company Description

We're the sleep company changing the world by changing the way you sleep. We're here to help you become your best self.

Problem

The shorter you sleep, the shorter you live. 1 out of 5 people suffer from sleep deprivation. Studies have shown that sleeping less can increase the risk of Alzheimer's, cause weight gain and make adults up to 200% more likely to have a heart attack or stroke. At the moment, sleeping pills are the go-to solution. These are harmful and highly addictive. The world is in a global sleep crisis and in drastic need of a natural solution.

Solution

The Somnox Sleep Robot offers a natural sleep solution that helps you sleep faster, longer and wake up refreshed by slowing down your breathing, focusing your attention and playing soothing sounds at the right times in the sleep cycle. A mobile app that comes with the robot helps the user to set his or her own preferences

Market

The global sleep aid market is forecasted to attain revenues of \$101.9 billion by 2023. The market has been categorized into 6 sleep disorders, of which insomnia holds the largest share with a 31.2% contribution. Five to seven percent of the world's population aged 40+ uses prescription sleep aids. By now, Somnox has raised EUR 500.000 in Crowdfunding.

Business Model

B2B2C: Margin on Direct Sales through eCommerce Channels (Webshop/ Amazon) and distributors
B2B: Hotels, Healthcare Institutions and Corporate healthcare programs.

USP & Differentiation

First to market creating and owning the Sleep Robot category – Strong IP position, additional trademark & design rights – First to create 'living companions' that evoke emotion, instead of cold lifeless products (introducing robots with a soul) – Not just monitoring or diagnosing sleep, but also actuation through real time data processing (robotics) – Combining objective sleep data (quantified self) with subjective sleep data

TENDO AB

Robotic assistive technology that brings independence to people living with a disability, while addressing global healthcare challenges

tendo
for people, not symptoms

Lund, Sweden
www.tendoforpeople.se
Founded in 2016
5 Employees

Field of Activity:
Health

Capital raised:
~ **EUR 550.000**

Investment need:
EUR 1.5m

Watch 3min pitch

Give your feedback

Company Description

Tendo develops an assistive robotic technology controlled by non-invasive, biometric sensors - a revolutionary system for robot-human interaction. NASA, OdenseRobotics and Ideon have all supported the journey and Tendo has received a lot of attention for their innovation. The technology was selected to be presented at ISPO 17th World Congress in Japan out of 700 applicants from all over the world.

Problem

The growing and aging population creates significant challenges for both the society and individuals. Technical innovations are needed to enable independence, however many of today's technologies are not suited for daily use or are not commercially available for years.

Solution

The Tendo technology is a minimalistic robotic assistive technology for people with disabilities. The lightweight solution is controlled by their intuitive sensors that can assist a user's intended movement even if the own body does not respond to it. The first product, using the Tendo-Technology, is a hand-exoskeleton that helps the user to grip, hold and release objects intuitively. It gives users their independence back while reducing welfare costs.

Market

The medical exoskeleton market will grow from \$88 Mill. (2016) to \$2.3 Bill. (2025) (Coherent Market Insights), meaning that Tendo is entering a rapidly growing market at an early stage. The first product has 50 million potential users in Europe, Japan and North America alone. We aim to have good liquidity by 2022 and an EBITDA of €1,5 million 2023, and the potential to reach over €15 million by 2025.

Business Model

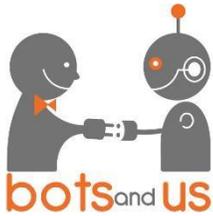
Tendo will be introduced to the Scandinavian market as a specialized aid for people with high spinal cord injuries - this to confirm its commercial potential. Tendo will then reach international market efficiently by licensing it to global players, while re-investing the surplus in new products. The technology can be applied to other body parts, and other robotic applications, thus providing new revenue opportunities.

USP & Differentiation

Existing solutions, addressing the same or similar needs, are often big, bulky and difficult to use. Few are commercially available or are only for rehabilitation at hospitals. What difference the Tendo Technology is the slim size, biometric intuitive sensors, and that the technology also assist you to open as well as to close the grip.

BotsAndUs Ltd.

Revolutionise customer management with autonomous robotics & AI



London, UK

www.botsandus.com

Founded in 2015

9 Employees

Field of Activity:

Autonomous robots for indoor public spaces

Capital raised:

EUR 2.5m

Investment need:

EUR 1.2m

Watch 3min pitch

Give your feedback

Company Description

BotsAndUs's mission is to revolutionise the way businesses interact with their customers in physical spaces to stay competitive in the e-commerce era. We offer them access to real time, high quality data and insights that allow them to serve the right customer, the right product at the right time - even better than their online competitors.

For this we created a fleet of autonomous service robots to work alongside people in dynamic, public spaces - retail stores, shopping centres, bank branches and airports. They digitise the full customer journey, offering 24/7 customer service, automating data collection and transforming it into business insights and predictions.

Problem

The retail industry loses one trillion US\$ a year because of poor inventory and customer management. 24% of Amazon's US revenue comes from consumers who first tried to buy a product in a physical store and failed (IHL, 2018). All this due to the incapacity of physical retailers to manage their large estates and get real time access to customers.

Solution

We provide fleets of collaborative robots designed to autonomously approach customers and serve them; perform operations tasks such as store mapping, shelf monitoring, detecting out of stock products and capturing real time data and insights about customer traffic routes and needs. With our solution, companies can align investments with customer behavior and operational requirements to boost profitability.

Market

The total market for non-industrial robots is expected to reach €24.1B in 2022, growing at a CAGR of 17.8% with over 31 million robots to be shipped in 2020, according to the International Federation of Robotics. Service robots have increased by 53% in 2018.

Business Model

Monthly subscription packages including: robot units, software development, integration, ongoing support, and most importantly access to the data dashboards.

USP & Differentiation

One of the few companies globally to have autonomous robots deployed with customers in public spaces. Our data collection and analysis capabilities across the robot fleet put us in the unique position to develop industry leading AI systems and algorithms for any kind of robotics deployments in indoor or outdoor public spaces.

FARM AUTOMATION AND ROBOTICS SL (FAROMATICS)

Smart robotics for intensive poultry farms



Vilanova i la Geltrú,
Spain

www.faromatics.com

Founded in 2016
16 Employees

Field of Activity:
Agrofood

Capital raised:
EUR 1.6m

Investment need:
EUR 3-4m

Watch 3min pitch

Give your feedback

Company Description

Faromatics is dedicated to using smart robotics to increase animal welfare at the same time as farm productivity. Our first product is the ChickenBoy, a robot for meat chicken farms; 3 more products are being developed. Faromatics has a global distribution deal in place.

Problem

Broiler farmers are under triple pressure to produce more volume at ever lower prices while providing increasingly better health and welfare for the animals and using less and less antibiotics. Farmers therefore need solutions to detect health and welfare issues much faster, while at the same time automating routine tasks.

Solution

The ChickenBoy is the world's first ceiling suspended robot that monitors broiler welfare and helps increase farm productivity. The robot monitors climate, health & welfare and farm equipment; it alerts farmer in case of problems. The robot uses sensors, but first and foremost artificial intelligence, deep learning and big data. ChickenBoys are currently in 3 and by end of 2019 will be in 6 countries.

Market

There are 1.3m animal houses world-wide. The Total Available Market is estimated at EUR 9bn or 635k robots per year with an annual growth of 1.3% over the next decade (OECD, FAO). The ChickenBoy has a payback time of about 12 months and saves farmers EUR 68k during its lifetime, i.e. it increases profits by 20-60%. The Serviceable Available Market is estimated to grow from a tiny EUR 17m in 2019 to over EUR 1bn in 2023.

Business Model

The business model has three main pillars: hardware sales (9,999€ per ChickenBoy) plus a recurring service contract (99€/month and robot). In addition, the robot can house 3rd party sensors distributed by us for a percentage (similar to an app store).

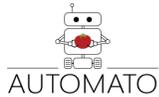
USP & Differentiation

We have unique knowledge of the sector as expressed in our clearly advanced high-tech product, a global distribution network and a dream team to count on. The ChickenBoy is 5 times cheaper and has more functionality than our nearest competitor.

These companies have already received 120k EUR in support from the RobotUnion programme and are looking for private investment:



Aether Biomedical has created Zeus, a low cost-high efficacy prosthesis. This bionic limb can multiarticulate 14 grip modes.



Automato Robotics has developed a robot that works in soil, greenhouses or high tunnels to detect ripe tomatoes and harvests them.

CYBER SURGERY

Cyber Surgery has created a mechanical tracking system to insert pedicle screws with more precision into the vertebrae of people who have spinal diseases.



Formhand has developed granulate-based vacuum grippers that can adapt to and handle objects with different shapes.



Infocode has created Bin-e, an IoT device which sorts and compress the recyclables automatically.



MX3D has developed groundbreaking robotic additive manufacturing technology.



Proxima Centauri has created machines that are developed to automate the collection and classification of natural guts.



Rebartek has developed a standardized robotic cell to assemble reinforcement bar pieces into rebar cages.



Rigitech has created a drone delivery to integrate supply chains through hybrid drone hardware and cloud-based logistics.



The mission of Rovenso is to create agile robots that perform security and safety monitoring of industrial sites.

From more than 200 applications, **RobotUnion** has selected **20 startups** to be financed with **up to EUR 223 000 in cash plus acceleration services**.

The 10 best startups entered the product acceleration program and received up to EUR 120 000. After a technical and business acceleration program, the Venture Jury Day will lead to a selection of the 4 best startups which will receive **EUR 100 000 for the final Investment phase**.

The 10 companies you will meet during the RobotUnion Venture Jury Day participate in an **Acceleration Programme**, led by top Research and Technology Organizations, key world-class digital ecosystem professionals and entrepreneurs from all over Europe, which includes:

- State-of-the-art technical support and access to “premier-class” technology provided by top Research and Technology Organizations like **VTT, DTI, TU DELFT, TECNALIA and PIAP**.
- World-class Training and high-level Mentoring by a pool of tier 1 mentors provided by **ISDI**.
- Internationalization services. Presence in top EU Scaleups events such as 4YFN@Mobile World Congress, Slush, Web Summit and International PR exposure powered by **Mobile World Capital**.
- Fundraising services provided by **BLUMORPHO** (private funding) and **FundingBox** (public funding).
- Engagement with world top industry leaders such as MADE representing world Manufacturing leaders, FENIN in Healthcare and FERROVIAL in Civil Infrastructure.

RobotUnion has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement no 779967



ROBOTUNION

www.robotunion.eu

