



# **EIT REGIONAL INNOVATION SCHEME ACTIVITY REPORT 2021**



European Institute of  
Innovation & Technology

A body of the European Union



# EIT REGIONAL INNOVATION SCHEME ACTIVITY REPORT 2021

## Executive Summary

The **European Institute of Innovation and Technology (EIT)** is fully committed to supporting and accelerating innovation excellence across Europe, as well as aiding the capacity building of modest and emerging innovation countries as per the European Innovation Scoreboard (EIS). The EIT primarily does this through the EIT Regional Innovation Scheme (RIS), which is implemented by its Knowledge and Innovation Communities (KICs).

2021 marks both the first year of the new EIT Strategic Innovation Agenda (SIA) 2021-2027 and the seventh year since the establishment of the EIT RIS. This report provides insight into the main activities, deployed services and cooperation mechanisms that took place as part of the EIT RIS in 2021. Moreover, it highlights success stories from start-ups and innovators that have benefitted from the collaboration with the EIT KICs and created an impact with their innovative solutions tackling major societal and environmental challenges.

This report gives an overview of the main programmes and services provided by the EIT KICs in RIS-eligible countries in 2021, such as business support activities for start-ups, and training and innovation activities fostering the next generation of European innovators. Additionally, the report includes testimonials and success stories from supported entrepreneurs.

This report also celebrates the impact delivered by the EIT RIS since its establishment in 2014. The development and delivery of pan-European EIT RIS activities and networks has seen great improvement across the RIS regions since then, evident in the increasing number of applicants, participants and Knowledge Triangle (KT) organisations (higher education, research and business) partaking in these activities. In this context, this report gives a snapshot of the progress of the EIT RIS and its achievements between 2014 and 2021.





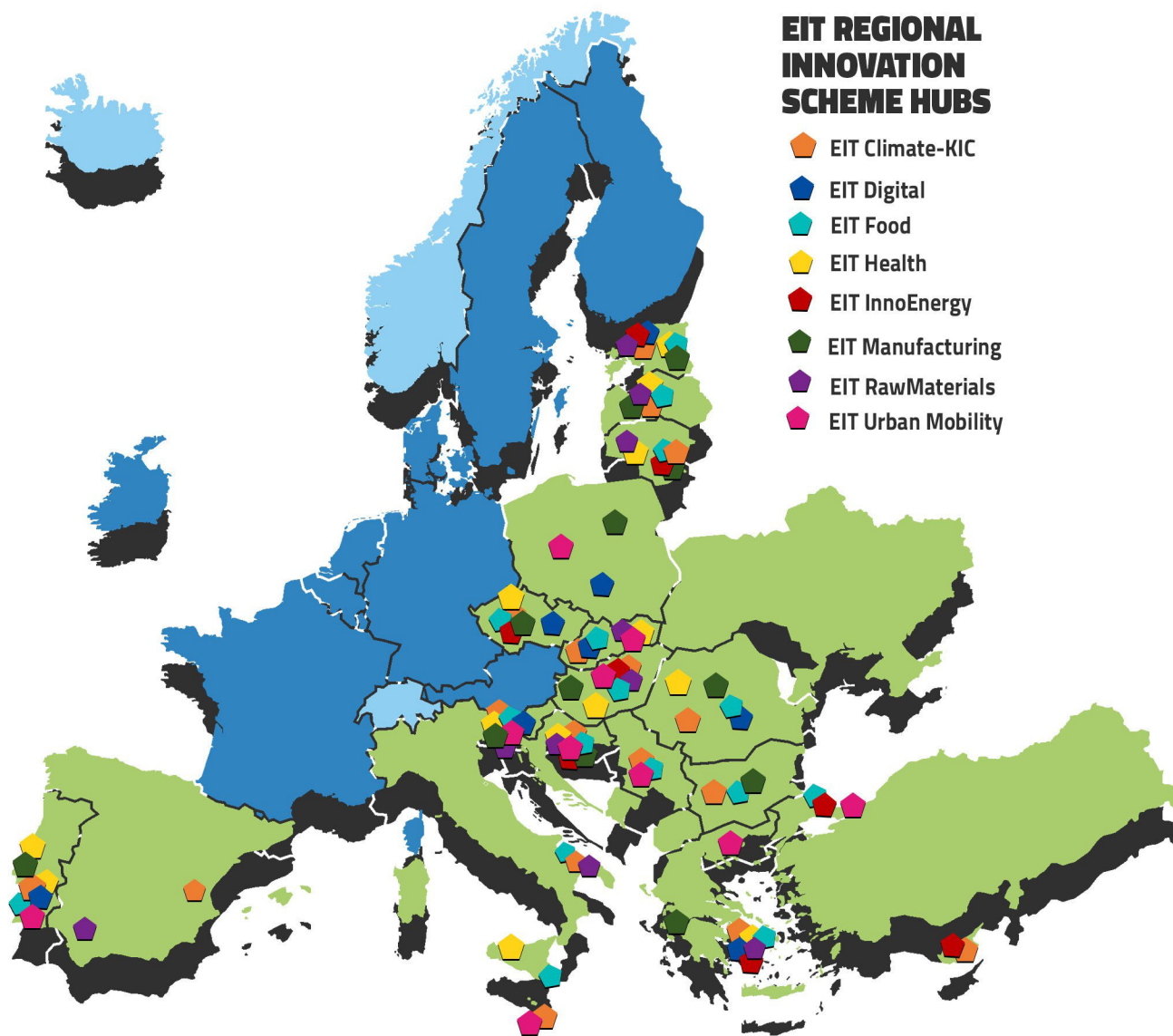
# Introduction

The EIT was established in 2008 to contribute to the sustainable economic growth and competitiveness of Europe by reinforcing the innovation capacity of its Member States and the European Union (EU). The EIT has pioneered the integration of higher education, research, and business (also known as the 'Knowledge Triangle', KT) in Europe with a strong emphasis on entrepreneurial talent, business creation and innovation skills.

Against the backdrop of persisting regional disparities in innovation performance in Europe, the EIT launched the RIS in 2014 to provide tailored capacity building support (financial, technical and educational), and widen its regional outreach for moderate and emerging innovator countries. The EIT RIS, which is steered by the EIT and implemented by its KICs, offers start-ups and innovators based in the EIT RIS geographical area an additional level of support. The overarching objective is to contribute to the advancement of innovation in the targeted countries and territories by strengthening the capacity of their innovation enablers and actors, and the linkages among them through disseminating the KT approach.

The geographical distribution of the EIT RIS Hubs at the end of 2021 is shown on the map on the right. The EIT RIS geographical area (2021-2024) on mainland Europe is marked in green. In addition, the EIT outermost regions are also eligible for the EIT RIS.

The EIT RIS was initially run on a voluntary basis, implemented primarily as an outreach scheme aimed at building innovation capacity and raising awareness, allocating around 3.5% of the total EIT grant budget. Despite this, the EIT RIS delivered significant results, including major improvements in the geographical reach of the EIT KICs' now pan-European networks.







The graphic above shows the impact delivered by the EIT in the EIT RIS geographical area between 2014 and 2020

EU Member States	Horizon Europe Associated Countries	Outermost Regions
Bulgaria Czechia Estonia Greece Spain Croatia Italy Cyprus Latvia Lithuania Hungary Malta Poland Portugal Romania Slovenia Slovakia	Montenegro Republic of North Macedonia Serbia Türkiye Ukraine	<div>           French Guiana            Guadeloupe            Martinique            Mayotte            Réunion            Saint-Martin            Azores            Madeira            Canary Islands         </div> <div>           France            Portugal            Spain         </div>

The list of **EIT RIS-eligible countries** and territories will be updated from 2025. Apart from the Outermost Regions, eligibility for the EIT RIS is set at country-level, in line with the European Innovation Scoreboard (EIS).





The **EIT KICs** have a degree of flexibility in designing their EIT RIS activities, given these align with the EIT KIC's multi-annual strategies, contribute towards achieving the EIT's overarching objectives and deliver tangible value-added results. All EIT KICs undertake a 'place-based' innovation approach and engage local organisations to serve as EIT RIS Hubs in RIS countries and territories. Local organisations are selected through an open competitive selection process.

The primary purpose of the EIT RIS Hubs is to ensure the visibility of the EIT Community, by raising awareness of activities and cooperation opportunities for local players across education, research and business, and attracting and facilitating the engagement of new participants in EIT KIC activities. EIT RIS Hubs also liaise with and promote collaboration between relevant local, regional and national authorities, allowing the sharing of EIT KIC expertise on social, economic and environmental challenges and opportunities.

By the end of 2021, there were 91 EIT Hubs in the EIT RIS geographical area, 12 Co-Location Centres and one EIT Community Hub in Hungary. Cooperation and information dissemination between EIT RIS Hubs in seven pilot countries was supported through an EIT RIS Information Coordination Service launched by the EIT in 2021.

From the start, the EIT has fully recognised the enormous innovation potential of the EIT RIS geographical area. Using all tools at its disposal, the EIT has invested significantly in strengthening the innovation capacities of their local ecosystems, through capacity building activities leveraging closer interactions between local KT actors, and by supporting highly promising innovators, start-ups and scale-ups.

One example of how the EIT KICs support the best and most promising innovators is the EIT Jumpstarter. The EIT Jumpstarter, a flagship Cross-KIC pre-accelerator programme set up in 2016 to facilitate innovation and entrepreneurship for sustainable development in the Central-Eastern and Southern-European regions, supports innovators in turning their ideas into commercially viable deep-tech products and services. Through tailored training and mentoring, participants are enabled to build and validate their business models, and to become fully prepared for the next steps on their entrepreneurial journey.



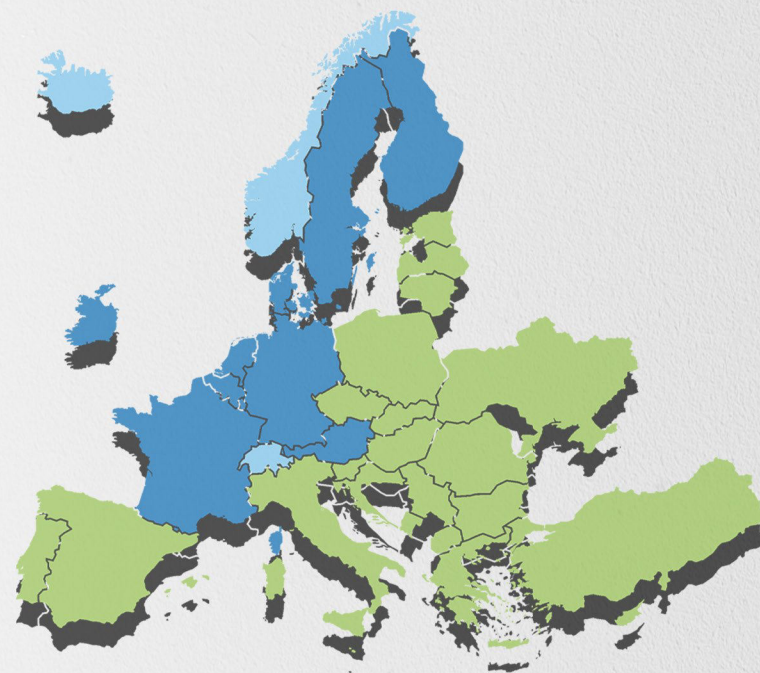


The winners of the Grand Final, hosted at the end of the programme in the form of a pitch contest, receive a EUR 10 000 prize. To date, the EIT Jumpstarter has supported over 600 validated European deep-tech start-ups, many of which then went on to benefit from the EIT KICs' individual accelerator programmes. The success of the EIT Jumpstarter has been internationally recognised with the programme receiving two European Awards for Excellence.

Through the support of the EIT Community, numerous EIT-backed ventures based in the EIT RIS geographical area have managed to seize their innovation potential, finding breakthrough commercial success and demonstrating immense promise for further growth. Whilst ventures based in Italy, Spain and Portugal have produced many of the breakthrough commercial successes seen emerging from the EIT RIS geographical area – such as the Portuguese EIT Health-supported start-up Sword Health, which recently became the country's first health 'unicorn' –, ventures found in other countries across the EIT RIS geographical area are seeing considerable and rapidly increasing success.

## EIT REGIONAL INNOVATION SCHEME ACTIVITY REPORT 2021

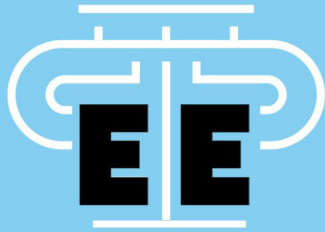
New partners from RIS-eligible countries	217
RIS MSc/PhD students	661
Participants in (non-degree) education and training	29 723
Designed/tested innovations	81
Marketed innovations	157
Supported RIS start-ups/scale-ups	914
Start-ups created from/for innovation	73
Start-ups created from EIT Label MSc/PhD programmes	4
Investment attracted by KIC-supported start-ups/scale-ups	EUR 350 823 025
KIC success stories	81





# EIT HEALTH RIS HIGHLIGHTS

## ENTREPRENEURIAL EDUCATION



5 RIS education activities  
implemented in 18 RIS-eligible countries,  
benefiting 629 participants

The **WE HEALTH RIS Bootcamp** was held online in October 2021 for women entrepreneurs from RIS-eligible countries. The bootcamp aimed to strengthen their participation in health innovation and entrepreneurship activities, through empowering capacity-building activities tailored to their needs and by inspiring and supporting them to advance in their professional careers. The bootcamp benefited 17 female participants from 10 RIS-eligible countries.

## INNOVATION PROJECTS



11 RIS innovation projects  
implemented in 7 RIS-eligible countries,  
through 89 applications received

The **RIS Alumni Event Series** was held for alumni from RIS-eligible countries to engage them in EIT Health programmes whilst also providing an opportunity to discuss hot topics across healthcare with experts in the field.

## BUSINESS CREATION & ACCELERATION



3 RIS business creation programmes  
implemented in 21 RIS-eligible countries,  
involving 48 participants

The **2021 InnoStars Awards** provided an opportunity for young innovators to validate their ideas, develop products and build successful businesses. Successful participants had the chance to attract investors and shorten the time it takes to get their ideas to the market.

15 shortlisted teams received EUR 25 000 each for five months of training and mentoring. EIT Health provided mentoring support for 20 runner-up start-ups of EUR 4 000 in value.

# EIT Health-supported Start-ups



## ESTONIA

**Migrevention** is the world's first fully digital headache clinic. The team started their journey when they won the Estonian EIT Health Hub BioHackathon 2020.

Despite the challenges brought by 2020, the team turned their idea into a fully-fledged product – the Migrevention Migraine & Headache Diary app. This digital headache diary improves the daily life and treatment of migraine patients.

"Knowing that we can make people's lives better inspires us."

**Katrina Laks, CEO and Co-Founder of Migrevention**

### Did you know?

A unicorn in business refers to a start-up company with a value of over USD 1 billion.



## PORTUGAL

**Sword Health** offers virtual care for patients with musculoskeletal (MSK) pain by matching them with digital therapists who facilitate pain management exercises. It closed a Series D investment round of EUR 192 million, reaching a EUR 2.3 billion valuation and becoming Portugal's first health unicorn.

The company has worked with insurers, health system actors, and employers in the US, Europe, and Australia to make quality physical therapy more widely accessible. It was supported by EIT Health through a SwitHome Innovation Project in 2018 and the Bridgehead Accelerator programme in 2019.

"This investment round will enable Sword Health to accelerate its mission to free two billion people from physical pain through more personalised MSK based offerings — from prevention to post-surgical care — while still remaining at the forefront of value-based digital MSK care and expanding local and global operations among self-insured employers, health plans and other entities."

**Virgilio Bento, CEO and Founder of Sword Health**





## LATVIA

**Kristaps Krafte** is the CEO and Founder of **Vigo Health**, which offers an accessible digital solution to stroke survivors to effectively recover in the comfort of their home. According to Kristaps, the idea of developing a solution for stroke survivors might have never occurred to him if he had not participated in the EIT Health IHC Master's Programme at Copenhagen Business School in the field of healthcare innovation.

In 2021, Vigo Health became the first digital therapeutic company in the Baltics to receive an official reimbursement code from the Latvian national health authority. Kristaps is hopeful that Vigo Health will be reimbursed by the Danish state for their service in 2022. This could lead to their product, Vigo becoming cheaper and more widely accessible.

"Step by step, we are moving towards our ultimate goal of becoming the worldwide leader in stroke rehabilitation by making rehabilitation more accessible and cheaper so people can live better."

Kristaps Krafte, CEO and Founder of Vigo Health



## ROMANIA

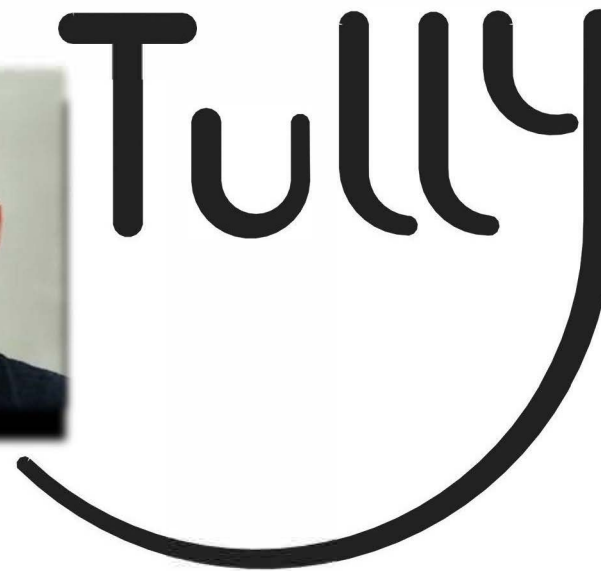
**Adina** and **Marius Rus** are the Co-Founders of **Tully**, which won at the EIT Health InnoStars Awards 2021. Tully is a wearable device helping children with Attention-Deficit/Hyperactivity Disorder (ADHD) learn how to cope with emotional flares and attention problems. It integrates well-established principles of bio-feedback in a manner children can easily engage with.

Adina discovered she enjoyed working with children with ADHD while covering for a counsellor who had fallen ill in the kindergarten of her daughter in the US. She decided to make it a second career. Returning to Romania, Adina completed an MA in Child Developmental Psychology.

Meanwhile, Marius was working with start-ups as an adviser. In 2016, while Adina was working on her MA thesis, they started exploring the idea of Tully. Rus' vision is to create a full range of automated psychological support for sensory integration disorders, from specific (ADHD, bipolar disorder, ASD) to general conditions such as anxiety or depression.

"It is very rewarding to see that what started as an idea is becoming a real solution for those who need it the most. We are very grateful for the EIT Health team who supported us professionally in all imaginable ways and shared their invaluable feedback with us. There is a lot of hard work ahead of us, but thanks to the financial and professional support we believe that our product will soon be available to many children."

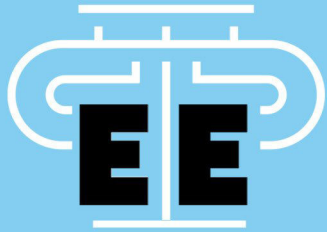
**Marius Rus, Co-Founder of Tully**





# EIT CLIMATE-KIC RIS HIGHLIGHTS

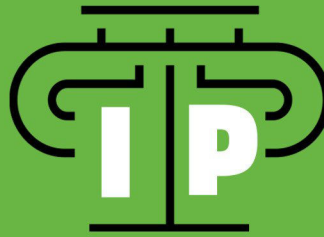
## ENTREPRENEURIAL EDUCATION



6 RIS education activities implemented in 16 RIS-eligible countries, benefiting 1 687 participants

The EIT KIC Portugal Hub organised the online event **Funding Climate Action** on 14 December 2021 to debate climate action funding through discussions between initiative implementors and climate action initiative financing entities. The event targeted industry and political stakeholders, start-ups and other entities interested in sharing knowledge and getting to know more about the topic. The event benefitted 40 attendees.

## INNOVATION PROJECTS



9 RIS innovation projects implemented in 11 RIS-eligible countries, reaching 31 participants

A technical workshop on **Technologies for the Transition to Climate Neutral Shipping** took place on 8 September 2021. EIT Climate-KIC Greece Hub, UN Sustainable Development Solutions Network and Maritime ClimAccelerator organised this Chatham House Rule workshop on the range of technologies and pathways to get to net-zero shipping.

14 well-known speakers from around the world presented state of the art technology transition pathways to zero emission long haul vessels. This stakeholder engagement workshop took place in an online format and gathered 46 stakeholders from ports, shipping companies, universities, consultancies, and banks.

## BUSINESS CREATION & ACCELERATION



1 RIS business creation programme implemented in 14 RIS-eligible countries, involving 125 participants

**SOL4ALL**, a COVID-19 response programme contributing to tackling unemployment caused by the COVID-19 crisis, was launched by ZEZ in Croatia and attracted EUR 145 000 in citizen investment. EUR 13 000 was sponsored by a local bank, with additional support of EUR 30 000 to help SOL4ALL achieve their goal of powering 1 000 homes in 10 Croatian cities with solar photovoltaic (PV) systems. The solarisation project will create up to 8 000 green jobs annually, through community-led energy transition.

The SOL4ALL team organised a Good Energy Tour in September 2021 to educate citizens and promote the use of renewable energy sources, with a focus on solar PV for households.



# EIT Climate-KIC-supported Start-ups

## SPAIN

**Zeleros** is a European company based in Spain with the mission to develop the world's most scalable hyperloop system. It has attracted EUR 13M in investments. The project is aligned with the EU's Sustainable Development Goals, paving the way to a net zero future and more sustainable intercity and logistics mobility.

Zeleros boasts a network of world-renowned partners across the railway, infrastructure, aviation, and energy industries, such as Renfe, Airbus, Acciona, ArcelorMittal, Red Eléctrica de España, Capgemini Engineering, EIT InnoEnergy, and CAF Group. It has also partnered with research centres like CIEMAT, international investors like Silicon Valley's Plug and Play Tech Center or the UK's Goldacre, and associations like the International Union of Railways (UIC). A global consolidated hyperloop network could potentially avoid more than 6.3 gigatons of greenhouse gas emissions and transport up to 1.5 billion passengers and 27.5 million tons of freight per year by 2050.

"Spain is a world champion in high-speed transport, and the hyperloop is the next big leap. Together with our industrial partners and institutions, we are positioning Spain as a frontrunner in this development."

**David Pistoni, CEO and Co-Founder of Zeleros**



## MALTA

**HandsOn Systems** is a technology company specialising in Internet of Things (IoT) solutions and three key products: fleet management, asset tracking through radio frequency identification, and an innovative usage-based insurance solution. The company's valuation is at EUR 6.2 million, and its annual sales for 2021 was at GBP 3.6 million. Whilst primarily offering services in Malta, HandsOn Systems also have customers in Italy, Africa, and the Middle East.

HandsOn Fleet is considered one of the best GPS tracking and fleet management solutions available today. The project has attracted the attention of high-level investors such as Melita, one of Malta's largest telecommunication service providers, and strategic partners like Google, Microsoft, and Garmin. As for clients, HandsOn secured contracts with G4S, Bolt, Lufthansa, TNT, and EasyGas Malta to name a few.

EIT Climate-KIC provided HandsOn Systems with state-of-the-art coaching, financial support, and an international network of entrepreneurs, experts, and investors.



## ITALY

**Carlotta Storchi** is an environmental engineer by training. She first heard about EIT Climate-KIC's Climate Innovation Leadership (CIL) and Journey programmes in her MSc on Earth Resources Engineering at the University of Bologna. Her goal was to apply the theories she had learned at university to real-life situations.

The Journey part of the programme was especially enjoyable for Carlotta. She found it both engaging and uniquely rich in networking opportunities. Her personal and professional takeaways from CIL and Journey will stay with her forever.

Carlotta is now working with **Go2Rail**, a start-up linked to EIT Climate-KIC's Climate Innovation Leadership programme and focuses on sustainable mobility and behavioural change.

"The Climate Innovation Leadership and Journey programmes left a very strong impression on me. I especially appreciated the opportunity to network, share ideas, and contribute meaningfully to group work. If you're thinking of applying, it's a great choice to make. If you're prepared to fully commit yourself to the work, you will gain a lot of knowledge and confidence."

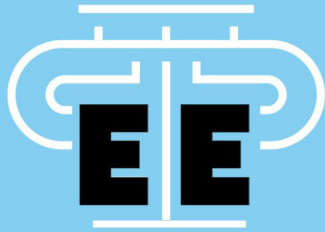
Carlotta Storchi, Sustainability Analyst at Go2Rail





# EIT DIGITAL RIS HIGHLIGHTS

## ENTREPRENEURIAL EDUCATION



9 RIS education activities  
implemented in all RIS-eligible countries,  
benefiting 187 participants

The EIT Digital Summer School in Tallinn attracted 37 applying teams in 2021, from Estonia, Latvia, Lithuania and the Ukraine. 8 applicants were invited to a bootcamp jointly organised by the Estonian partner, Startup Wise Guys. Following the bootcamp, teams were expected to fund their start-ups to reach the second phase of the venture programme before 1 September 2021.

## INNOVATION PROJECTS



7 RIS innovation activities  
implemented in all RIS-eligible countries,  
reaching 80 participants

The EIT Digital Innovation Days 2021, hosted by EIT Digital in December 2021 at 7 EIT Digital Nodes, involved several RIS countries. The Innovation Days, held in partnership with top European deep-tech entrepreneurs and innovators, showcased some of EIT Digital's 2021 key achievements online and on-site. The events took a deep dive into discussions on the hottest topics in the digital industry.

## BUSINESS CREATION & ACCELERATION



7 RIS business creation programmes  
implemented in 18 RIS-eligible countries,  
involving 196 participants

The EIT Digital Venture Programme 2021 offered an eight-week pre-acceleration programme executed by six regional partners: Foundation in Greece, Startup Wise Guys in Estonia, KTP in Poland, JIC in Czechia and Slovakia, BGI in Portugal, and the University of Ljubljana in Slovenia. Entrepreneurs with innovative tech business ideas learned how to develop and finalise their Minimum Viable Product (MVP), establish their start-up company, and raise funds with investors. They validated their business solution at the final Pitch Days, where they showcased their solutions in front of early-stage investors, potential clients, and experts from the tech community.



# EIT Digital-supported Start-ups

## HUNGARY



Entremo



**Entremo** is a Hungarian start-up that developed a remote monitoring wristband, which automatically measures a patient's vital signs in non-intensive hospital wards, reducing nurses' workload. Entremo began piloting the device in a nursing home in Hungary in July 2021. The start-up, which also produces other patient monitoring smart devices and connected services, was born out of the EIT Digital Innovation Factory.

All Entremo founders are former EIT Digital Master School students. The young professionals at Entremo have known each other for a long time, they went to high school together and honed their skills at school ski camps. All continued their education in technical fields and have participated in several technical and scientific competitions together. The Entremo team has already won over 10 different scientific competitions.

"We saw from consultations with medical professionals that monitoring of patients' basic parameters is a serious problem, but it can be solved. There is simply no widespread, market-leading device that continuously monitors patients outside the intensive care unit that is also affordable."

Péter Lakatos, CEO and Co-Founder of Entremo

## ITALY

**Enerbrain's** mission is to optimise energy consumption for air conditioning, improving environmental comfort and reducing CO<sub>2</sub> emissions. The Italian scale-up is part of the EIT Digital Accelerator. Enerbrain collects the data of buildings, processes it using cloud-based technology, and provides the best output to meet energy efficiency and indoor comfort goals.

In 2021, the company raised EUR 5.2 million in investments for its energy management innovation, which can be used without drastic changes to the building's existing systems or structure. In most cases, it takes two days of installation to cut energy consumption by 30%, improving indoor air quality and thermal comfort. The system integrates unified management through an analytical dashboard, also accessible through an app.



enerbrain®



## LITHUANIA

**Indrė Taurosevičiūtė** is a graduate from the EIT Digital Master School, Co-Founder at **SpotYet**, and Project Manager at SuperHow. Together with other EIT Digital Master School students, she co-founded the social communication start-up SpotYet in her first months of study. SpotYet is a multidisciplinary team, whose focus is to kickstart personal connections in a fun way by encouraging meaningful face-to-face conversations between people who may not otherwise meet.

During her technology entrepreneurship studies at Eindhoven University, Indrė learned how to transform an idea into a business solution while collaborating in teams throughout the business creation process. Following this experience, she decided to attend a hackathon in Belgium to try her hand at the fresh business idea with her team. This is where SpotYet was born.

"One reason to choose the EIT Digital Master School is the double degree. The other is the community that it offers. Everything is possible when you are a student at EIT!"

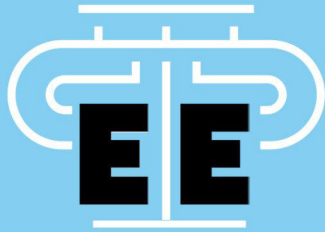
Indrė Taurosevičiūtė, Co-Founder of SpotYet





# EIT RAWMATERIALS RIS HIGHLIGHTS

## ENTREPRENEURIAL EDUCATION



11 RIS KAVA education activities implemented in 18 RIS-eligible countries, benefiting 63 373 participants

The **2021 Skills for the Future company programme** took place in Slovenia. It was a secondary-level education programme, fostering the next generation of European entrepreneurs. The programme aimed to empower youth with the insights, skills and confidence to invent solutions to the numerous, complex social challenges ahead.

It involved 450 students, and the winning mini-company is called OPS Technologies from the Celje School Centre. They presented an organic polishing structure, derived from cow horns to replace mineral-based products used for steel polishing.

## INNOVATION PROJECTS



9 RIS KAVA innovation activities implemented in 18 RIS-eligible countries, reaching 902 participants

The **RESEERVE** project launched the West Balkan Mineral Register to provide a comprehensive and useful register of primary and secondary raw materials.

The West Balkan Mineral Register focuses on metals and industrial primary minerals, mine and metallurgical waste sites in the following countries: Albania, Bosnia and Herzegovina, Croatia, North Macedonia, Montenegro and Serbia. The project also showcased the results at the hybrid Mineral Potential of the Eastern and South-Eastern Europe Region Conference, hosting more than 80 attendees.

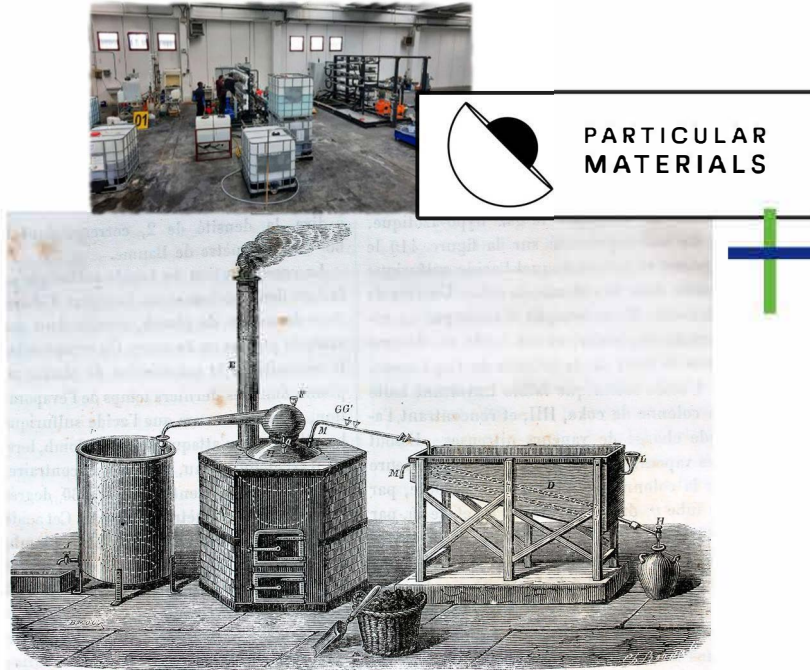
## BUSINESS CREATION & ACCELERATION



1 RIS business creation programme implemented in 7 RIS-eligible countries, involving 100 participants

The **RIS Entrepreneurship programme by EIT RawMaterials** is the development and enhancement of the EIT RawMaterials ecosystem in the RIS countries, part of a long-term effort called "RIS Ecosystem Building 2025". 2021 was the second year of activities. In short, the results can be summed up as the following:

- 7 RIS Incubators composed of relevant organisations delivering services to start-ups in 7 RIS countries
- 55 RIS applicants for EIT RawMaterials programmes



## ITALY

**Particular Materials** is based in Veneto, Italy, and it manufactures high-quality nanomaterials through continuous-flow hydrothermal synthesis, capable of several 100kg of output per day. The company focuses on direct upcycling of industrial waste to high-value materials to reduce costs and increase sustainability.

It employs 16 people and has attracted EUR 1M in equity and GBP 400 000 in grants. The team has demonstrated that their proprietary nanoparticle manufacturing technology is highly versatile and has proven that wastewaters can be used as a source of nanomaterials.

## CZECHIA

**AtomTrace** develops and manufactures special instruments using the Laser Induced Breakdown Spectroscopy (LIBS) method. Its instruments use laser beams to perform online elemental analysis of materials on the surface of an object and in its subsurface layers. The instruments can be used both in laboratory conditions and in outdoor environments up to 30 metres from the object. They are designed for research institutes and universities, industry and forensic investigations, with numerous other potential applications in various fields.

AtomTrace is among the few disruptive companies worldwide developing and producing LIBS analytical instruments. This gives AtomTrace a unique global competitive advantage. As a result, the company is aiming for a 5-year compound annual growth rate of 60.5% by 2023.





## BRAZIL

**Carolina Paes** is a graduate from EIT RawMaterials International Master of Science in Sustainable and Innovative Natural Resource Management (SINReM). The SINReM multidisciplinary programme allowed Carolina to get up close to innovative recycling technologies that contribute to the circular economy transition. Seeing them in action taught her how to secure raw materials for future generations.

She is the author of an article titled "Green Recovery Policies for the COVID-19 Crisis: Modelling the Impact on the Economy and Greenhouse Gas Emissions", published in the summer of 2021.

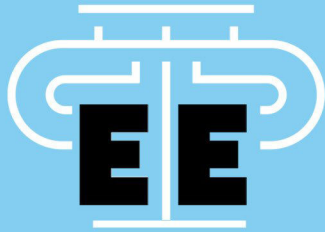
"My experience with the EIT Alumni Community was enriching and allowed me to meet incredible people around the world, who have life goals like mine: using innovation and technology to solve social and environmental problems and reducing socioeconomic discrepancies with a circular approach!"

Carolina Paes



# EIT FOOD RIS HIGHLIGHTS

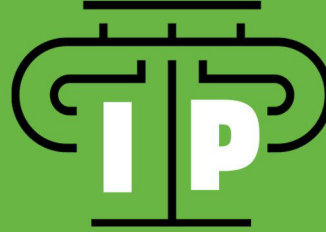
## ENTREPRENEURIAL EDUCATION



4 RIS education activities  
implemented in all RIS-eligible countries,  
benefiting 1 415 participants

After scouting and engaging with companies working on innovative water-saving technologies, four scale-ups benefited from a 3-month mentoring programme and training sessions within **WATER SCARCITY**, organised by EIT Food. An online international pitching competition and awareness-raising activities on water scarcity were held as well.

## INNOVATION PROJECTS



3 RIS innovation activities  
implemented in 4 RIS-eligible countries,  
reaching 212 participants

EIT Food Türkiye Hub organised two events in the framework of the **Annual Food Agenda project**. More than 200 participants had the chance to learn about food and agriculture systems, with entertaining quizzes held during the events. At the Annual Food Agenda, an approach for soil to table and the future of Türkiye's agrifood sector were adopted and elaborated.

## BUSINESS CREATION & ACCELERATION

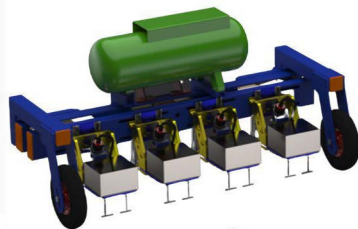


11 RIS business creation programmes  
implemented in all RIS-eligible countries,  
involving 660 participants

The **EWA – Empowering Women in Agrifood** programme is aimed at reinforcing female leadership and supporting women or female-led start-ups in the initial phases of their business development in the agrifood sector. The programme aims to provide comprehensive consulting at an early stage of the participants' career to support the successful set-up and development of their sustainable agrifood business. Until 2021, EWA has supported 130 female entrepreneurs.



# EIT Food-supported Start-ups



## CZECHIA

ULLMANNA is a family-run tech start-up that has developed a robotic non-chemical weeding machine powered by AI. The project raised EUR 581 600 in public funds.

ULLMANNA grew their team to six alumni of the EIT RIS Food Test Farms programme. They also concluded contracts with two clients.

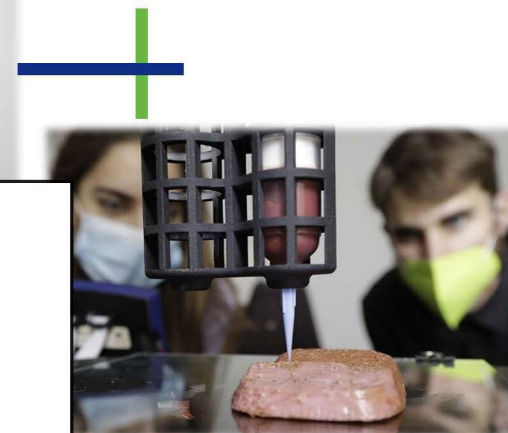
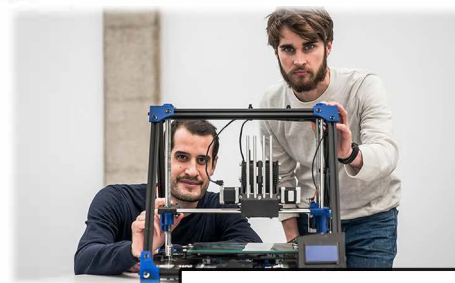
"Our ambition is to develop the most efficient and the fastest intra-row weeding machine in the world."

Martin Ullmann, CEO of ULLMANNA

## SPAIN

Novameat offers a plant-based meat substitute that is 3D printed with a pea and rice protein paste. The idea is to overcome the challenges facing today's unsustainable agricultural industry and help create a healthy, efficient, humane, and sustainable food supply system. To date, Novameat has attracted EUR 6.16 million in investments.

This new steak is created through a patented micro-extrusion technology, producing fibres between 100 and 500 microns in diameter – much smaller than the fibres produced by existing extrusion technologies. This allows the complex structure of real meat to be replicated, with muscle fibres and fat entwined.



## ROMANIA

Madalina Ilie is an alumna of the EIT Food New Product Development Skills workshop. Madalina is the Founder of **Manna Foods Solutions** and Co-Founder of Eleon Energy Systems. She is a novel foods solutions enthusiast working to revolutionise food consumption both on Earth and in space.

Through accelerated technology development like 3D food printing and tablet cooked food, Manna Foods Solutions foresees its usefulness during food shortages, climate change, and health crises. Madalina wants to promote fast access to food anywhere in the world – even in hostile environments like space.

"I truly encourage people who are working, or are in any way connected with the food industry, including R&D, innovation, or tech, to apply to EIT Food New Product Development, when it reopens. It's a great chance to learn more about this subject. Moreover, it is a chance to enlarge your business network with high-level experts from the industry."

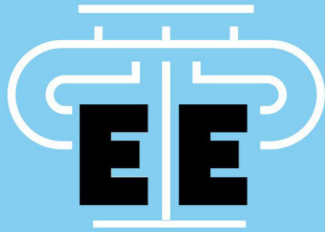


Madalina Ilie, Founder of Manna Foods Solutions



# EIT INNOENERGY RIS HIGHLIGHTS

## ENTREPRENEURIAL EDUCATION



17 RIS education activities  
implemented in 7 RIS-eligible countries,  
benefiting 5 704 participants

The **EIT Jumpstarter Joint Local Training** provided training of seven teams and mentoring of four. Each team presented their idea or project and received training about the market and financial aspects of its business development. The training also presented the EIT KIC Greece Hub and possibilities of support available from EIT InnoEnergy following programme completion.

## INNOVATION PROJECTS



5 RIS innovation activities  
implemented in 3 RIS-eligible countries

The **Accelerate Estonia Scaleup Safari** took place online throughout September and October 2021 as part of the build-up to UNFCCC COP26, involving around 25 representatives of the United Nations. Ragmar Saksing, Head of the Greentech sector at the Tehnopol Science and Business Campus, held a presentation on the Estonian clean-tech ecosystem. He also gave an overview of Estonian green-tech companies and Tehnopol activities, introducing the EIT InnoEnergy Estonia Hub and how the Hub can help start-up companies and corporates through InnoEnergy activities.

## BUSINESS CREATION & ACCELERATION



20 RIS business creation programmes  
implemented in 7 RIS-eligible countries

The EIT InnoEnergy Türkiye Hub has partnered up with YTÜ Yıldız Teknopark and started the **STAR BIGG-Green Growth Programme**, an acceleration programme for sustainable energy start-ups. It enabled entrepreneurs to turn their technology and innovation-oriented business ideas into qualified business plans and form companies with capital support of up to EUR 24 750.

# EIT InnoEnergy-supported Start-ups



## SERBIA

**ElevenEs** has developed the technology to produce lithium-iron-phosphate (LFP) batteries that are more sustainable and efficient than traditional batteries. It is an industrial spin-off of the multinational Al Pack Group, which specialises in aluminium processing. They received investment and support from EIT InnoEnergy to build a battery gigafactory near Serbia's lithium deposit, and have attracted further investment of EUR 349 million.

"LFP cells last more than twice as long as competing chemistries. They can be recharged up to 6 000 times, charge faster, can be repeatedly charged to 100% state-of-charge, and cause practically no fires in electric vehicles. On top of that, they cost significantly less."

**Nemanja Mikać, Founder and CEO of ElevenEs**

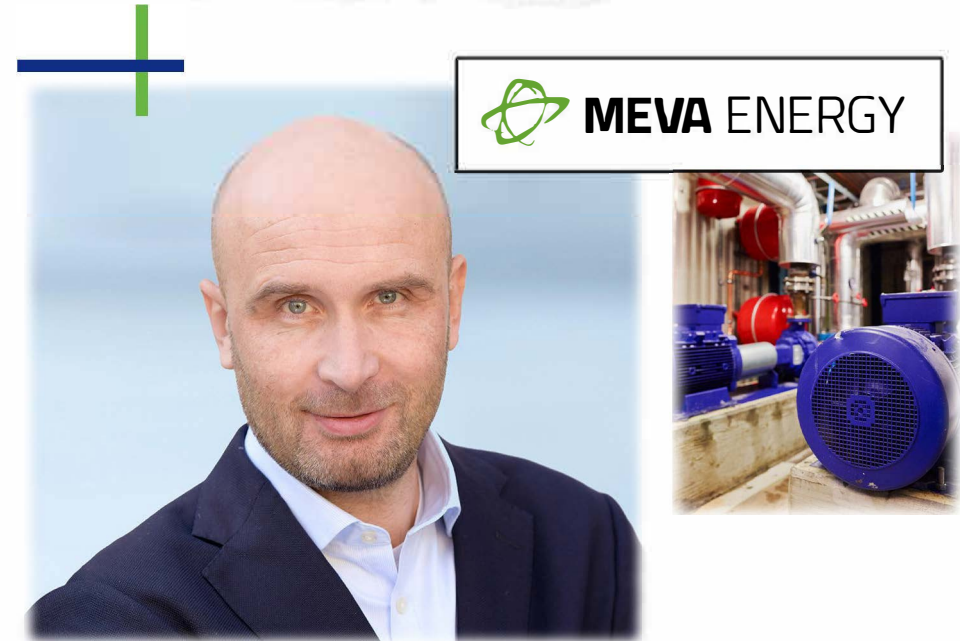
## POLAND

**Meva Energy** signed a green energy contract worth EUR 23 million with IKEA Industry to produce long term renewable power from wood residue. In less than 3 years, a Meva Energy power plant converting low value wood residue into renewable gas will be in place at IKEA Industry's production unit in Zbąszynek, Poland. The collaboration was an investment in on-site renewable power and introduced a completely new and highly efficient technology to produce green energy.

The plant will have lower CO<sub>2</sub> emissions (14 000 tonnes per year) compared to the carbon footprint of the Polish power grid. Moreover, the number of truck transports of wood residue leaving the Zbąszynek factory for external disposal will be reduced by about 300 trucks per year. Instead, the wood residue will be consumed for renewable power production directly where it is being produced. This de-centralised principle is the basis for reaching high conversion efficiency, as well as realising high levels of CO<sub>2</sub> reductions.

"Meva has the right product at the right time. The goal of climate neutrality necessitates new technological, climate neutral solutions in Europe."

**Marcin Korolec, Member of the Board of Directors at Meva Energy**





## ITALY

Daniele Novara's start-up, **Easy Hydro**, has received well-deserved recognition at the EU Sustainable Energy Awards for developing the first-ever hydro power station in a working underground mine. Just 40 kilometres north of Dublin, a water turbine located deep in a zinc mine is producing 30 kW of clean energy thanks to Daniele's novel technology. The technology stems from his work at Trinity College Dublin and uses modular water pumps to create low-cost, small-scale hydropower stations capable of exploiting untapped energy within existing water pipes.

Daniele and his team were able to complete the first turbine installation in 2021 thanks to collaboration with EU-based equipment manufacturers and a Swedish mining company, together with funding from EIT RawMaterials. With large-scale adoption of the technology, Daniele is optimistic about the impact his company can make and its contribution to bringing the EU closer to the 2030 climate targets.

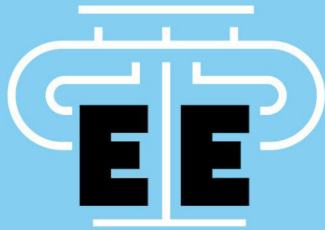
"I am extremely happy about my time at the EIT InnoEnergy Master School, learning how to get involved in the energy transition. The programme allowed me to spend two years living and working in different corners of Europe with classmates from all over the world. I really appreciated the many workshops and activities organised alongside regular classes and the emphasis on entrepreneurship."

Daniele Novara, CEO of Easy Hydro



# EIT URBAN MOBILITY RIS HIGHLIGHTS

## ENTREPRENEURIAL EDUCATION



33 educational courses  
implemented in 9 RIS-eligible countries,  
benefiting 803 participants

**COOPERATION INNOVATION TECHNOLOGY TRANSFER (COINTT) 2021** was held on 19-21 November in Slovakia, attended by 125 in-person participants and 422 online. The COINTT conference sought to draw the attention of academics, professionals, businesses and the public to the issues of technology transfer, intellectual property protection, innovation and business support. The main goal of the conference was to support the transfer of technologies, knowledge and insights from Slovak public scientific research institutions into practice, by creating a space for scientific research workers to meet with representatives of the commercial sphere and possible investors.

## INNOVATION PROJECTS



27 innovation activities  
implemented in 10 RIS-eligible countries,  
and 4 RIS innovation projects  
benefiting 19 RIS entities

**ECOMM (European Conference on Mobility Management)** was held in Portugal, bringing together over 200 participants with the goal of achieving sustainable transport modes that put users first and provide more affordable, accessible, healthier and cleaner alternatives to current mobility habits and patterns. The conference theme was "Beginning a New Era – Accelerating Shifting to Sustainable Mobility". ECOMM 2021 was a three-day event with excursions, keynote speeches, an exhibition, 50-80 presentations and workshops as well as lots of opportunities for making new contacts.

## BUSINESS CREATION & ACCELERATION



108 start-ups supported,  
10 start-ups established and  
EUR 718 000 generated in investment

**4 Green Brother Accelerator Workshops** took place between 23 June and 26 August 2021. A demo day was also held to help innovators enter their domestic and international markets, as well as make investments quicker and with less risk.

Green Brother is a professional network for green technology, energy efficiency, circular economy, smart cities and mobility, and environmental protection innovators. As the representative of two EIT KICs, namely EIT InnoEnergy and EIT Urban Mobility, Green brother provides a credible professional background to scale-up businesses, powered by the EU.



# EIT Urban Mobility-supported Start-ups



## TÜRKIYE

**Optiyol** is a Turkish start-up that is implementing a next-generation approach to route optimisation. They participated in the accelerator programme Innomotion. Shortly after joining the programme, Optiyol was qualified for one of the EIT Urban Mobility calls for investment, meaning it has had a very rapid development.

With Optiyol, one can transform delivery management and meet the standards of supply chain management processes. Optiyol uses its comprehensive data model which feeds flexible and tunable algorithms for each operation to capture the needs of managers, dispatchers, drivers and customers for the most realistic representation of operations.

## SPAIN

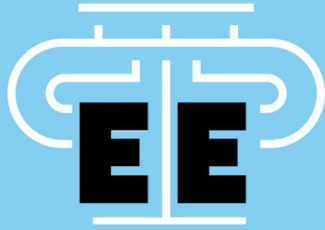
**HOPU** offers devices to monitor air quality for both gases and particulates. These devices use artificial intelligence, Internet of Things (IoT), and data quality solutions. HOPU also engages citizens and decision-makers to make sure the data is broadly understandable.

It further supports urban development and digital transformation through data-powered tools with dashboards and IoT. All of this makes HOPU a leader in smart cities, smart destinations, and environmental monitoring of air quality, noise, temperature, and humidity. HOPU also offers weather stations and optimisation of water irrigation for gardens.



# EIT MANUFACTURING RIS HIGHLIGHTS

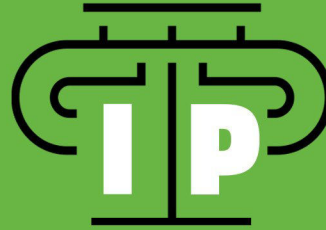
## ENTREPRENEURIAL EDUCATION



13 Teaching and Learning Factories implemented in 7 RIS-eligible countries, benefiting 129 participants

The EIT Manufacturing RIS competition **LEADERS – Women Innovators in Manufacturing at EIT RIS** has trained 30 women innovators from 16 EIT RIS-eligible countries in improving their pitching skills. This 3-day-long training provided, on the one hand, crucial entrepreneurial skills to women in order to attract investors and promote their inventions with the objective to lift them to the next level. On the other, it created a safe space for women, where they can support and learn from each other among an international community of professional women.

## INNOVATION PROJECTS



14 marketed innovations, 24 SMEs and 6 start-ups created in 12 RIS-eligible countries

The event **EIT Manufacturing RIS Hubs as Innovation Enablers** was organised by the KIC's RIS team in cooperation with all the EIT RIS Hubs on 24 November 2021. The event addressed the role of the EIT RIS Hubs in enhancing the innovation capacity of their countries through innovation projects, leveraging synergies with local, national and regional stakeholders and facilitating educational activities.

The EIT Manufacturing RIS Hubs had the chance to present their success stories and best practices to the audience, providing examples on how stakeholders can cooperate with the EIT RIS Hubs and utilise the opportunities they provide at a local level. In total, the event gathered approximately 70 participants from 28 different countries.

## BUSINESS CREATION & ACCELERATION



1 RIS business creation programme implemented in 6 RIS-eligible countries, involving 14 RIS start-ups and 80 individuals

The **EIT Manufacturing Innovation Challenge**, created and implemented by the EIT Manufacturing RIS Croatia Hub, brought together large-scale companies and start-up teams to develop solutions for sustainable growth challenges, fostering open innovation, knowledge transfer and new ideas. The programme engaged four companies across four sectors (pharmaceuticals, food, foundry, digital solutions), who sought to present manufacturing challenges to the wider community and invite external innovators to propose solutions.

During the programme, representatives were in close contact with the start-up teams and shared relevant know-how needed to complete the tasks. 23 start-up teams applied to the programme of which 12 were selected to compete.



# EIT Manufacturing-supported Start-ups



**ROBOTWIN**



## CZECHIA

**RoboTwin** is an RIS start-up created in 2021, whose vision is to make automation of specialised jobs finally efficient with smart robot teaching, based on motion tracking and imitation. It is a set of hardware and software that tracks worker's motions, extracts their know-how and generates optimal robot programmes. RoboTwin represents a collaborative way of automation that transforms routine unhealthy jobs into more creative and responsible ones.

It is socially sustainable: the workers become part of the automation process, their skills are digitalised and efficiently utilised in templates. It requires less work time to be spent in workshops and thus reduces reliance on the human workforce. Thanks to this, European manufacturing can become more stable and grow despite social, health or political circumstances.

Their journey at EIT Manufacturing started at the EIT Jumpstarter 2021, which they won. Now, they are developing an EIT Manufacturing innovation project. They won the BoostupEast competition and one of the co-founders won the Women RIS Leaders contest in 2022.

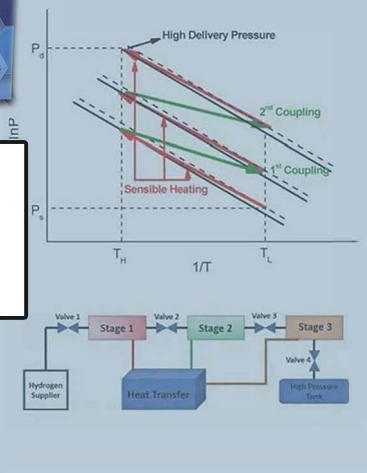
## GREECE

**CYRUS** aims to optimise the aluminium extrusion process by transferring overall quality inspection online with their first in-line AI-based defect detection system. Deep learning allows for surface inspection and early defect detection, resulting in scrap reduction and savings in production, processing and recycling costs. Real-time production monitoring and big data analytics facilitate fast and effective decision making. CYRUS enables the production of zero-defect products.

CYRUS was supported by EIT Manufacturing through the EVO-R 2021 programme and the RIS Intrapreneurship Challenge 2022. They received the award for the best solution for sustainable, resilient and socially impactful manufacturing among start-ups ready to scale up their business at the BoostUp Competition, organised by EIT Manufacturing CLC East.



### Technology Description



# EIT Community

**Cross-KIC** activities are joint activities in which all EIT KICs join forces to deliver and enhance efficient, high impact innovation across Europe. They boost RIS stakeholder engagement and expand the reach of KIC activities. In the 2021-2027 period, activities under the Cross-KIC Strategic Regional Innovations project shall contribute to the KICs' regional impact. This is in line with the EIT SIA 2021-2027 and the EIT Impact Framework 2021-2027.

Joint activities are predominantly aimed at innovators and researchers looking to commercialise their innovative projects and connect to the pan-European ecosystem.

## EIT Community-supported Start-ups

### PORTUGAL

**SmartCap** is the first light-activated cap for catheter sterilisation. It was developed by Inês Gonçalves, a researcher from the Institute for Research and Innovation in Health at the University of Porto. SmartCap received EUR 870 000 through the Innovator Award from the Wellcome Trust Foundation.

SmartCap seeks to reduce healthcare-associated infections that affect about 4.1 million people in Europe and cause over 120 000 deaths per year, with the most frequent infections associated with catheters. This type of infection causes complications that put patients' lives at risk and are highly costly. SmartCap's innovative cap is a safe and long-lasting anti-microbial solution, capable of preventing infection through catheters.

It has taken the science innovation world by storm: following a top placement in the 2021 EIT Jumpstarter, the SmartCap team has connected with the European partners of EIT Health through the InnoStars Awards and the Caixa Impulse program.

"It kills bacteria through the photoactivation of graphene without using antibiotics, thus preventing the development of bacterial resistance."

Patrícia Henriques, Project Manager at SmartCap



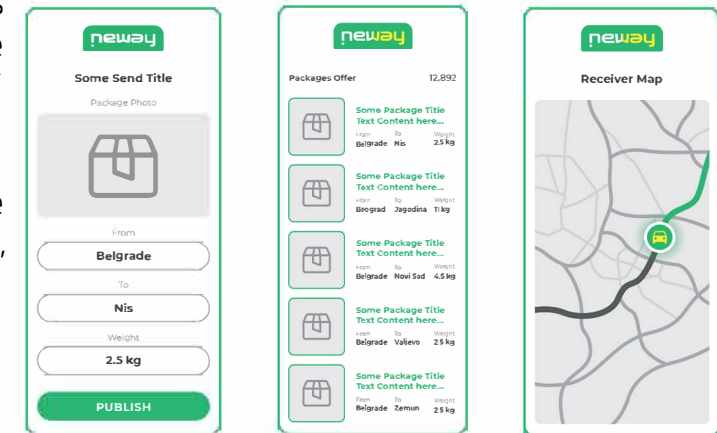


# EIT Community-supported Start-ups

## SERBIA

**NeWay** is a ridesharing solution that uses civil drivers for shipping items, thereby reducing CO<sub>2</sub> emissions from 16 kg to just 1 kg per package. Miljan Simonović and Dragan Stojilković created their start-up during the 2021 EIT Jumpstarter and won 2nd prize in the Urban Mobility category. In 2022, NeWay was selected for EIT Urban Mobility's thematic accelerator programme.

"The EIT Jumpstarter had a great impact on our understanding of how to build a start-up company: what are our future tasks, risks to have in mind, etc. We consider it to be a fantastic mentorship programme and, during this period, we were exceptionally motivated to continuously work on developing our platform. It has given us remarkable knowledge, resulting in experience with pitching and making a business plan. We would recommend this programme to anyone who has an idea that could have an amazing impact on quality of life and who is eager to face the challenge."



The NeWay Team

## HUNGARY — GERMANY

**ClimateHood** is a team led by Jasmin Heilemann (Germany) and Zsófia Anna Ghira (Hungary). They proposed an idea to mitigate the impact of heat waves in urban areas using low heat. The team progressed in the Jumpstarter programme until the Local Joint Training phase, where they built a business model that allowed them to map the value proposition and financials of their idea, as well as quantify the impact of their innovation for society.

With their refined project "CoolCo's — Cooling Corners and Corridors", the team applied for the New European Bauhaus Prizes, managed by the European Commission. ClimateHood was selected as a finalist in the "New European Bauhaus Rising Stars" strand in the category "Prioritising the places and people that need it the most", winning 2nd place.

"The Jumpstarter programme — and especially the New European Bauhaus sub-programme — gave place to the interdisciplinarity of ClimateHood's project. It is indispensable to think about and have conversations regarding urban public spaces. We received personal guidance and valuable comments on our project, and, at the same time, it was very nice to get to know other start-ups and approaches, too. We feel that our project is valuable and believe what we are doing is important. Thus, we keep going!"



The ClimateHood Team

# WHAT'S NEXT?

## A great innovator can come from anywhere

In recognition of its results during the 2014-2020 programming period and the potential of a strengthened EIT RIS, the **EIT SIA (2021-2027)** markedly enhanced the **EIT RIS mandate and resources for the period of 2021-2027**. The EIT RIS is now a legal requirement for EIT KICs to implement in their multi-annual strategies, ensuring that the EIT RIS becomes an integral part of KIC activities. The EIT RIS has also been allocated additional resources of between 10-15% of the total EIT grant (EUR 2.9 billion in 2021) and a stronger mandate to further increase the EIT Community's regional impact through:

- 1) enhanced openness towards potential partners and stakeholders
- 2) better articulated EIT KIC regional strategies, closely linked to relevant Research and Innovation Smart Specialisation Strategies (RIS3)

2021 was a transitional year, with an enhanced EIT RIS entering full implementation in 2022. To guide that implementation from 2022 to 2027, the EIT adopted an RIS Implementation Framework 2022-2027. The EIT RIS will strengthen its contribution to the advancement of innovation capacities across Europe, notably by increasing tailor-made support for local innovation ecosystems, and involving more HEIs, businesses, and research organisations in regional outreach strategies.

The Framework will ensure that by 2027, the EIT will have advanced the innovation performance of RIS-eligible countries and regions by strengthening innovation capacities, enablers, actors, and linkages. This in turn will grow the support and power of Europe's largest innovation ecosystem.

This activity report gives only a taste of the incredible talent to come out of the **EIT RIS** after just seven years of activities. The innovations and businesses that have been able to take root and thrive thanks to the EIT support show how valuable closing the European innovation gap is. With this new talent now connected to the EIT's wider European innovation ecosystem, there is no question they will benefit the EU's wider sustainability goals.







# **EIT REGIONAL INNOVATION SCHEME ACTIVITY REPORT 2021**