

 Awards 2017

# Meet the **Nominees**



# Awards 2017

## NOMINEES



The EIT recognises the exceptional achievements of members of its Innovation Communities through **three categories** in the annual EIT Awards:



### Awards CHANGE

**CELEBRATES GRADUATES** from EIT-labelled educational programmes who spur innovation and entrepreneurship and bring about a change in the areas addressed by the EIT and its Innovation Communities.



### Awards VENTURE

**PUTS SUCCESSFUL ENTREPRENEURIAL START-UPS** in the spotlight that have been supported by the Innovation Communities through a dedicated business creation or business development process.



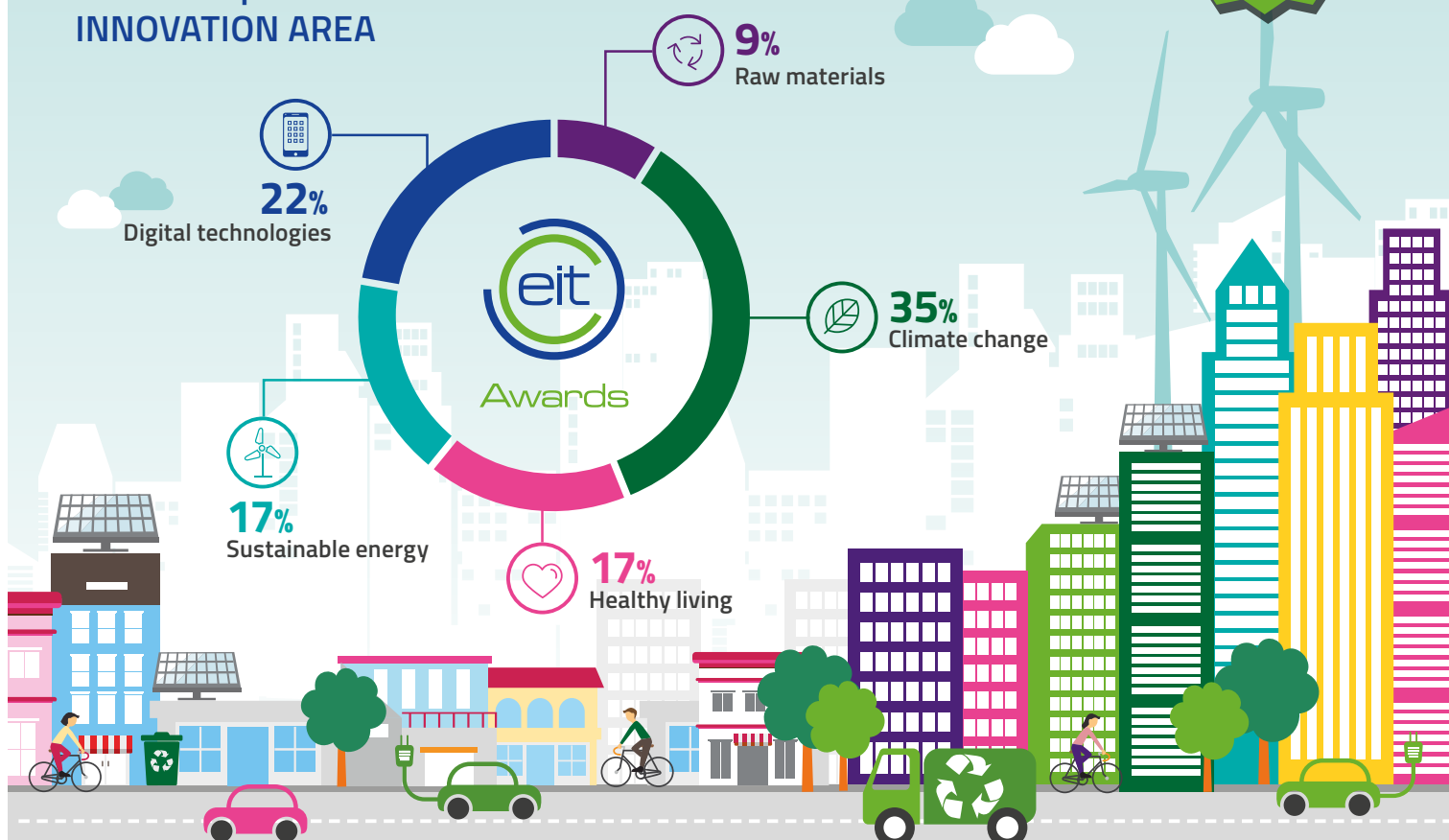
### Awards INNOVATORS

**RECOGNISES INNOVATION TEAMS** from the Innovation Communities that have developed a product, service or process with a high potential for societal and economic impact.

Who are the EIT Awards nominees in 2017?



### Nominees per INNOVATION AREA



## Nominees by GENDER

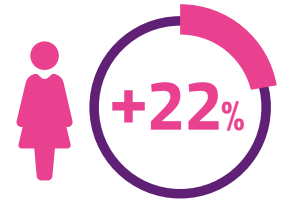
2016



2017



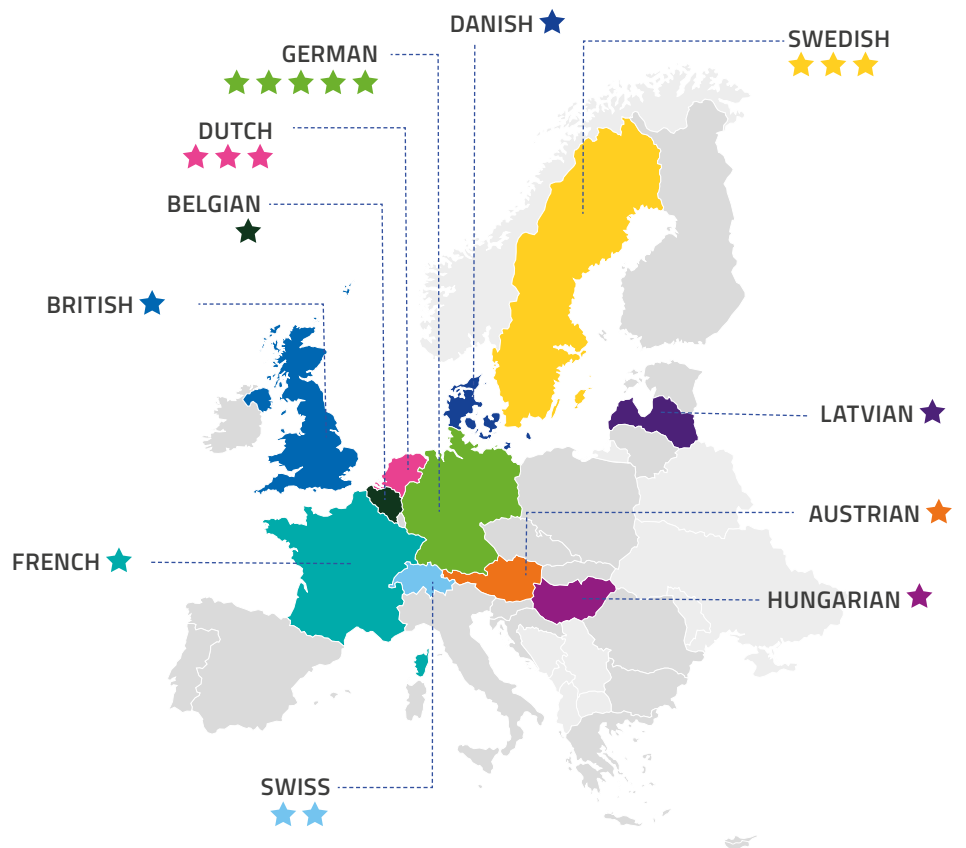
**WOMEN  
ENTREPRENEURS**  
nominated in 2017



COMPARED TO  
2016

## Nominees by NATIONALITY

20 from 11 European countries



Number of nominees ★

## WHAT ARE THE PRIZES FOR EIT AWARDS 2017?



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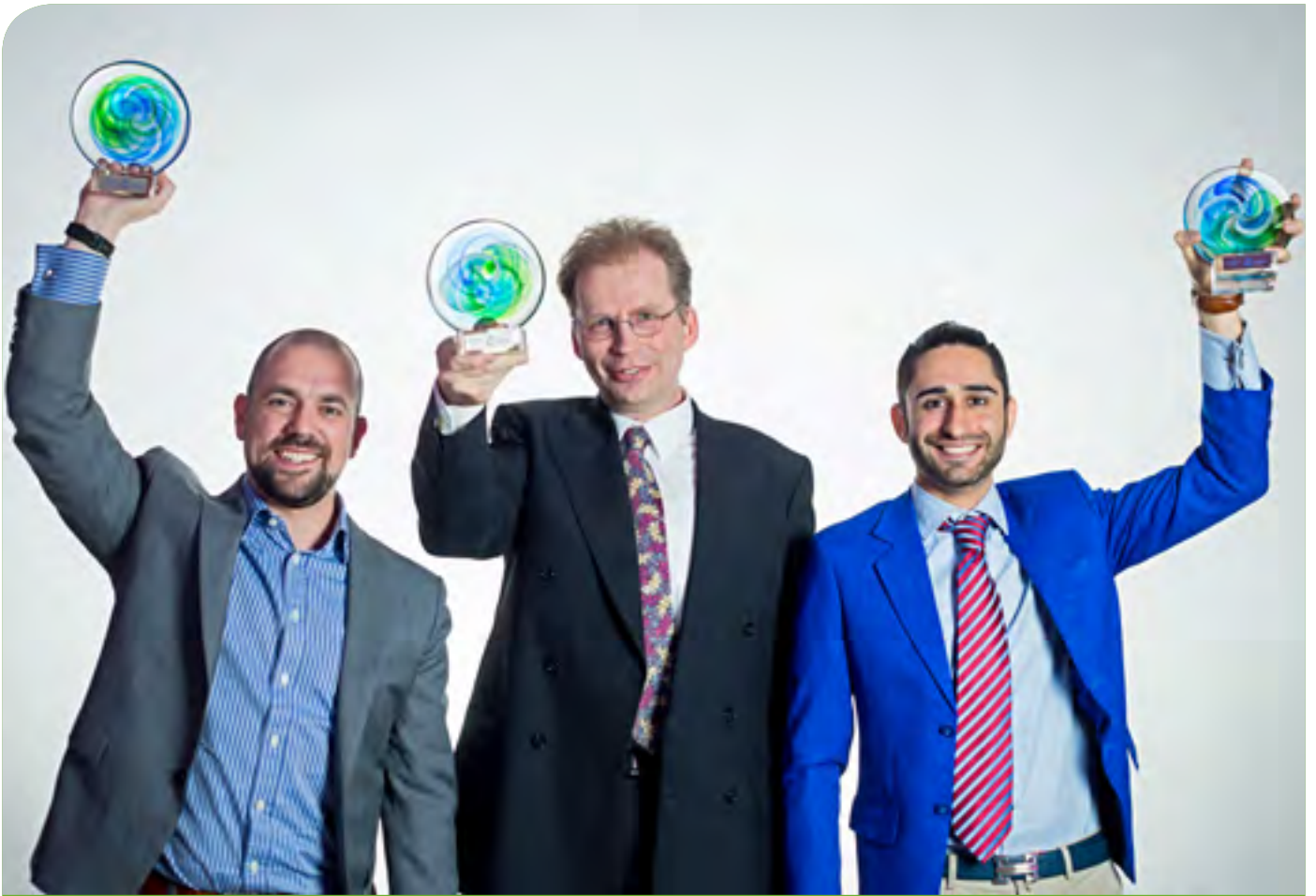
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There are letters next to each name above and at the top of each EIT Awards nominee's profile. During INNOVEIT 2017, use these letters when voting starts for the EIT Audience Award and make your vote count!

**VOTE**  
for your  
favourite!



## Welcome to the EIT Awards 2017!

The annual EIT Awards recognise the extraordinary talent found in the EIT's Innovation Communities. The Awards support the EIT's efforts to boost innovation and entrepreneurship in Europe, and are a great way for individuals, start-ups and innovation teams within the EIT Community to present their incredible achievements.



International recognition of the EIT Community's work is growing each year. **Two of the 2015 EIT Awards nominees were named on the Forbes 2016 '30 Under 30 Europe' list, while an incredible 18 members of the EIT Community were named on the list this year.** In addition, two of the EIT Community's women entrepreneurs were nominated for the EU Prize for Women Innovators 2017, one of whom went on to win the Rising Innovator Prize.

Also this year, two of our 2016 EIT Awards winners have seen continued success, with one winning the MBR Global Water Award in Dubai, and the other winning the Capgemini InnovatorsRace50 in the Consumers & Well-Being category.

There has never been a better time to be part of Europe's largest innovation community.

In the following pages, you will learn about this year's nominees and the ideas, projects and products that have led to their consideration for the 2017 EIT Awards.

The range of innovations that our nominees bring to the EIT Awards continues to astound. In the **EIT CHANGE Award** category, they include a tactile belt to help visually impaired people navigate the world; software to plan greener buildings by assessing their lifecycle; a process to produce biofuel from waste wood; and a process to produce ink from waste coffee grounds.

The **EIT Venture Award** nominees have developed software to identify and analyse the climate change risk faced by companies; production technology to substitute clay minerals for toxic chemicals in building materials; software to flag security issues for app users; a thin coating for heat exchangers to prevent scaling and fouling; a process to recycle contaminated scrap metal; cyber-security for critical infrastructure; a system that uses big data to heal patients in a smarter way; plasma medicine to treat chronic wound patients and kill multi-resistant bacteria; electricity solutions for those living without energy access; and solutions for independent and sustainable living.

The **EIT Innovators Award** highlights and rewards teams supported by our Innovation Communities. The nominees for this award have created innovations that include e-health tools to predict the risk of dementia; advanced sensors for food cooling; a system to provide gate-to-gate internet connectivity for air travellers; a drop-in solution for silicon wafers; a CAD tool for proactive cyber-security management; and a blood test for early detection of aggressive prostate cancer.

The EIT's newest Innovation Community, **EIT Food**, is already seeing important activity. We are pleased to introduce this Community by highlighting two great innovators.



This year, we have introduced a new category: the EIT Audience Award!

Get to know all of our Awards nominees at the **Innovation Tour on 16 October, then vote for your favourite!**

**When voting starts, use the letter at the top of each nominee's page and make your vote count!**



Awards  
CHANGE

The EIT CHANGE Award celebrates graduates from EIT-labelled educational programmes who spur innovation and entrepreneurship and bring about change in the areas addressed by the EIT and its Innovation Communities.



# Sustainable ink, sustainable value chain

Key words: coffee waste, sustainable pigments, circular economy



## Eline Leising

General Manager, Caffelnk and Consultant, RebelGroup | Main product: Caffelnk



### Aim

To extract pigments from coffee waste and use them to create sustainable ink

### EIT Community connection

EIT Climate-KIC Master Label programme (2014-2016), EIT Climate-KIC Journey, EIT Climate-KIC Greenhouse programme (the Netherlands, 2015-2016)

## The project

### The idea

Caffelnk gives coffee waste a second life by extracting the pigments and using them to produce sustainable ink, forming part of a new value chain based on sustainability.

### Inspiration

Coffee is the most consumed beverage in the world, and coffee waste equal to three Eiffel Towers in weight is produced each day. Meanwhile, the demand for ink is increasing, with ink production polluting the environment – especially pigments. Our team wanted to replace polluting pigments with a sustainable alternative, so we developed ink pigments sourced from waste coffee grounds.

### Unique selling points

Our method of connecting the coffee sector with ink producers is revolutionary. Caffelnk is both a service provider and a technologically innovative enterprise.

### EIT Community support

It was thanks to the EIT Climate-KIC Summer School that our team met, and we received training to develop our idea and present it during a pitch competition. We benefited from EIT Climate-KIC's Greenhouse programme, which supported us with financials,

personal and professional coaching, and opportunities to meet relevant experts.

### The future

Our aim is to successfully establish a new value chain making pigments from coffee waste in the Netherlands and France. We will develop coffee waste recycling and aspire for all pigments to be extracted from natural sources. On a global level, Caffelnk aims to raise awareness of the possibilities to create value from waste.

## The nominee

### The beginning

Nature has always inspired me and it motivated me to complete a Master's programme in industrial ecology, based on learning from nature and viewing waste as a valuable resource. At Caffelnk, we want to do this by closing loops and re-purposing waste products.

### Joining the EIT Community

I strongly believe in the power of collaboration. The EIT connects science, business and policy, and therefore boosts sustainable innovation processes. The EIT and EIT Climate-KIC offer opportunities to meet like-minded young professionals from all around Europe, eager to make this world a more sustainable place.

### Entrepreneurial spirit

Sustainable change and transitions have always fascinated me, but before I joined EIT Climate-KIC I did not see myself as an entrepreneur. EIT Climate-KIC made me realise my own potential to create positive change.

### An ideal world

I would like to drastically decrease current levels of meat consumption in the world, since this would solve many environmental problems.



I strongly believe in the power of collaboration.

# A cleaner world with biofuel

Key words: wood, bio refinery, circular economy



## Florence Gschwend

Co-founder and Director of Operations, Chrysalix Technologies |  
Main product: BioFlex process

### Aim

To use any type of woody material to produce the chemicals, materials and fuels of a cleaner tomorrow

### EIT Community connection

EIT Climate-KIC

## The project

### The idea

Our team developed a chemical process that utilises inexpensive liquid salts to separate the major components of any type of woody material. This allows us to condition biomass material to produce products like bioethanol and bioplastics. Most importantly, our process can extract and recover heavy metals from the biomass.

### Inspiration

For my Ph.D. project, I worked on making the processing of biomass more economically viable. Now I want to develop the technology to be implemented in the real world.

### Unique selling points

While other technologies struggle to convert wood, and especially waste wood, our technology allows us to use contaminated waste wood from construction and demolition to produce inexpensive fuels, materials and chemicals.

### EIT Community support

I received part of the funding for my Ph.D. project from EIT Climate-KIC and participated in the EIT Climate-KIC Summer School. We also participated in the EIT Climate-KIC Greenhouse, Climate Launchpad, and Accelerator programmes. Through

this, we received some funding and very valuable coaching.

### The future

In 10 years, I want to be converting one million tonnes of waste wood every year. This sounds like a lot but only represents around 25% of the wood waste the UK produces and 1/60<sup>th</sup> of what the EU produces. A single large paper mill converts the same volume of wood into paper in one year.

## The nominee

### The beginning

While I was doing my Bachelor's degree in chemistry, I felt dissatisfied with the courses that focused on traditional chemical synthesis rather than innovative chemistry. This influenced my choice for a Master's programme, which I did in green chemistry, energy and the environment at Imperial College.

I have worked in the same research group ever since.

### Joining the EIT Community

When I started my Ph.D., I met other students who told me about EIT Climate-KIC, so I got in touch with the local office. They told me all about the programme – especially the summer school – and it sounded super interesting, so I signed up that same day.

### Entrepreneurial spirit

Being an entrepreneur only occurred to me during my Ph.D. through the events and programmes organised by EIT Climate-KIC. They brought it all out in me!

### An ideal world

I'd remove all the plastic currently in our oceans, rivers, lakes, beaches, forests and deserts.

I learned what I didn't want to be: someone who does repetitive work.

# A navigation belt to feel directions and routes

Key words: navigation device, visually impaired, inclusion



## Julia Wache

Head of Sales and Co-founder of feelSpace GmbH | Main product: naviBelts



### Aim

To give people, especially the blind and visually impaired, more freedom and independence by facilitating orientation with a navigation device that leaves hands, eyes and ears free

### EIT Community connection

EIT Digital Doctoral programme

## The project

### The idea

My start-up developed a navigation belt that indicates direction via constant vibrational feedback, leaving hands, eyes, and ears free. Visually impaired (and other) users can develop a better sense of orientation and, through this, navigate more independently and comfortably.

### Inspiration

I discovered the research on tactile belts through my sister who was involved in the work – I was fascinated by the results.

### Unique selling points

The navigation belt provides a stress-free navigation experience that leaves hands, eyes and ears free. It is inclusive and can be used by everybody (not just the visually impaired, but also bikers, hikers, seniors, tourists...).

### EIT Community support

I gained all my knowledge of entrepreneurship and running a successful start-up through my training in the EIT Digital Doctoral programme. Thanks to many valuable contacts within the EIT network, I now also know a lot of experts who support me.

### The future

I hope that feelSpace naviBelts become commonly used as a navigation device, not just by visually impaired people, but by others as well.

## The nominee

### The beginning

I developed a business model for producing the tactile belts commercially in 2014 during the EIT Digital Business Model course, because research showed large potential for the blind and visually impaired. My work won a \$25K prize at VT KnowledgeWorks Global Student Entrepreneurship Challenge in the US. I then joined a team of researchers from Osnabruck and established feelSpace with them in 2015.

### Joining the EIT Community

I saw a chance to learn more about being an entrepreneur and how to implement research results into actual products that would help people, so I joined the EIT Digital Doctoral programme.

### Entrepreneurial spirit

During my first internship at a start-up in San Francisco, I became aware of how much I enjoyed the start-up field myself, and that it is possible to

learn the necessary skills. I started to change my future plans accordingly.

### An ideal world

I would like people to believe in the good nature and intent of others. In my experience, trusting people and supporting them to reach their full potential often leads to those people becoming trustworthy. They dare to reach for more and they excel in what they do.



I would like people to believe in the good nature and intent of others.



# Lifecycle assessment for greener buildings

Key words: lifecycle assessment, construction, emissions



## Philipp Hollberg

Co-founder, Managing Director and Product Manager of CAALA GmbH |  
Main product: CAALA GmbH software

### Aim

To enable building planners to optimise designs from an environmental, energetic and economical perspective, taking the entire lifecycle into account

### EIT Community connection

EIT InnoEnergy SELECT Master programme and EIT Climate-KIC Accelerator

## The project

### The idea

CAALA offers a SaaS (Software-as-a-Service) solution so that building planners can get real-time feedback in the early planning phase regarding the economic and environmental performance of their buildings. Without much previous knowledge about energy and emissions, they can check whether regulations are being fulfilled and avoid expensive changes later.

### Inspiration

Discussions with my brother regarding his Ph.D. thesis resulted in an understanding of the great role the construction industry must play in fostering sustainability.

### Unique selling points

For the first time, planners can optimise a building design, offering customers better quality building with lower lifecycle costs and a minimised ecological footprint.

### EIT Community support

The EIT InnoEnergy SELECT Master programme empowered me to become a tech entrepreneur. The EIT Community provides me with a network of like-minded people and access to neighbouring EU markets, while EIT Climate-KIC supports CAALA through its Accelerator programme.

## The future

In 10 years' time, we would like to have established CAALA as the standard for lifecycle assessment in the early planning phase and have the majority of architects in Europe using it.

## The nominee

### The beginning

I always had a great interest in the environment, especially after becoming aware of climate change in my youth. Today, I have the unique opportunity to make use of the experience and knowledge acquired throughout my life to make the construction industry more environmentally friendly.

### Joining the EIT Community

I had the opportunity to work for the COO of EIT InnoEnergy as a working student. Doing so convinced me of the great potential the EIT has in

fostering positive change in Europe and around the world.

### Entrepreneurial spirit

Co-founding an NGO in Ghana was a life-changing experience; it proved that we can all realise dreams and have a scalable impact. Since then I have been eager to make a positive impact by starting new organisations and companies.

### An ideal world

I would love to see people being more conscious and reflective about the world they live in so that they use more of their energy and potential for positive change. We do not lack the knowledge, creativity or resources to make the world more fair and sustainable. We just lack the collaborative willpower to do so.



We can all realise dreams and have a scalable impact.



Awards  
VENTURE



The EIT Venture Award puts successful entrepreneurial start-ups in the spotlight that have been supported by the Innovation Communities through a dedicated business creation or business development process.



# An innovative solution to metal corrosion



Key words: anti-scaling, anti-fouling, surface solution



## Annemette Hindhede Jensen

CEO of SiOx Aps | Main product: Nanomel

### Aim

To prevent metal surfaces from scaling and fouling

### EIT Community connection

EIT Climate-KIC Accelerator (EIT Climate-KIC Nordics)

## The project

### The idea

SiOx is based on the knowledge that with just a small change to a heat transfer surface, scaling and fouling can be prevented. We created Nanomel, a thin film that provides a dense and flexible silica-on-metal coating that effectively protects the metal substrate.

### Inspiration

Other projects have addressed the problem of scaling and fouling, but none was able to fabricate a thin coating suitable for heat transfer surfaces. We recognised this as an ideal solution.

### Unique selling points

For heat exchangers, it is essential that the coatings are thin. They must also fulfil various requirements for installations related to drinking water and food.

### EIT Community support

The EIT Community supported us with networks, masterclasses, funding and coaching. It's all been extremely beneficial to building our company, especially when developing the business case and establishing contacts.

### Teamwork

We are two engineers working full-time. I have a Ph.D. in electrochemistry and materials

science and am the CEO. I use my networking and presentation skills to be the 'face' of SiOx. I keep a strong focus on bringing the technology from lab to market.

Alexander Bruun Christiansen, Ph.D. in physics and nanotechnology, is our R&D Engineer. He pursues a highly scientific approach to quickly identify the challenges and opportunities for potential applications of the technology.

In addition, SiOx has a network of collaborators, including the Technical University of Denmark, Alfa Laval and Elplatek.

### Venture development

We have already demonstrated the potential of Nanomel in the lab, and are now working on market installations in district heating and biogas. We are always looking out for new markets to enter.

## The nominee

### The beginning

I have always been interested in nature and preserving our environment. The use of abundant non-toxic materials is essential for the sustainability of our planet.

### Entrepreneurial flair

I think the key to becoming a successful entrepreneur is will, talent and networking skills.

### Learning from experience

Be ambitious. Always.

### Best memory

Our best memory was when we opened the test heat exchanger in Alfa Laval and realised the huge difference that can be made.

### Ideal advisor

Elon Musk, CEO and co-founder of Tesla Motors. He is trying to redefine transportation on land with electric vehicles and send humans to other planets.



I think the key to becoming a successful entrepreneur is will, talent and networking skills.

# Recycling contaminated steel scrap

Key words: recycling, metals, sustainability



## Bert Bult

Co-owner and Director of Purified Metal Company |  
Main product: Purified Metal Blocks



### Aim

To recycle contaminated steel scrap in a patented and innovative way

EIT Community connection  
EIT RawMaterials

## The project

### The idea

The PMC solution recycles contaminated steel scrap in a cost-effective and sustainable manner, rather than dumping it in landfills or cleaning it at high cost. Through a single patented process, we produce a high-quality end product for the steel industry: Purified Metal Blocks™ (PMBs).

### Inspiration

While working at a steel plant, we realised that asbestos-contaminated steel scrap was either being dumped in landfills or being cleaned at high cost. We started to consider alternatives.

### Unique selling points

PMC offers a circular and cost-efficient alternative to dumping contaminated steel scrap in landfills, which is a global issue for the environment and labour safety.

Steel scrap is normally considered to be a waste product because of the contamination attached to it. PMBs will be one of the few types of steel scrap that will meet the end-of-waste criteria of the European Union.

### EIT Community support

EIT RawMaterials is a key supporter and sponsor of PMC. They introduced us to potential partners and provided financial support to get through critical stages of development.

### Teamwork

Our venture started between three partners (Nathalie van de Poel, Jan Henk Wijma and myself). We continue to work very closely to achieve our main goal, and our complementary competencies have helped us to move quickly.

### Venture development

We are currently working on financing the first factory, and the funding is almost complete. Our goal is to start building the factory in January 2018.

## The nominee

### The beginning

I was approached by my two partners after they came up with the idea of recycling contaminated steel scrap. I immediately saw the potential and the rest is history.

### Entrepreneurial flair

I believe that an entrepreneur needs to be open to new ideas, able to deal with setbacks, and able to build a strong network of potential partners.

### Learning from experience

My advice is to reach out and be open to the EIT Community network. Within this network, entrepreneurs can find professionals, institutions and companies to support their start-ups in getting to the next level and exchange ideas to help manage potential challenges.

### Best memory

My best memory was the whole process of setting up the company. Before this, I worked for quite a few companies, developing new products, processes and markets for them. Doing this for my own company – and solving a major environmental problem – makes me very happy.

### Ideal advisor

We have already been working with our ideal advisors over the last three years – key individuals from major companies and institutions in the industry (EIT RawMaterials, RWTH Aachen, Royal HaskoningDHV, SGS Search, Visser & Smit Bouw, Renewi, EY and AON).



My advice is to reach out and be open to the EIT Community network.

# Pioneering plasma medicine

Key words: plasma medicine, chronic wound therapy, bacteria



## Carsten Mahrenholz

Co-founder and CEO of COLDPLASMATECH GmbH |  
Main products: Plasma Cube and Plasma Patch

### Aim

To pioneer the next step in modern medicine, treat chronic wound patients, and kill multi-resistant bacteria

### EIT Community connection

EIT Health Germany, winner of the Business Plan Accelerator "Best of the Best" 2016, and winner of the Public Award in Barcelona

## The project

### The idea

A Star Trek-like medical device that uses cold plasma to kill multi-resistant bacteria and treat even chronic wounds. It's not an idea – it's real.

### Inspiration

We wanted to bring a new technology to the market that was researched for 10 years, to treat patients who have no hope of recovery. We wanted to fight a problem that could take us back to the Middle Ages: antibiotic resistance.

### Unique selling points

Our technology is a non-systemic solution to kill superbugs directly in wounds. The active wound-dressing "Plasma Patch" is easy to use, delegable to medical professionals, mobile, treats large areas, and is adaptable in size and form based on patient and clinical needs.

### EIT Community support

The EIT Community has provided us with networking, access to EU markets, communication, press events, personal help and feedback.

### Teamwork

Teamwork is everything. Without the others, everyone would have failed. We are highly diversified in profession and character and we are very close – what started on a professional basis soon became friendship. Now it's

"all for one and one for all". As CEO, I know that everyone supports me in my decisions, and they know I am watching their backs.

### Venture development

We are setting up line production with a number of companies, including Wacker Chemie, Dätwyler, and the Schreiner Group. We already have CE Conformity for our disposable patches and are in the process of applying this in accordance with the Medical Devices Act. We are collaborating with several health insurance companies to prepare market access.

## The nominee

### The beginning

I always wanted to combine my passion for science and economics. When I was CEO of a tech-transfer company, I co-wrote a proposal for a new technology with plasma physics and was offered the chance to lead the workgroup. Then I founded COLDPLASMATECH in 2015 and began to give it my complete focus the following year.

### Entrepreneurial flair

Willingness to seek calculated risk, ability to solve problems quickly, allowing failure and being able to work around it. Being disruptive, confident, self-critical, creative and communicative.

### Learning from experience

Talk to many people, learn from them and their failures, and then: find your own way!

### Best memory

A 21-year-old, severely burned girl became infected with a superbug and was about to die. We built a plasma cannon overnight to treat her. She was able to receive a transplant and survived.

### Ideal advisor

Steve Jobs, Elon Musk, and others doing things to change the world.



We wanted to fight a problem that could take us back to the Middle Ages: antibiotic resistance.



# Cyber-resilience for critical infrastructure

Key words: cyber-security, monitoring, infrastructure



## Damiano Bolzoni

CEO and Co-founder of SecurityMatters | Main product: SilentDefense



### Aim

To provide cyber-security and cyber-resilience to critical infrastructure sectors, ensuring that underlying and supporting networks are healthy and threat-free at all times

### EIT Community connection

EIT Digital Accelerator, EIT Digital Access to Finance

## The project

### The idea

SecurityMatters is the developer of an innovative automated network and situational awareness platform that enables critical infrastructure organisations worldwide to implement and operate cyber-resilient industrial control systems.

### Inspiration

The critical infrastructure industries and installations on which we all depend face particular and domain-specific cyber-security threats. We wanted to develop solutions to meet these specific needs and protect the infrastructure that underpins modern society.

### Unique selling points

SecurityMatters provides a passive automated network monitoring solution for industrial environments. This empowers asset owners to identify, react, and respond to industrial threats and flaws.

### EIT Community support

With the support of the EIT Digital Access to Finance team, we raised substantial funding from four prime investment groups. The German corporate venture fund Robert Bosch Venture Capital provided funding that helped us expand our sales, marketing and support teams internationally.

### Teamwork

We have a mix of highly qualified people, forming a team that is greater than the sum of its parts. In terms of the founders, Sandro Etalle is a strategic thinker who brings a wealth of networks and contacts, which provides us with access to talent and connects us with a wide range of stakeholders. Our CTO, Emmanuele Zambon, has deep technological knowledge and is a specialist at solving technical problems. My role is to connect our technology with partners and their products.

### Venture development

We currently protect over 50 critical infrastructure installations around the world and are competing with the largest players globally. In terms of next steps, we want to consolidate the verticals in which we are already operating and eventually sign original equipment manufacturer agreements with large vendors and service providers. This will provide a large boost to revenues.

## The nominee

### The beginning

My interest in cyber-security dates back to 2002, when I joined one of the Big Four consulting companies as an ethical hacker. I developed my knowledge when I joined the University of Twente (the Netherlands) for a Ph.D. in network security, and got into cyber-

security for critical infrastructure organisations in 2008.

### Entrepreneurial flair

Perseverance, vision, and humility. One must be able to recognise their shortcomings and work with talented people to fill those gaps.

### Best memory

My best memory so far has been hearing from several Fortune 500 companies and partners that our team is stellar.

### Ideal advisor

Master Yoda for his discipline and dedication.



My best memory so far has been hearing from several Fortune 500 companies and partners that our team is stellar.

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# Everybody a data scientist



Key words: **business intelligence, health, big data**



## Hans Constandt

Founder and CEO of Ontoforce | Main product: **DISCOVER**

### Aim

To heal patients with smarter data and have a global impact on bringing drugs to market faster

### EIT Community connection

EIT Health, EIT Go Global

## The project

### The idea

We are becoming a world leader in semantic search and aim to disrupt the business intelligence space with our top-notch solution.

### Inspiration

I was a data scientist, but when I found out my child had a disability I couldn't find the data myself. So I built a platform to help parents and children find the right schools, therapies and paediatricians. We have seen that we can truly heal patients by democratising Big Data.

### Unique selling points

We invested heavily in user interface. You can learn and use the system after watching a five-minute YouTube video and then mine over 120 databases in minutes. We use semantic data federation, which means you keep the data where it is and always have the freshest data through a working federated search system.

### EIT Community support

A lot of experts gave us advice and helped us to pivot, optimise our pitch, meet customers and partners, review our materials, develop go-to-market strategies and much, much more.

### Teamwork

We have an extremely intelligent and motivated team where we keep

our values of excellence, loyalty, integrity, openness and social impact very high. We are also ultra-focused and take consensus decisions fast, using agile programming and calling people on their accountabilities.

### Venture development

We are in the scale-up phase. We have raised EUR 3.2 million in two seed rounds with VCs and dedicated angels, and EUR 1.3 million from the Flemish government. We might also go for some EU funding.

## The nominee

### The beginning

I was born in Congo with malaria and very sick, and I think that's where I got my passion to help people and the energy to do this.

### Entrepreneurial flair

Be inspiring, have a mission, and lead by example. Be open, share, and be authentic.

### Learning from experience

You do more together than alone, but set objectives and expectations from the beginning with every hire, partner, investor and customer. Acknowledge and fill in your gaps as soon as possible. Also, I learned that when you ask for money, you get advice ... but when you ask for advice, you get to the money.

### Best memory

So many I can't count them ... running into one of the founders of Google and talking about how data can save the world ... shaking hands with Tim Berners Lee and not being willing to wash it for days ... meeting great entrepreneurs like Mike Benioff. But one of the best is seeing how proud my wife and kids are.

### Ideal advisor

Tim Berners Lee, Paul Janssen, Mike Benioff. Idealists who want to help the world and also have a strong sense of doing great business.



We have seen that we can truly heal patients by democratising Big Data.

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# Assessing climate risk with big data

Key words: climate change, investors, risk management



## Oliver Marchand

CEO and Co-founder of CARBON DELTA AG | Main product: Climate Value-at-Risk



### Aim

To bring the financial sector on a 2°C path by establishing Climate Value-at-Risk as the de-facto global standard for climate risk assessment and reporting

### EIT Community connection

EIT Climate-KIC Accelerator programme, EIT Climate-KIC European Venture Competition 2016 winner, EIT Climate-KIC partner starting 2017

## The project

### The idea

Carbon Delta is an environmental fintech start-up that identifies and analyses the climate change risk faced by companies. To help investors understand and quantify climate change risks within their portfolio, Carbon Delta has developed a software model to assess Climate Value-at-Risk – or how much of a company’s market value could be affected by climate change.

### Inspiration

While working as the IT manager for an asset management firm, I learned about the Carbon Bubble Theory: companies relying on fossil fuel are valued based on the available reserves. However, the burning of these reserves would far exceed a global warming of 2°C, thus implying a stranded asset risk. It immediately occurred to me that although the risk is real, there was no tool for investors to act on. I realised that somebody needed to provide a climate change data service for asset managers.

### Unique selling points

We employ Big Data technologies to automate the quantitative analysis of company climate risks, and we have an unmatched universe of covered companies that can be expanded at marginal cost due to our automated methodology.

### EIT Community support

The EIT Community has supported our vision with networking opportunities, visibility, brand building, financial support, and mentoring. They’ve also connected us with students to conduct research projects.

### Teamwork

Carbon Delta consists of three co-founders: I am the CEO, David Lunsford is Head of Development, and Dr Elke Schaper is Head of Software Engineering. Our skillsets are complementary, and we carefully structure our responsibilities to ensure everything is covered and nothing overlaps unnecessarily.

### Venture development

With the acquisition of our first clients, we are in the middle of market entry. While our product will be continuously expanded and improved, the current version is market ready. Therefore, we are now looking to increase our sales and gradually penetrate an increasing number of markets.

## The nominee

### The beginning

I became interested in climate change in 1992, when the concept was introduced to me in introductory lectures on meteorology. I have followed the issue with great interest ever since.

### Entrepreneurial flair

Experience, general knowledge and interest in a broad range of fields, commitment and endurance, able to empower and excite people.

### Learning from experience

Engage early and go to as many events as possible. Focus on the business model, and work continuously on your business plan.

### Best memory

Acquiring clients and winning the EIT Climate-KIC European Venture Competition 2016.

### Ideal advisor

Michael Bloomberg. He runs the financial industry’s number one platform, providing access to a large variety of financial data for investors. We are striving to create a similar market impact, but focused on climate risk data.



It occurred to me that although climate change risk is real, there was no tool for investors to act on.

# Affordable PAYG energy access

Key words: pay-as-you-go, affordable energy, modular, solar



## Siten Mandalia

CEO of Solaris Offgrid | Main product: Solaris

### Aim

To provide a scalable and affordable electrification solution for the 1.2 billion people currently living without energy access

### EIT Community connection

EIT Climate-KIC and EIT InnoEnergy

## The project

### The idea

Solaris offers a pay-as-you-go (PAYG) model for affordable energy access. Combined with our innovations in customer service, hardware, software, and deployment efficiency, we have been able to build momentum and scale quickly. To date we have over 1,000 active systems.

### Inspiration

More than 600 million people in Sub-Saharan Africa struggle to access modern energy services, and the current market for solar home systems is filled with poor products – temporary stop-gaps for kerosene users.

### Unique selling points

We position ourselves against competitors on three dimensions: modularity, customer service, and price. The Solaris system is fully modular, allowing affordable upgrades. We also offer a fully integrated customer service experience, with every interaction handled by quality professionals. Finally, the Solaris system is built from the ground up, so we can offer our entry-level system at a lower price than competitors.

### EIT Community support

EIT Climate-KIC and EIT InnoEnergy both provided assistance and funding in the early stages when risks were significantly higher and investment raising most difficult. Support during this gap period was essential

in moving from a good idea with prototypes to a real business. The EIT Community also provides a network and knowledge to grow businesses and tackle problems pragmatically.

### Teamwork

I have seven years' experience in start-ups developing renewable and energy access solutions. I am CEO, supervising operations, setting objectives and handling finances. Thibault Lesueur worked for four years in the energy consulting industry and is Solaris Offgrid's COO/CMO, in charge of marketing and the day-to-day operations in Tanzania. Benjamin David has over 10 years' experience in developing robotics and energy metering hardware. As CTO, he is in charge of product development, electronic and software engineering, and impact analysis.

### Venture development

We are in a post-pilot and post-revenue stage, getting ready to scale up.

## The nominee

### The beginning

I strongly believe that business is one of the most powerful tools the ordinary citizen has in order to make a tangible impact on society. I also feel exporting technology is the most sustainable solution to key issues in the developing world. From this understanding and with a focus on East Africa, where my parents were born and many of my family members

reside, I came to energy access as a sector of opportunity and impact.

### Entrepreneurial flair

Having a logical and pragmatic mindset, as well as determination and energy.

### Learning from experience

Get feedback from real customers as soon as possible and scientifically collect evidence on the problem that the product solved for them.

### Best memory

Installing Solaris in 1,000 houses.

### Ideal advisor

People who have managed large distributed work forces in developing nations, like Iqbal Quadir and Muhammad Yunus.



I strongly believe that business is one of the most powerful tools the ordinary citizen has in order to make a tangible impact on society.

# Non-toxic building products from clay

Key words: chemical-free, building products, sustainable



## Solvita Kostjukova

CEO and Co-founder of ALINA | Main product: ALINA LIFE



### Aim

To produce clay mineral materials that replace toxic chemicals in building products

### EIT Community connection

EIT RawMaterials

## The project

### The idea

ALINA challenges how things are made. We use innovative production technology to make state-of-the-art clay mineral materials that can replace the toxic chemicals and heavy metals normally used in building materials. Our products take responsibility for the health of people and the environment.

### Inspiration

My inspiration comes from my family and my daily life. My goal was to reduce indoor air pollution, which affected my children by provoking different allergies and asthma. In partnership with the University of Latvia, we defined a challenge and set out to find a realistic alternative to the toxic chemicals used for building material production.

### Unique selling points

Given that toxic chemicals (biocides) are our main competitors, ALINA LIFE products have several major advantages: they are human and nature friendly, they use low energy manufacturing and produce zero waste, and the raw materials are widely available in Europe.

### EIT Community support

The EIT Community has supported us with networking, helped to find corporate partners, and provided a grant of EUR 60,000.

### Teamwork

ALINA has an outstanding management team of three experienced professionals who cover the main competencies: sales and marketing, product and technology, and manufacturing and finances. The management team is well supported by leading northern European scientists specialised in the field of mineral materials.

### Venture development

ALINA is an early stage start-up company, established in December 2015. Our product has been introduced to a number of regional and global industry manufacturers, and as a result we have signed contracts for R&D and co-creation projects. ALINA LIFE has also received the Sustainable Build Award in Denmark and is the first product of its type to receive the prestigious Cradle2Cradle certification. Today ALINA is developing a scalable business model, and is building partnerships with manufacturers and distribution channels across Europe and globally.

## The nominee

### The beginning

My interest started in Brazil, while I was interning at the Ecological Engineering Laboratory at UNICAMP. I was severely affected by the herbicides and pesticides that were used to grow vegetables. I recognised and experienced the damaging and

degrading effects of toxic chemicals. It pushed me to investigate the main sources of pollution that are having a dangerous effect on human health.

### Entrepreneurial flair

Ambition, execution, and a great team.

### Learning from experience

The EIT Community is an excellent springboard to grow and scale your business.

### Ideal advisor

William McDonough, the founder of Cradle2Cradle. Cradle2Cradle design, also called regenerative design, is a biomimetic approach to the design of products and systems. It models human industry on nature's processes, viewing materials as nutrients, and suggests that industry must protect and enrich ecosystems.



Our products take responsibility for the health of people and the environment.



# Inspiring solutions for sustainable living

Key words: sustainability, ecological building, independent living



## Theresa Steininger

CEO and Co-founder of WW Wohnwagen GmbH | Main product: Wohnwagen

### Aim

To develop flagship projects like the Wohnwagen that present a new way of natural living with water circulation systems, independent energy production and ecological building

### EIT Community connection

EIT InnoEnergy and EIT Climate-KIC Accelerator programmes

## The project

### The idea

We want to become the name in independent, sustainable living. We offer inspiration (through projects like the Wohnwagen), knowledge (through our free blogs as well as planning and consulting services), and products and kits for the implementation of new housing solutions (in our webshop).

### Inspiration

The way we live and the way our homes are built have a massive effect on our climate. While most people are aware that we use excessive resources and build too big, they lack inspiring and feasible alternatives.

### Unique selling points

We offer integrated solutions for water, heating and electricity. We take an emotional and hands-on approach to making renewable energy and sustainable living interesting and accessible to completely new target groups.

### EIT Community support

We joined the EIT Climate-KIC Accelerator, got the chance to develop our business model, and found ways to develop a scalable model and multiply our impact. We then got in touch with EIT InnoEnergy, joined the Accelerator programme, and got a huge boost:

internationalisation, contact with future investors, professionalisation of our sales strategy, reporting, controlling, contact with business partners, and intense coaching.

### Teamwork

We have an amazing team! Our team has grown over the past three years and is very diverse. We are agile, flexible and fast. We know our strengths, and we know when to ask experienced professionals from our network for support. We have a lot of fun together and are all driven by the intense desire to really change something in the way people live today.

### Venture development

Ready to internationalise! We hit our first million in revenue last year and have successful flagship projects in Germany, Switzerland, Austria and Belgium. Now we want to scale to the next level, which means rolling-out our products and ideas at the EU level.

## The nominee

### The beginning

It all started with this feeling that there is something wrong in the world and that we need to actually DO something to make a difference and show people that there are possibilities for a new way of living.

### Entrepreneurial flair

Intuition for opportunities, creativity in problem solving, courage and

confidence. A good, motivated team that you can rely on.

### Learning from experience

Planning is important, but don't get stuck in your head – try to see your ideas and then bring them to life. Problems can often be solved on the go. Network, find strong cooperation partners, and talk to people about your idea.

### Best memory

The very first time a Wohnwagen customer said: 'Yes! I want one of those, please build one for me!'

### Ideal advisor

An e-commerce guru or online specialist to boost our web platform.



Planning is important, but don't get stuck in your head...problems can often be solved on the go.

# Providing mobile app security

Key words: mobilisation, security, apps



## Zsolt Nemeth

CEO of App-Ray | Main product: App-Ray technology



### Aim

To build a mobile application security standard

### EIT Community connection

EIT Digital Accelerator (Access to Market [A2M] and Access to Finance [A2F])

## The project

### The idea

App-Ray is a spin-off company of Fraunhofer AISEC based in Munich, which aims to commercialise the cutting-edge technology developed by Fraunhofer. It does this by making on-premise and SaaS-based applications and API integration layers.

### Inspiration

Mobilisation is an unabated trend that has led to huge security issues and violations of privacy. App-Ray will help to sensitise all stakeholders in the industry – those who make the apps and those who use them. Control is given back to the user, which is in accordance with the policies of all EU Member States.

### Unique selling points

We provide instant, static and dynamic analyses, 360° protection, ongoing monitoring, and automated detection. We can scan obfuscated apps. Unlike many other vendors, we don't need the source code of the app to run our service.

### EIT Community support

The EIT Community has introduced us to many security related key accounts from different verticals that helped us to perfectly understand the requirements and prerequisites for using App-Ray within large organisations that must follow compliance and data protection policies.

### Teamwork

Our team is headed by two serial entrepreneurs with many years of experience in the IT sector and proven track records. While I am more focused on IT security and cryptography, my partner has broad experience in state-of-the-art IT architecture implemented with large and mid-sized companies. We are supported by IT security experts and professional skilled members in the area of product management, marketing and after-sales services.

### Venture development

App-Ray has started to market its SaaS-based and on-premise solutions and is continuously developing the platform with product enhancements.

## The nominee

### The beginning

My professional career started in the IT security field, many years ago. I was able to successfully launch a start-up in this field, primarily in the cryptography area, which was acquired by BAE. Back then I had also already started a successful cooperation with Fraunhofer AISEC, which introduced App-Ray to me.

### Entrepreneurial flair

Being able to anticipate market trends, and having professional skills in IT security. Having passion, discipline, patience, and a vision as well as the ability to execute it. Last but not least, management skills to motivate and engage a team.

### Learning from experience

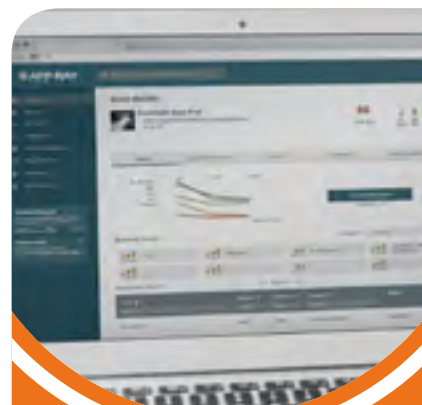
Be open-minded and receptive to the good advice of people with many years of experience in the industry and take advantage of the EIT's great resources. The EIT Community has skills in any field the typical start-up could face – invest a good amount of your valuable time in building and maintaining a strong partnership with them.

### Best memory

Winning our first customer contract over EUR 100,000.

### Ideal advisor

Johann von Neumann, Hungarian mathematician. He brought mathematics to the real world and found applications for theories.



Be open-minded and receptive to the good advice of people with many years of experience in the industry.





Awards  
INNOVATORS



The EIT Innovators Award recognises innovation teams from the Innovation Communities that have developed a product, service or process with a high potential for societal and economic impact.

# Gate-to-gate connectivity

Key words: **broadband, air travel, connectivity**



## Çiçek Çavdar

ICARO-EU Activity Leader | Main product: Icaro EU



### Aim

To provide seamless gate-to-gate mobile broadband connectivity for aircraft passengers

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT Digital

**Theme:**  
Digital infrastructure

**Funding generated:**  
EUR 6.2 million

**Number of partners:** 5

## The project

### Overview

ICARO-EU is an integrated gate-to-gate direct air-to-ground communications (DA2GC) system that seamlessly connects network infrastructures on aircraft with ground cellular networks to provide passengers with broadband services and cellular coverage.

### EIT Digital support

In addition to the funding, the main source of support from EIT Digital for the ICARO-EU Innovation Activity has come from Henrik Abramowicz, the Digital Infrastructure Action Line Leader from the EIT Digital Stockholm Node.

### Groundbreaking innovation

Air passengers today aren't able to use their mobile phones for broadband connection when they are flying, and only a few airlines provide Wi-Fi access after take-

off. Current solutions relying on satellite backhaul connectivity and in-cabin Wi-Fi access have various limitations: these include higher costs for service providers, inability to support broadband cellular services, capacity related issues, etc. for providers and consumers alike.

Our aircraft connectivity will be integrated through a high-capacity DA2GC system with ground cellular networks, and this solution will be considerably more reliable and more affordable than the in-flight access available today.

### Societal impact

ICARO-EU will bring high-speed broadband internet connectivity over 4G to European aircraft passengers, letting them travel gate-to-gate without ever losing connectivity.

The project will also provide improved services for transportation safety boards and European flight movement tracking agencies

through enriched monitoring and management approaches (e.g., live cockpit video streams, flight data information in the cloud, etc.) and for premium services.

### Achievements so far...

Ericsson, as telecommunications vendor, is providing Airbus with radio connectivity equipment. Airbus is coordinating the integration of the ICARO-EU system and will provide airlines with the fully integrated solution. ICARO-EU has also developed a business model recognising the complex relationship between actors and the value chain.

### Teamwork

ICARO-EU is an EIT Digital Infrastructure innovation activity with various partners: Airbus Group, Ericsson, Create-Net, and KTH Royal Institute of Technology (lead partner). The collaboration between all of our partners is crucial to the success of the business.



ICARO-EU will bring high-speed broadband internet connectivity over 4G to European aircraft passengers.

# Improving technology for solar energy



Key words: solar cells, renewable energy, sustainability



## Stefan Reber

CEO of NexWafe | Main product: NexWafe

### Aim

To provide solar wafer epitaxial growth technology to decrease production costs of solar cell manufacturing

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT InnoEnergy

**Theme:**  
Renewable energy

**Funding generated:**  
EUR 1.9 million

**Number of partners:** 5

needs by providing a true drop-in replacement for costly Czochralski silicon wafers. This guarantees easy use in existing solar cell and module production lines, and high quality n-type silicon wafers enable solar cell manufacturers to produce higher solar cell efficiencies. NexWafe also offers high potential for cost-reduction by minimising energy and material consumption while improving capital efficiency.

### Societal impact

Our product strengthens the portfolio of available photovoltaic solutions, and will make solar energy more accessible on a global scale. In addition, the manufacturing of photovoltaic equipment will bring industrial jobs back to the EU. The manufacturing model itself drastically reduces the carbon footprint of producing n-type photovoltaic wafers, making solar energy even more sustainable.

### Achievements so far...

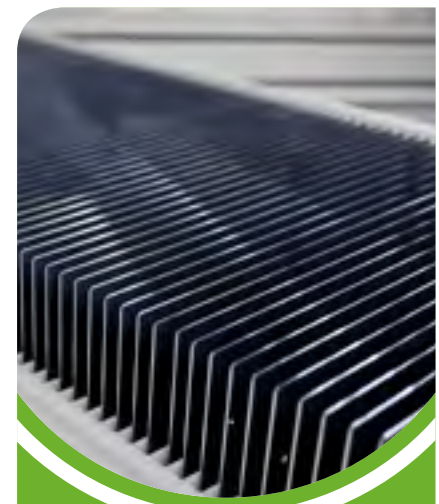
The first functional wafers have been produced, and the site for the manufacturing plant has been selected.

### Teamwork

The project has five partners, three of which are companies operating in the solar energy sector and two are research institutes with expertise along the whole value chain of the project.

The project partners are representatives of the product value chain: NexWafe as the commercialisation partner and Ecosolifer and Fill Factory as first users. First users have the unique opportunity to benefit early from the advantage of the technology and its impact on product quality and cost production.

Fraunhofer, as the initial R&D centre at the origin of the technology, benefits from previously acquired agreements with NexWafe.



NexWafe strengthens the portfolio of available photovoltaic solutions, the fastest growing renewable energy source.

## The project

### Overview

NexWafe produces n-type monocrystalline silicon wafers for high-efficiency solar photovoltaics that are reliable and of superior quality. The wafers are fully compatible with common cell and module fabrication processes at a fraction of the cost of standard wafers.

This will help solar cell producers increase their bottom-line earnings through drastically reduced silicon usage, dramatically less energy consumption, and significantly reduced capital expenditure.

### EIT InnoEnergy support

Our company received important support from EIT InnoEnergy with funding of EUR 2 million. The EIT Community also provided support in the development of the business.

### Groundbreaking innovation

NexWafe's technology meets specific photovoltaic industry



# Early detection of aggressive prostate cancer

**STHLM 3**

 Key words: **detection, diagnostics, prostate cancer**

## Martin Steinberg

STHLM3 Project Leader at Karolinska Institute |

 Main product: **Stockholm3 Test (STHLM3)**


### Aim

To predict the risk of aggressive prostate cancer at biopsy by analysing five protein markers, more than 100 genetic markers, and clinical data

### KEY FACTS

**Project started:** 2017

**Innovation Community:**

EIT Health

**Theme:**

Early intervention/disease prevention

**Funding generated:**

EUR 1.8 million

**Number of partners:** 8

### Groundbreaking innovation

STHLM3 itself is unique. It is a non-invasive blood test that combines five protein markers, over 100 genetic markers, clinical data and a proprietary algorithm to detect the risk of aggressive prostate cancer.

### Societal impact

By reducing unnecessary biopsies and treatments by more than 50% and mortality up to 20%, STHLM3 will have a significant positive impact on society by reducing individual harm from over-diagnosis, mortality and overall healthcare costs.

At an individual level, fewer men will have to undertake prostate biopsies, which are painful and can lead to severe infections, and fewer men will receive unnecessary treatments. Most importantly, aggressive cancers will be detected early in more men and give them a greater chance of survival.

At a societal level, the economic burden will be significantly reduced, since there will be fewer biopsies and unnecessary curative treatments, less active surveillance of insignificant tumors, and reduced procedure-related morbidity.

### Achievements so far...

STHLM3 has been validated in a clinical study with more than 58,000 participants. The results have been published in numerous scientific

journals, including The Lancet Oncology, Nature Reviews Clinical Oncology and European Urology Focus.

The test has been validated in clinical use in Sweden and Norway, and is being evaluated by the Swedish National Board of Health and Welfare for potential use in a national screening programme by invitation.

Preparations are being made to begin implementation studies in Germany, the Netherlands, Belgium and Finland, and discussions with potential international lab providers have been initiated.

### Teamwork

The development of STHLM3 is based on close public/private collaboration between academia, industry and healthcare providers. The research was led by the Karolinska Institute, and the technical platform was provided by Thermo Fisher Scientific. The main study was financed by Stockholm County Council.

Aggressive cancers will be detected early in more men and give them a greater chance of survival.

## The project

### Overview

The Stockholm3 test (STHLM3) is a blood test that increases the detection of aggressive cancers by 20% and, at the same time, reduces the number of unnecessary biopsies by 50% compared to current clinical practice. STHLM3 also identifies men with aggressive prostate cancer with low PSA values (1–3 ng/ml), which is crucial for early detection. The test characteristics are unique and open the door to a new clinical gold standard test.

### EIT Health support

EIT Health has been a catalyst for HCP/industry/academia cooperation for testing, validation and market access. It's been a vehicle to accelerate the uptake and acceptance of the concept, and has also supported us with funding.

# Managing dementia with eHealth tools

Key words: dementia, healthy ageing, eHealth



## Shireen Sindi

Project Coordinator of Multi-Mode |

Main product: Multi-Mode Dementia Risk Score App

### Aim

Develop and commercialise eHealth tools for dementia risk prediction in various at-risk populations, and lifestyle intervention to prevent cognitive decline and postpone dementia onset

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT Health

**Theme:**  
Promote healthy ageing

**Funding generated:**  
EUR 405,000 in first year

**Number of partners:** 5

to engage necessary academic and industrial partners.

### Groundbreaking innovation

The Multi-Mode Dementia Risk Score App is the only evidence-based app that can detect dementia risk among various age groups, using easily available demographic and lifestyle risk factors. With no cure available for dementia, prevention, detection and early intervention are crucial.

developed based on demographic, vascular and psychological risk factors.

The first version of the Dementia Risk Predictor App was produced in late 2016, and has gained significant interest from various research institutes and EU projects, international companies developing eHealth tools, patient organisations and policy makers.

### Teamwork

The project is hosted by the Department of Neurobiology, Care Sciences and Society at the Karolinska Institute, with academic and industrial partners located in Sweden, the UK, the Netherlands and Spain. The collaborative teamwork has been crucial and led to the development of the risk scores and the Dementia Risk Predictor App.

## The project

### Overview

Multi-Mode is developing and bringing to the market innovative evidence-based eHealth tools for two key areas: dementia risk prediction in various at-risk populations, and multi-domain lifestyle intervention to prevent cognitive decline and postpone dementia onset. Our products will reach diverse public and private settings for use by citizens and health professionals.

Various target populations can benefit from Multi-Mode's eHealth tools, including middle aged and older adults, patients in memory clinic settings, care givers, and health professionals in both the public and private sectors.

### EIT Health support

EIT Health provided important funding to the project, allowing it

### Societal impact

Dementia has become a global challenge and health priority according to the G8 Dementia Summit and the WHO. With no cure currently available and dementia/Alzheimer's disease drug trials having failed, the development and implementation of risk detection and intervention approaches to postpone the onset of dementia is crucial.

The Multi-Mode approach uses individual risk signatures to prevent cognitive decline while starting integrated lifestyle modifications prior to the onset of symptoms. Successful prevention will substantially reduce the societal costs as well as individual suffering.

### Achievements so far...

Analyses have been completed using five well-characterised population-based research studies. Dementia risk scores for older adults have been



With no cure for dementia, prevention, detection and early intervention are crucial.



# Tools for battery lifetime awareness



Key words: artificial intelligence, CAD, battery life

## Wilfried Dron

CEO – VP of Technology and Co-founder of Wisebatt and Project Leader of CPS Lifetime Awareness | Main products: ESTIMATE and AWARENESS



### Aim

To offer a tool allowing designers to predict battery life and product failure

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT Digital

**Theme:**  
Digital industry

**Funding generated:**  
EUR 637,000

**Number of partners:** N/A

## The project

### Overview

Short battery life is an ongoing and growing issue – both for the engineers who develop systems and for their end users.

Accurately assessing the life of battery powered devices is complex, especially in the early stages of the design cycle. The usual method is to build a prototype, let it run and test it, but this is time consuming, expensive and requires expertise.

CPS Lifetime Awareness developed two solutions to address this challenge. ESTIMATE is a CAD tool that helps software and hardware engineers estimate and optimise the battery life of the device they are designing. AWARENESS is an artificial intelligence programme that can predict with 92% accuracy when a device will fail because of a lack of energy remaining in its battery.

### EIT Digital support

Support from EIT Digital was very important to the project development, especially that of Petri Liuha, EIT Digital Action Line Leader for Digital Industry.

### Groundbreaking innovation

In addition to their main functions, our products will allow designers to reduce the battery size of the devices they design. This results in less battery waste and less impact on the environment. Furthermore, ESTIMATE is a very simple tool to use, which means that it can be used as a tool by teachers in universities and other higher education settings.

### Societal impact

People get annoyed when their phone's battery life drops unexpectedly, but when the same phenomenon occurs with a pacemaker or industrial devices, the effect can be far more dramatic. Our products target designers of medical devices, wearables, security devices and other products for which battery life is critical. This can potentially save lives and definitely bring security and peace of mind.

### Achievements so far...

We've received our first investment in the company, and the public beta version of ESTIMATE will be ready for launch in late 2017. We have also had significant interest from several large companies.

### Teamwork

The start-up team is composed of myself (inventor of the technology, co-founder and CEO), and Marion Blatter (product owner, co-founder, and in charge of the user experience). We lead the company together. Pedro Lusich, Imane Khalis and Hrishikesh Bhosale are part of the team as C/C++ developers.

The project team is composed of Niklas Wirström, researcher at SICS (Sweden), Martin Wagner, Senior Consultant at Atos Research & Innovation (Spain), and Khalil Hachicha, Associate Professor at LIP6-UPMC (France).



People get annoyed when their phone's battery life drops unexpectedly. When the same phenomenon occurs with a pacemaker, the effect can be far more dramatic.

# Cooling technology for higher food quality

Key words: sustainability, food services, cooling



## York Ostermeyer

Co-founder of SusCool | Main product: SensorHold and ChillService App

### Aim

Provide next generation sensor solutions and load management for sustainable food cooling

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT Climate-KIC

**Theme:**  
Urban transition

**Funding generated:**  
EUR 2 million

**Number of partners:** 10

## The project

### Overview

Our SensorHold product and ChillService app work on next generation energy concepts for supermarkets and cooling chains for food. The project combines advanced sensors, machine learning and energy modelling to identify optimal solutions for load management in food cooling.

The client is guided through the installation by a smartphone app, which also enables the documentation of the process, ensures the quality of the implementation, and generates a database that will be used by the client to build their future energy efficiency strategy.

After the implementation of the sensor holder and the optimisation of the load management system, the cooling cabinets consume significantly less energy, resulting

in a return on investment of around two years.

### EIT Climate support

EIT Climate-KIC enabled our team to turn research findings from previous projects into a commercial product and service. Support from the Urban Transition theme of EIT Climate-KIC was invaluable and the EIT Community will be crucial to building further services based on the data generated in the project.

### Groundbreaking innovation

Our product can be applied to every cooling cabinet to reduce its energy consumption by 3-10%, depending on the type of cabinet and cooling concept, while also increasing the lifetime of the food stored in the cabinet.

In addition, the project introduces software support into a very fractured segment of the industry that is, as a result, prone to human error.

### Societal impact

Every person in the European Union is directly affected by food cooling and gaps in the cooling chain. When not handled properly, food has a reduced life as bacteria grow exponentially at higher temperatures. Our product and service contribute directly to the longer life of food, less food waste and fewer health problems related to insufficient food quality and freshness.

## Achievements so far...

The first commercial versions of SensorHold and the ChillService app were produced in spring 2017, and the REWE Group has been secured as our first commercial customer with an order for 400 supermarkets. We have also had significant interest from other supermarket chains.

## Teamwork

This is, for all of us, the most interdisciplinary team we have ever worked in and also the most rewarding. The REWE Group has been an invaluable partner in understanding the framework conditions, going beyond thinking in silos, and turning a good idea into a great product and service. This is matched by a team that is willing and able to work beyond the boundaries of their original disciplines and go the extra mile to make a difference.



EIT Climate-KIC enabled our team to turn research findings from previous projects into a commercial product and service.





### **EIT Food – The EIT Community’s newest member**

EIT Food has been a part of the EIT for less than one year, and is already driving important innovations. We recognise its remarkable progress in this section.

# Technology to ensure food safety

Key words: food analysis, cloud technology, artificial intelligence



## Isabel Hoffmann

Tellspec LTD CEO | Main product: Tellspec Food Scanners

### Aim

To build trust in food by offering real-time non-destructive food analysis

### EIT Community connection

EIT Food (member of Rising Food Stars)

### KEY FACTS

**Project started:**  
February 2013

**Theme:**  
Food analysis

### UNIQUE SELLING POINTS

- Cloud-based spectroscopy
- Large food database of spectral scans correlated with lab references
- AI-based detection algorithms

with pressure to produce food as cheaply as possible has led food suppliers to replace one or more food ingredients with cheaper alternatives. Thousands or even millions of people become ill each year from eating this food.

Tellspec provides a revolutionary technology that analyses consumer foods at the molecular level. Our patented AI-based data-driven cloud analysis can help monitor food fraud as well as food contamination locally and in specific regions, thereby helping consumers and authorities to make choices to prevent the onset of health issues related to food.

### Teamwork

Our team is located all around Europe – our key scientists are in Hungary, the developers are in Denmark, and the programmers are in the UK – but we are very close in spite of this. We all believe strongly in Tellspec’s mission.



## The start-up

### The idea

Tellspec connects spectral sensors into a robust cloud AI-based food analysis engine and a growing database of spectral scans to provide real-time non-destructive food analysis for both the consumer and the food industry. This is the first comprehensive solution for cloud-based spectroscopy. Third-party sensors can take advantage of our extensive database and our powerful computational analysis. We also offer our own handheld food sensors.

### Societal impact

One of humanity’s most pressing problems is food security, and food fraud is a big concern within it. Increased food demand combined

## Achievements so far...

We have several paying clients in agriculture, food distribution and retail. We have obtained a US patent for our scanners, and have won several awards:

- European Commission H2020 Food Scanner Prize; 2017
- Humanitarian Water Air and Food Award in the category of food safety; 2016
- MedPi Award in the category of health; 2016



Stay focused, work hard, and see in everything an opportunity.



# A platform for secondary resources

Key words: circular economy, marketplace, secondary resources



## Linda Grieder

RethinkResource Founder and CEO



### Aim

To create a sustainable and resource efficient future for our economy

### EIT Community connection

EIT Food (member of Rising Food Stars)

### KEY FACTS

**Project started:**  
June 2016

**Theme:**  
Circular economy

### UNIQUE SELLING POINTS

- More efficient waste management
- Additional revenue stream
- Resource stewardship = marketing opportunity
- User friendly interface
- Complete platform solution, integrated trading and open innovation

is a platform solution that allows active users to emerge as industry leaders with respect to resource stewardship.

### Societal impact

Opening up a platform for the industry to engage in a circular economy will strengthen recycling and re-use opportunities and support sustainable innovations. A functioning circular economy will place limits on incineration and significantly reduce landfill, and reduce the excavation of primary resources, thus cutting carbon emissions.

für Lebensmitteltechnik (DIL) and EIT Food's Rising Food Stars

### Teamwork

Our team is a mix of different fields of expertise, bringing together a wide network from industry and academia. Our interdisciplinary skills help us build a cross-industry network. By investing our full commitment, we are building knowledge in a fast and structured way. We are driven to change the way people think about resource stewardship, and thinking outside the box is what makes us the right team for successfully bringing RethinkResource to market.

### Achievements so far...

- First minimum viable product of marketplace
- First commercial customer: the biggest miller in Switzerland
- Significant interest from food industry, resulting in two partnerships: Deutsches Institut



## The start-up

### The idea

RethinkResource creates an online marketplace where producing and processing companies can trade their waste and by-products. To jumpstart product and process innovation with secondary resources, we offer an associated consulting business.

As early adopters, our customers profit from cross-industry knowledge sharing. This combination of a marketplace and community





## About the EIT Community

The European Institute of Innovation and Technology (EIT) is an independent EU body. Our Innovation Communities boost Europe's ability to innovate by nurturing entrepreneurial talent and supporting new ideas.

### Our mission is to

- Contribute to the competitiveness of Europe, its sustainable economic growth and job creation by promoting and strengthening synergies and cooperation among businesses, education institutions and research organisations.
- Create favourable environments for creative thought, enabling world-class innovation and entrepreneurship to thrive in Europe.

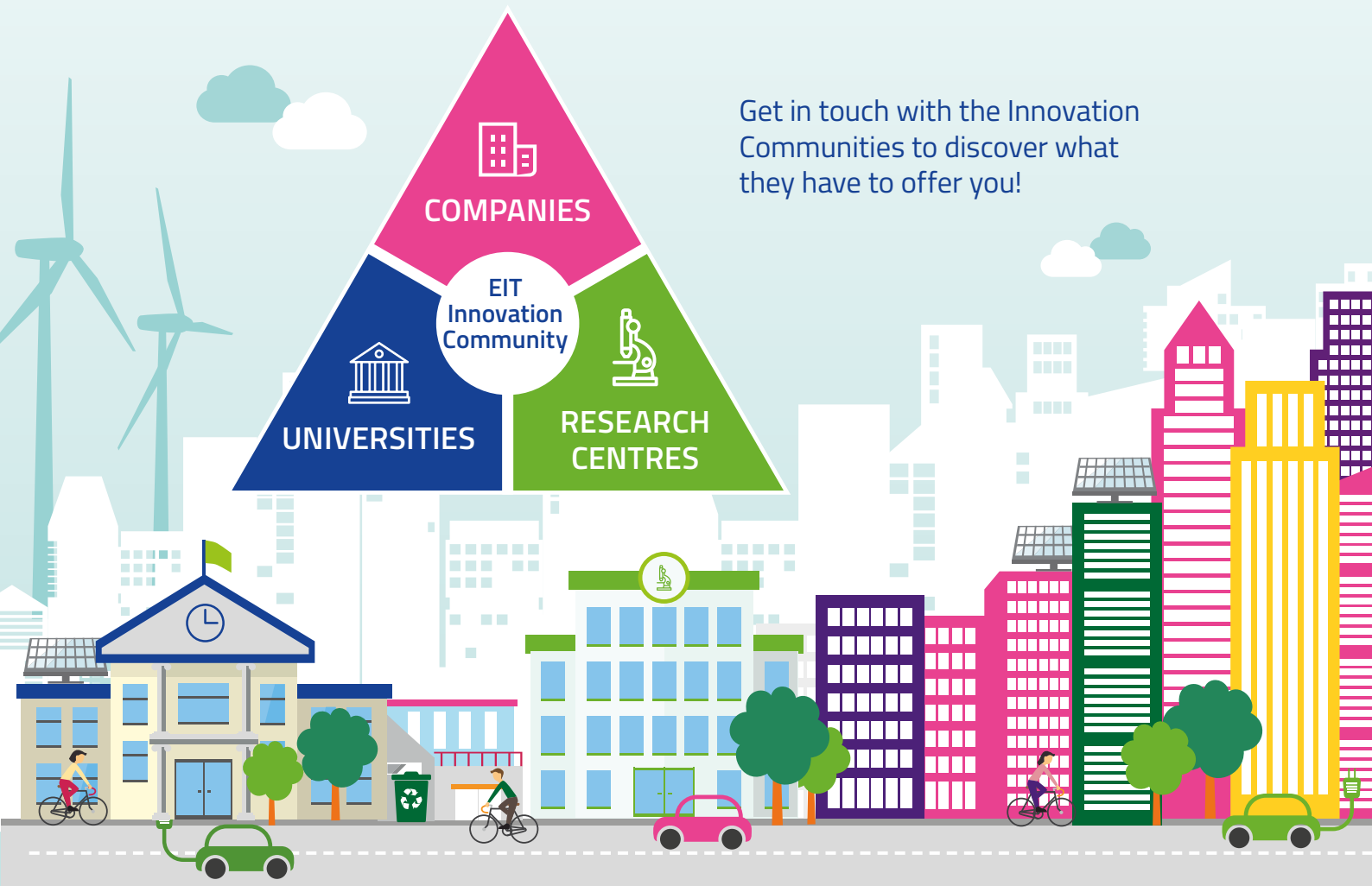
The EIT is an integral part of Horizon 2020, the EU's Framework Programme for Research and Innovation. Horizon 2020 is a key pillar of the Innovation Union – a Europe 2020 flagship initiative that aims to enhance Europe's global competitiveness.

### Innovation through integration

To boost Europe's innovation capacity, action is needed to overcome the fragmented European innovation landscape; this is where the EIT comes in. We have a pioneering role in increasing Europe's sustainable growth and competitiveness by reinforcing its innovation capacity in a global context.

The EIT brings together the 'knowledge triangle' of business, education and research to form dynamic Innovation Communities. These are unique, cross-border partnerships that:

- Develop innovative products and services
- Start new companies
- Train a new generation of entrepreneurs



Get in touch with the Innovation Communities to discover what they have to offer you!



**2 242**  
business  
ideas



**1 224**  
graduates completing  
EIT degree programmes



**305**  
innovative  
start-ups



**430**  
new products  
and services









**1 232**  
knowledge transfers  
and adoptions

Figures - July 2017

Each of the Innovation Communities operates in innovation hubs – there are now more than 30 across Europe. These innovation hubs work with regional centres to increase the impact of their activities. All innovation hubs offer entrepreneurial training and support, and more than 1,200 people have graduated from EIT-labelled programmes already.

Companies, universities and research centres work closely together in our **SIX INNOVATION COMMUNITIES** to create effective and innovative solutions for Europe:

EIT Innovation Communities	Website	f	Twitter
 <b>EIT Climate-KIC</b> Addressing climate change challenges	climate-kic.org	Climate-KIC	@ClimateKIC
 <b>EIT Digital</b> Generating world-class ICT	eidigital.eu	EIT Digital	@EIT_Digital
 <b>EIT Food</b> Ensuring a climate-resilient and sustainable global food value chain	eitfood.eu	EIT Food	@EIT_Food
 <b>EIT Health</b> Improving the quality of life for European citizens and the sustainability of health and social care systems	eithealth.eu	EIT Health	@EITHealth
 <b>EIT InnoEnergy</b> Tackling sustainable energy	innoenergy.com	InnoEnergy	@InnoEnergyEU
 <b>EIT RawMaterials</b> Ensuring the accessibility, availability and sustainability of raw materials for the economy and citizens	eitrawmaterials.eu	EIT RawMaterials	@EITRawMaterials

We will expand our activities in **2018** by **launching** a competition for **two new Innovation Communities**:



**EIT Manufacturing**

Strengthening and increasing the competitiveness of Europe's manufacturing industry



**EIT Urban Mobility**

Smart, green and integrated urban transport



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