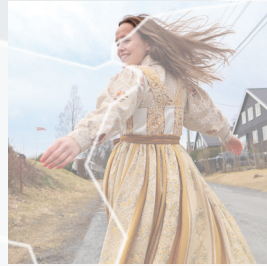


Young people leading the way to a sustainable economy



BeUBio

Young people leading the way to a sustainable economy

This brochure collects stories of young people whose business ideas, jobs and other activities lead the way towards a different and more sustainable economic path. With a variety of examples, young people from across the Baltic Sea Region, inspire new ways of making business while having a positive impact to the environment and society.

The BeUBio project aims to build a community of like-minded people, by sharing our stories and inspiring each other.

We wish to express our gratitude and admiration to all the young leaders who have shared their stories with us and the world!



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Digital tools and their potential in improving food systems



Full story

Agriculture is as old as civilisation and sometimes its processes can look rather archaic. However, new technologies, new practices and new management tools are becoming more accessible in agroindustry just like in any other sector. In 2017, Amit Vaghasiya & Monika Gumbyte founded AgrocLEAR (www.agroclear.com), an independent marketplace helping farmers and buyers trade online. The online platform is helping increase transparency and bringing buyers and sellers closer together by eliminating the need for middlemen in trade. By levelling the playing field for all producers, organic and certified ecological growers are seeing an emerging opportunity to become more competitive and promote their products independently. In addition, Nextrade (www.nextrade.pro), the parent company founded by the same team, provides business management tools for agribusinesses. By supporting individual agribusinesses to overcome bottlenecks in their operations, improvements made in AgrocLEAR's platform benefit the whole industry.



Amit Vaghasiya & Monika Gumbyte
AgrocLEAR & Nextrade



Journey

Amit has a logistics and supply chain background. His previous work experience led to the discovery of inconsistencies and a lack of trust in the food supply chain. Working on improving the food supply chain, Amit figured that he needed to help building trust amongst buyers and sellers. The breakthrough occurred when one agribusiness was willing to team up with him to put his ideas into practice. This is when Amit met AgrocLEAR/Nextrade's co-founder Monika Gumbyte, who was at that point working in an agribusiness. The two made a good match and started an independent platform.

"..management systems in agroindustry are significantly behind other industries.."

Challenges

Management systems in agroindustry are significantly behind other industries. Amit sees that there is a growing demand by conventional as well as organic growers to increase transparency in dealing with buyers. Moreover, as systems and data are not harmonised, the team had to identify challenges specific to the agroindustry together with the businesses. Amit explains that AgrocLEAR does not by itself 'invent' the solutions but works in close dialogue with agrobusiness to identify bottlenecks in the industry and design solutions. As farmers and agribusinesses face new challenges, AgrocLEAR helps them find solutions,

incrementally building a system that benefits the whole industry.

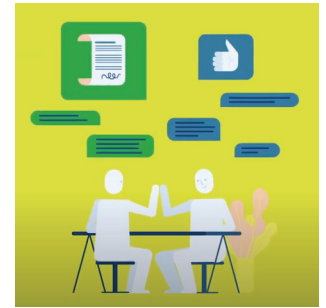
"..we want to be more than just a commodities exchange.."

Impact

By improving the entire food system, through fair-trade, price discovery and transparency, AgrocLEAR is levelling the playing field for organic and certified ecological growers. In turn, "organic growers contribute directly to health and the environment by producing food that is nutritional and poison free". Bringing producers and consumers closer together makes sustainable products more competitive and empowers both the consumers and the producers.

Next steps

AgrocLEAR and Nextrade are currently operating from Lithuania, but the aim is to expand across Europe. Countries have different trading systems and challenges. Therefore, Amit sees a big opportunity in harmonising systems at the EU level. As stated on the website "We want to be more than just a commodities exchange. We are on a journey to become the only platform you will ever need for all your business needs".



Championing the circular economy through material reuse at GreenStock



Full story

Circular economy. Reuse, recycle, find new opportunities in the old. We often hear this in connection with our consumption: clothes, food, electronics. But what about the building and construction sector? Established in 2018 by architects from the Norwegian University of Science and Technology (NTNU), in close collaboration with the construction sector and property owners, the company GreenStock is offering construction companies and organisations a simpler way to track and reuse their materials. GreenStock is 'reuse made simple'. It is a case of the circular economy in practice.



Marina Skanche, Ole Kristian Vingdal & Mathias Wahl



Journey

Marina, Mathias and Ole Kristian are all full-time students at NTNU, working at GreenStock part-time. GreenStock is currently an internal marketplace. The idea is that companies which have materials left over on one building site might be able to use these or allocate these parts for a different building site. You register the materials or the objects, and afterwards, the next user in the company is able to see what is available and where it is. Marina is GreenStock's marketing manager and made her way into the company through her MSc degree in Architecture. Ole Kristian and Mathias are software developers and are developing the backbone of the GreenStock database. They admit that the potential and wide-reaching effects of the company's idea make it all worthwhile. The ability to actively promote and enable a more sustainable and circular building and construction sector was an important underlying factor for all three.

"..it is not only possible, but easy, impactful, and profitable to reuse materials.."

Challenges

Being able to show examples as proof of concept is important for the further development of GreenStock. "The construction sector is not entirely sure how to reuse materials, so spreading information is important. Showing that it is not only possible, but easy, impactful and profitable to reuse materials" Marina stated. Asker Municipality in the south east of Norway

"..reduced waste, and additionally resulted in economic savings overall for the municipality.."

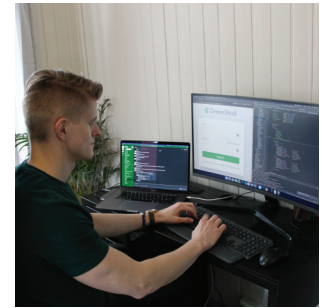
is a good example, demonstrating the viability of GreenStock's idea. "It's a really good case, and they were very pleased with [the database]", she added. "Just by registering and reusing their own resources using the [GreenStock] database, the pilot-project with Asker Municipality resulted in a significant cap in CO₂, reduced waste, and additionally resulted in economic savings overall for the municipality."

Impact

GreenStock is combining the recycling of materials with clever digital solutions – creating a database from which construction companies can pick and choose between existing materials within their organisations. This saves not only time and money for the organisation or company, but also the expensive and polluting act of constructing new furniture, building materials and such like. GreenStock's vision is to contribute to the mitigation of global material waste through a reuse-database.

Next steps

The team is growing in confidence and their ability to make a change. They also believe that anyone with passion, drive or an idea has an opportunity to act on it. Whether this is acting on and giving your own idea a go, or joining a start-up and working towards a common vision to enable a circular economy; all three agreed that the most important thing to do is to dare to try.



Care to Smile – a sustainable high-school student company



Full story

Care to Smile is a student company started by a bunch of enthusiastic high-school students wanting to get a taste of the business world while flying the sustainability flag high. They signed up to the 'Junior Achievement programme – Lithuania' to get the support they needed, and were awarded as the 3rd best student company in Lithuania in 2020 (out of 280 companies). As the name suggests, Care to Smile is producing toothpaste that takes better care of people's health and the environment. It has a solid consistency; it is packed in a recyclable glass jar and uses only natural ingredients.



Auguste, Julija, Gabrielė, Viltė, Aistė, & Saugintas
Care to Smile toothpaste



Journey

Everything started in around October 2019 after Auguste saw a presentation about Junior Achievement and showed it to her classmates. Lithuania's Junior Achievement (LJA), is a non-profit organisation that provides theoretical and practical training on market economy in Lithuanian schools. LJA is a member of Junior Achievement Worldwide, which operates globally. "Coming up with the business idea took a lot of time" recalls Auguste, but once they had it, their chemistry teacher helped them to come up with a recipe for sustainable toothpaste. Through this programme, the team was able to get the support they needed to establish the company.

"..1.5 billion toothpaste tubes are discarded and end up in landfill.."

Challenges

The student company consolidated with a team of six classmates in their 11th grade in high school. Augustė Murauskaitė is the team leader, but shares the 'vice-president' title with the other 4 members in the team. Namely, Julija Stankevičiūtė vice-president for marketing, Gabrielė Šimkutė vice-president for sales, Viltė Mackevičiūtė vice-president for finance, and Aistė Andrijūnaitė vice-president for supply-chain management. In addition, Saugintas Skilinskas is in charge of the production process. However, while each of them takes full responsibility

for their position, the roles are not strict; they work together as a team. According to Auguste, "the team is very good, and each member has their distinct qualities".

"..contains ingredients that are friendlier to the environment.."

Impact

According to Julija and Auguste, some "1.5 billion toothpaste tubes are discarded and end up in landfill" generating an enormous amount of plastic pollution. Moreover, regular toothpaste has components that are harmful to people and the environment. Care to Smile toothpaste, instead, contains ingredients that are friendlier to the environment. According to the team: "We think these ingredients are a lot better, because they are not only safe for people, but are also vegan and safe for nature. They would not cause as many problems if they got into the soil and the water, they do not leave an aftertaste after you brush your teeth, and they do not make your stomach hurt." In addition, the toothpaste is packed in recyclable glass jars, substantially reducing plastic pollution.

Next steps

At the moment, the team is producing the toothpaste in the school chemistry lab. However, their aim is to find partners that can take care of production while they focus primarily on marketing.



A young entrepreneur's bet with solid cosmetics



Full story

Nature and human-friendly as well as practical in daily life products, telling the truth and fighting stereotypes – this is the company of the young Lithuanian woman Vaiva Žvirblytė. In the business of solid haircare products “Solidu Cosmetics” (www.soliducosmetics.com), she hopes to reduce plastic and other forms of pollution. Surrounded by a strong team of young (mostly) women, they are also breaking stereotypes about gender roles and business practices.



Vaiva Žvirblytė



Journey

Originally from Lithuania, Vaiva lived in China for many years. Once she decided to leave, she had no real destination. Vaiva packed the essentials in one backpack and left. “That’s when I discovered solid shampoo and it blew my mind!” she recalls. “I was amazed that I had never heard of it, nor had any of my friends” she adds. After backpacking through Asia, Vaiva returned to Lithuania and started making solid shampoo and cosmetics by herself. Since the beginning, “Solidu cosmetics” has expanded to a larger facility and team with eight people working in production, marketing, design and sales.

“While your everyday haircare products contain around 80% water, these bars are made from the necessary elements only: skin-loving active ingredients, botanical oils, extracts, and natural essential oils” – customers see this slogan on the website. By eliminating water, the volume of the product is reduced by up to 80%. This means a reduction in the amount of packaging and transport needed, cutting waste and CO₂ emissions significantly. This business idea supports the Zero Waste philosophy.”

Challenges

It’s hard to be idealistic. “Products can never be 100% good, as many brands market themselves – it is simply impossible” Vaiva recognises. “In every step you take, you need to make choices and demonstrate how good you can be,” Vaiva explains. According to her, it is really hard to get the raw materials without plastic, in terms of either the packaging or filling, or other materials containing microplastics. In Vaiva’s words: “If the label says eco it doesn’t always mean it’s good for the environment, or if it says natural, it doesn’t mean it’s good for your skin” she notes. “So, our work

has involved teaching people and the market about what natural really means and what is good for the skin.”

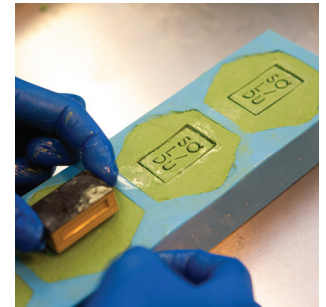
“..I find it impossible to believe that companies cannot change their practices..”

Impact

Companies often transfer the responsibility to the consumer for producing plastic packaging and other unsustainable products. They typically do so based on consumer demands: people buy plastic bottles so it’s their responsibility. “In this way they are blaming the consumer for their choices, but often the consumer has no alternative” Vaiva notes. “I find it impossible to believe that companies cannot change their practices. They do it to save a little money” she believes. For this reason, Vaiva is convinced that responsibility needs to be given to companies, and that political decisions need to be made to influence supply chains.

Next steps

Solidu cosmetics already has sales points in Latvia and Estonia, but the company wants to expand beyond the Baltic states and other European countries. Currently, the crisis triggered by the Covid-19 pandemic, is obstructing many plans to participate in exhibitions and to expand. Yet, Vaiva remains positive, “people still need to wash their hair, and still need cosmetics, so this effort will continue”.



Zero Waste influencer, blogger and coach



Full story

Liisa is an influencer, blogger and coach with more than 2 years of experience living a zero-waste lifestyle. She offers consultations and workshops and writes articles about sustainable living. Rather than guilt-tripping, Liisa's approach is to provide useful tools and tips on how to build individual habits to help people reduce waste in their daily lives. Liisa is also involved in projects surrounding the circular economy and is a journalist for Rohegeenius (Green-Genius in English) online magazine, where she writes about sustainability and nature.



Liisa Aavik



Journey

Everything started a few years ago as a psychology student when Liisa tried, as an experiment, to live 'zero waste' for seven days. Through her psychology education and work, Liisa gained some understanding of human behaviour, and habit-creation. "Knowing how habits are developed helps me to influence them or create them" Liisa explains. Based on her own experiences, Liisa, started a blog called suletudring.ee to give readers some useful hints on how to reduce waste in daily life. Zero waste is both a set of principles for how to reduce waste and a movement or campaign promoting waste prevention. Having a high demand for coaching, Liisa opened her own company to offer this service through her blog page.

"..sustainable living not only requires a behavioural change but a structural transformation.."

Challenges

There is high demand for zero waste initiatives in Estonia, which keeps Liisa busy. In her words "I haven't gone international because there is a lot of work to be done in Estonia". According to recent research findings, most Estonians think waste is the biggest environmental problem. However, Liisa notes that most people do nothing to avoid using plastic. While Estonia's youth has visibly grown aware of the importance of tackling waste, older generations remain reluctant to change their habits, Liisa explains. The growing trend towards sustainable living not only requires a behavioural change but a structural transformation of the economy and society at large. To trace the degree of transformation,

Liisa joined Lowmerism; a company that maps different companies in Estonia working with the circular economy.

"..zero waste is both a set of principles for how to reduce waste and a movement promoting waste prevention.."

Impact

It is hard to measure the exact impact of Liisa's zero waste 'campaign'. However, her articles and blog are read by tens of thousands of people every month. There is great demand for information on how to make a difference and for products that have a low environmental impact. The zero-waste movement does not only serve an environmental purpose, but has a positive impact on society by making people care about the common good and building a community. There are also economic effects, as new business opportunities are emerging from people's conscious demands.

Next steps

Recently, Liisa started working at Rohegeenius online magazine (Green Genius in English), where she writes different kinds of journalistic articles about sustainability and nature. Liisa believes that this new challenge will be an opportunity to broaden her knowledge about the world and the systems in place, to better understand possible solutions to complex societal and environmental problems. Liisa is simultaneously developing a business idea for a zero-waste delivery system. The idea is to provide consumers with the opportunity to buy free-packaging products online, while giving companies a platform where they can promote and sell their products.



Plant-based alternatives to plastic



Full story

A small international team of young people driven by their love for the environment are using a centuries-old Indian tradition to replace single use plastics with leaf-based plates for the catering industry. With a sales unit in Uppsala, Sweden, Leafymade imports plates and bowls in a variety of sizes and styles made from the leaves of the Shorea Robusta tree and produced by a specially recruited co-operative of local women organised by the NGO Manav Vikas, living in the Indian state of Odisha.



Vinh Hoang



Journey

Often the best ideas come when you change the focus of what you are doing. Vinh, a 30 year-old entrepreneur began his career concentrating on the design of a new style of lunch box better suited for fruit and vegetables. It was not the design that was wrong, it was the material – plastic. Suman Mehta and Meenu Choudhary were initially meant to help Vinh improve the lunchbox, but after a quick introduction to a leaf plate the two young Indians had lying around at home, the team decided to pivot, and focus on traditional Indian leaf-based plates and containers. This was back in late 2017. Like many small businesses, Leafymade began in Vinh's home. As Vinh had previously been a member at Drivhuset, he was invited to join Base 10 (a start-up community). "Uppsala University gave us some initial funding and advised us to contact SLU – which we did – and they provided further funding and access to researchers, particularly on the agricultural aspects of the production." When the owner of ICA Kvantum Uppsala/Gränby became one of the company's first investors and customers, Vinh realised they were on the right track.

Challenges

Vinh Hoang is the first to acknowledge that Leafymade is essentially a team effort. "Nothing compares to the amazing team-effort and passion at Leafymade" he says. But he was certainly its inspiration. Nevertheless he is keen to point out that his route to entrepreneurial success was by no means conventional. His parents wanted him to study and get a stable job. Vinh went to engineering school but later he had found his calling. He was going to try to be an entrepreneur. "I thought starting a business was only for people that were better than me, with more experience and know-how – after all, what did I know about starting

a business?" It is not easy to transition to the upfront demands of the business world. It takes a special kind of courage to promote a new idea, however great its potential.

"..often the best ideas come when you change the focus of what you are doing.."

Impact

Leafymade is keen to promote the aims of the United Nations Agenda 2030, which has much wider aims. All 17 of the sustainable development goals included in the Agenda are set out on the Leafymade website to emphasise that it wants to go beyond simply reducing the use of plastic in the catering industry. "We work in the hope - ambitious as it may seem – that one day India will give up on the use of plastic" Vinh adds. For this, education will be crucial, and here he feels Leafymade is doing its part.

Next steps

Leafymade's headline contribution to the sustainable economy must be the 2 tonnes of plastic which it has already replaced through its innovative use of a natural alternative, but Vinh makes it clear that his aims are wider. The challenge he sets himself is not only focusing on the product and how it's sourced but also on packaging, shipping and presentation. "Even the ink on our stickers has to be green."



Think globally, act locally: a grassroots approach to generate social change



Full story

Anastasia has long been interested in environmental sustainability and is today involved in many activities to promote these values. However, after studying Environmental engineering in St Petersburg, she was deeply demotivated and could not imagine that change towards sustainability was possible in Russia. After spending some time in Finland and learning about social entrepreneurship as a grassroots approach to lead social change, Anastasia started Green Glass (www.instagram.com/greenglass_pro), a studio where she creates decorations and art installations from recycled glass. She also organises interactive workshops using the Global Goals Jam methodology to help companies or organisations act on sustainable development goals (SDGs).



Anastasia Selezneva



Journey

When studying environmental engineering at St Petersburg Mining University, Anastasia thought it was "hopeless to introduce positive change in Russian industries". However, moving to Finland to study a masters on sustainable development and business opened a whole new world to Anastasia. She got inspired by how things worked in Finland, where human activity seemed to coexist with the natural environment. By the end of 2018, Anastasia, together with El Copitas bar and bartender Zhenya Zarukina, launched the #formemorychallenge urging bars in St Petersburg to start sorting waste and sending glass for recycling, receiving overwhelming attention with some 40 establishments interested in participating within a month. This eventually gave birth to Green Glass - brand and studio, where Anastasia and glass-master Svetlana, create interior decorations and art installations from recycled glass. With this initiative, they hope to get more craft makers and industries working with recycled materials. Anastasia is also active as a coach and facilitator in workshops using the Global Goals Jam methodology to help companies and organisations act on Sustainable Development Goals (SDGs).

**"..human activity
seemed to coexist
with the natural
environment.."**

Challenges

Anastasia has experienced a lot of rejection from people who do not see the importance of environmental sustainability. However, Anastasia

has found a way through to generate awareness of environmental concerns and promote sustainability. Rather than denouncing bad practices, she is focusing on social entrepreneurship – leading by example and spreading the word.

**"..focusing
on social
entrepreneurship –
leading by example
and spreading
the word.."**

Impact

While top-down change in Russia seemed unthinkable, Anastasia realised that she could do her part and have a positive impact by working at a grassroots level with like-minded people. Anastasia came across the concept of social entrepreneurship, which is based on the premise that individuals, as well as organisations and companies, can be agents of change.

Next steps

Anastasia is also contributing to an exhibition about waste in Russia for a new 'mobile' contemporary art museum. The intention is to move around Russia and raise awareness of how waste is perceived in Russia and the opportunities of reusing valuable resources. Furthermore, Anastasia's aim with Green Glass and Global Goals Jam is to generate a movement - to show others how things can be done differently.



'Sewstainability' – the rise of reuse and redesign



Full story

Ever looked at your grandmother's doilies and thought they would make an excellent top or scrunchie, but don't know how to do it? Been to a flea market and found the coolest fabric you have ever seen, but don't know what to do with it? Being able to see possibilities and transform old clothes and textiles into beautiful garments is perhaps Ingrid's superpower. And she is sharing the sewing-process with us, too. Over the past couple of years, Ingrid has risen to become a well-known re-designer and reusing influencer on Norwegian social media. It is sustainability in practice, and it is available to all.



Ingrid Vik Lysne



Journey

It all started with the beautiful hand-embroidered tablecloths she found at local flea markets: 'There were lots of embroidered tops and shirts in the shops that year. At the same time, there were beautiful hand-embroidered tablecloths in secondary shops and flea markets that no one bought, perhaps because it wasn't very trendy to use tablecloths at the time, but I realised I could make the same tops myself', Ingrid recalls. She got her sewing machine out and started making tops and shirts, which she eventually sold through her own online platform. Since then, her journey has taken a new direction, but her focus on using old textiles and garments remain the backbone of her newfound 'sew-fluencer' life.

"..making something from the left-over textiles in these types of collaboration is a win-win.."

Challenges

While starting out by selling her beautiful hand-embroidered tops, the job has since changed somewhat. With an increasing presence on social media, her job has expanded to include sewing workshops for municipalities and organisations throughout Norway, collaborative ventures with other re-designers and even a sewing book project, which is to be published in August 2020. In the autumn of 2019, Ingrid toured Norway with another re-designer, Ingrid Bergtun, with a sewing course focusing on making jackets from old wool blankets. More recently, Ingrid teamed up with Mari Nordén, Jenny Skavlan and Ingrid Bergtun in the sewing collective 'Fæbrik', which aims to bust the barrier to sewing with sewing patterns.

"..rather than throwing garments and clothes away, you can easily mend and change them.."

Impact

Ingrid and Ingrid Bergtun recently started collaboration with the Norwegian clothing brand Makeløs. They were invited to design a clothes collection from Makeløs' left-over textiles. She points out that making something from the left-over textiles in these types of collaboration is a win-win for the clothing brand. They get more use out of the quantities of textiles they had to buy at the outset, which would otherwise be thrown away after production. Her own climate and sustainability engagement with regards to the textile industry has become increasingly stronger over the years. She has a greater focus on waste now. Through her social media accounts, you will often see Ingrid bring up the environmental aspect of the clothing industry and show how, rather than throwing garments and clothes away, you can easily mend and change them into something new.

Next steps

Ingrid's various initiatives to inspire budding (re-) designers across Norway are important steps towards changing our attitudes and increasing our awareness towards, not only the design and creative process, but also the innate value of garments and textiles. She is reminding us of the endless possibilities we have to make unique garments, and break away from fast fashion, all whilst doing our little bit for the environment.



From the grounds up – reaping the benefits of the coffee bean



Full story

Imagine a list of the top coffee drinking countries and you can be sure that the Nordic countries are in the Premier League. Consider a similar table of countries most concerned with waste recycling in a circular economy and you find a similar result. It is not surprising then that a team of young Colombians with an idea for using spent coffee grains should choose the Danish capital Copenhagen as a base for their entrepreneurial venture. 'Kaffe Bueno' is based in the heart of the city. Two factors played an important role in the thinking behind the new company. First, the team knew coffee growers back home were struggling to get fair prices for their product. Secondly, they knew that waste products were simple 'resources in the wrong hands' and spent coffee grounds was not the exception. They were determined to find ways to resolve this unlikely combination.



Juan Medina



Journey

The journey started as a physical change of abode for the three young Colombian friends. Their Scandinavian friends had recommended Denmark as a country that might welcome their ideas of product creation from spent coffee grounds (SCG). But they needed a visa to stay in Europe. Thanks to the Start-up Denmark programme (www.startupdenmark.info) they got their visas and moved to Copenhagen. In 2017, the company received a grant from the Innovationsfonden (www.Innovationsfonden.dk) to collaborate with DTI (Dansk Teknologisk Institute) through its Innobooster scheme. This gave them the funding to test their Kaffe Bueno Oil in different cosmetic applications and scale up their technology from lab to pilot/industrial scale needed to extract the goodness from the spent coffee beans.

“..the yearly environmental impact of coffee waste decomposition is equivalent to the emissions of 9 million cars..”

Challenges

In December 2019, the company received a major boost when The Miljøstyrelsen (Danish Environmental Protection Agency) awarded them a grant for a joint collaboration grant of 2.2 million DKK with DTI. The project under the name INFUSE is designed to “unlock coffee’s health and commercial potential. DTI’s (Dansk Teknologisk Institute) capabilities and technologies combined with Kaffe Bueno’s knowledge and vision is the recipe for success of this project that aims to accelerate the development of health-promoting ingredients derived from spent coffee grounds”.

“..waste products were simple resources in the wrong hands..”



Impact

So how does recycling coffee grounds impact the environment? The Kaffe Bueno website has some surprising figures. “The yearly environmental impact of coffee waste decomposition is equivalent to the emissions from 9 million cars.” If not properly treated, methane, the gas which it produces, is 86 times more harmful than CO₂. For every tonne of coffee grounds recycled, we avoid the emissions of 340 m³ of methane into the atmosphere. Within the next 5 years, they are planning to recycle 1600 tonnes of coffee yearly, which is equivalent to the average emissions from 3 million cars per year. The health benefits of coffee grounds go beyond the beverage. The variety of Kaffe Bueno products can be used to protect the skin against damaging UV rays, boost blood microcirculation and fight against inflammation. They can be used to “reduce the risk of type II diabetes among other chronic diseases”.



Next steps

The three young Colombians who founded the company, while ever grateful for the welcome and support that Denmark has given them, have not lost sight of the people in their native country who make their business possible. “By extending coffee’s economic life, we will be able to give something back to the people to whom we owe its existence; the farmers, ideally in the form of education or technology projects in the future.” Juan insists.



Gelater leather-like material: a better alternative for the garment industry



Full story

With seven years of experience in the fashion industry, Mari-Ann's goal with Gelater is to scale up the production of an eco-friendly leather-like material to replace leather. Gelater materials are made from waste generated from the meat industry. Additionally, dyeing uses non-toxic processes, as opposed to leather tanning. The technology developed promises an easily scalable, affordable, and eco-friendly material that can positively contribute to improving the environmental footprint of the fashion industry.



Mari-Ann Meigo Fonseca
Co-Founder & CEO



Journey

Mari-Ann was working as a garment technologist when her interest in eco-materials and eco-textiles started to develop. "Seeing all the waste that comes from the textile industry was a trigger for me." She registered for an MBA in entrepreneurship and technology management at the University of Tartu where she also joined an 'eco-innovation club'. "I found material scientists at the university who were working with gelatine-based materials", which are made from the waste of the meat industry. "Because of my background, it made sense to work on a leather-like material." Mari-Ann, in collaboration with the university's material scientists, registered for ClimateLaunchpad – one of the world's biggest competitions for green business ideas offered by EIT Climate-KIC. After successfully passing the national competition, the team won the global competition. They were awarded 10,000 euros and access to the Climate-KIC ClimateLaunchpad Accelerator, where they are helped to develop their idea into a business. Mari-Ann and the team have developed a technology to produce nano-fibrous materials from gelatine derived from animal waste processing. With this innovation, Mari-Ann and the team offer a textile that can be used as a more sustainable alternative to leather in the garment industry and interior design.

Challenges

One of the key challenges with Gelater is that "in some way we are going against the flow – the vegan trend", Mari-Ann explains. "So, we don't know if this is going to be huge or not", she adds. Sometimes the sustainability discussion can be black-and-white. But as long as there is a meat industry, Gelater product makes sense from an environmental perspective. It is hard to be 100% sustainable. Mari-Ann thinks

"it is good to be open minded – it's easy to get stuck in your idea – but we have to adapt to what is happening in the market – and pragmatic, if we are going to sustain our business".

"..seeing all the waste that comes from the textile industry was a trigger for me.."

Impact

There are many benefits of Gelater material to the environment and human health. Today, there is a vast amount of waste resulting from the livestock industry, most of which is incinerated. Gelater offers a technology to upcycle that waste, extending its potential use and replacing the need for less sustainable alternatives. The leather industry utilises highly toxic chemicals in tanning, which is highly damaging to the health of the industry's workers. Gelater material does not require tanning but dyeing, which is performed in a harmless manner.

Next steps

An unexpected turn of events came with the COVID-19 pandemic. Given the lack of face masks on the market, Gelater adapted their technology to produce filtering materials based on a SAN polymer. The focus on developing the leather-like material will continue after overcoming the Covid-19 crisis.



PLŪKT tea: Generating value in rural areas from wild herbs



Full story

After freshly graduating from university, Māra Lieplapa founded PLŪKT in 2018, a company producing teas from herbs hand-picked from Latvian nature. "There are some 1300 varieties of herbs in Latvia that are good for human consumption, yet, only a few of them are actually used." Making a product with a positive impact on the environment and the local area of Madona, was Māra's drive to start her own business.

PLŪKT offers a variety of teas from hand-picked herbs naturally growing in meadows, grasslands and forests of Latvia. The selection includes two lines of products, loose tea, where you can see the flowers and leaves, and teabags. "The teabags are biodegradable and decompose within 30 to 60 days". Māra has long family knowledge using herbs for traditional medicine among other applications such as improving wellbeing in general and sustaining a healthy lifestyle.



Māra Lieplapa



Journey

Māra was finishing her degree at the BA School of Business and Finance when it all started. "When I graduated from university, me and my mum were asked to represent young entrepreneurs of Latvia in China". While in China, Māra got exposed to a rich tea culture, which made her think about the opportunities of using Latvia's herbs to produce tea and expand the tea culture back home. Māra pitched her idea at several business accelerators and got support from her local community. This gave Māra access to a grant for a 4-year long period to develop her business idea. Today, PLŪKT is on sale in speciality stores in 13 countries.

"..there are some 1300 varieties of herbs in Latvia that are good for human consumption, yet, only a few of them are used.."

Challenges

There are a number of challenges in starting a business, particularly as a young person and a woman. "As a young person, it can be hard to reach older people in retail – they may not think you have enough experience" Māra says. Another key challenge is winning the acceptance of the product in the market. Additionally, a challenge is that harvest is very seasonal, so PLŪKT cannot support farmers all year round. Māra explains that they work with up to 20 farmers during the summer, and only 5 during the autumn season.

"..sustainability is one of our core values.."

Impact

"Sustainability is one of our core values", Māra emphasises. PLŪKT tea is organic, is not farmed, and landowners have all the organic certificates. PLŪKT is also one of the first companies in Northern Europe to manufacture biodegradable teabags. "We sell through zero-waste shops without packaging, where we encourage people to buy in bulk." PLŪKT also has a strong social focus. Māra explains that "rural areas are lacking attention and opportunities for local people". They support local farmers, mostly family owned farms, or single women that need additional income.

Next steps

Up until today, Māra and team have mostly focused on manufacturing, but their long-term ambition is to generate a tea culture locally. "We want to focus on teaching", and to do so, they are working on two fronts. One focuses on consumers – "raising awareness of the health benefits and the whole experience around tea". The second, focuses on professional tea masters, mostly from Asia. Māra aims to raise awareness of Latvia's tea culture internationally by organising tea master cups.



Promoting a self-sustaining lifestyle through community support agriculture



Full story

Simone works at Under Tallarna (www.undertallarna.se/om-oss), a small-scale farm initiated by a bunch of young enthusiasts passionate about a self-sustaining lifestyle and sustainable living. The farm is managed under the community support agriculture (CSA) model, where clients become members of the farm. This eliminates the need for intermediaries, securing a fairer and stable income for the farmers and a reliable product to clients. Farming farmers is, however, Simone's biggest ambition. She organises events for anyone to try out what it's like to be a farmer, and to learn about sustainable living.



Simone Grind
Under Tallarna



Journey

Simone grew up in Järna, a well-known nature-orientated community in Sweden. From an early age she got interested in the 'Transition' movement, a grassroots community that seeks higher self-sufficiency and generating change locally. Simone identified many things that did not work well in society and became determined to take the responsibility into her own hands. Simone came across Under Tallarna and fell in love with the idea of creating an 'oasis' for sustainable living. She noticed that being action-orientated made her happier than protesting about things that don't work.

"..the younger population is detached from agriculture, which poses some serious challenges to the future of farming.."

Challenges

There is little political and financial support for small-scale farming. Therefore, "surviving as a small-scale farmer is really hard". There is a lot of competition from farmers that have no sense of social and environmental responsibility, and intermediaries keep 50 to 80% of the earnings. Under Tallarna bypasses many of these challenges through the CSA model, which is a form of cooperative agriculture, where the producer and the consumer work in partnership.

"..there is a lot of competition from farmers that have no sense of social and environmental responsibility.."

Impact

The CSA is a mutually beneficial model, which makes small-scale farming viable, while also making sustainable agriculture more accessible to local communities. With only half a hectare of productive land, Under Tallarna produces enough vegetables for 120 members, including restaurants, two preschools and several local households. The closed system saves "a lot of costs by skipping intermediaries, logistics, administration, selling" and reduces waste significantly. Many local politicians have gained interest and are now proud of the strong socially and environmentally sustainable movement and economy that has developed in the Järna area. Simone notes that "sustainable businesses employ many people" in the Järna area today.

Next steps

Simone is most interested in "farming farmers". According to her, the average age of farmers in Sweden today is between 60-65 years old. At the same time, the younger population is detached from agriculture, which poses some serious challenges to the future of farming, food security, and rural communities. This is why Simone wants to "generate better conditions for farmers" and inspire others by showing that "it is possible to live from it in creative and fun ways".



Cutting up to 4% of global emissions by feeding cows with seaweed



Full story

Fredrik Åkerman, Leo Wezelius and Angelo Demeter are three young enthusiasts on a mission to reduce 4% of the global greenhouse gas emissions, through feeding cows with special red seaweed.

Cows produce more than 5% of the global greenhouse gas emissions globally, just by farting and burping methane gas. This is more than twice as many emissions as all the world's aeroplanes combined. But thankfully, over six years of research has now been published showing that by supplementing the cows' diet with a small amount of special red seaweed, their enteric methane production goes down by up to 80%. The team is now on the way to establishing the first on-land commercial scale production of this specific red seaweed to make it the new industry standard for the dairy and beef industry.



Fredrik Åkerman, Leo Wezelius & Angelo Demeter



Journey

Fredrik was in high school when he first came to know about the effect seaweed has on cows. Six years later he started looking into possible ways to develop this seaweed commercially. Shortly after, he involved his friend Leo, and then Angelo came into the picture. He had recently received a degree in biology and specialised in the food industry. During the summer, the team applied to participate in the yearly held Brilliant Minds conference pitch competition Open Minds and won. About a month later, the team had raised 3 million SEK from angel investors and founded the company. Soon Ian Tuart, an algae expert with more than 10 years of experience producing seaweed at scale in Australia joined them. Located at Kungsholmen in central Stockholm, the team set up Volta Labs; the heart of Volta, where the science team is now developing the production recipe optimised for cultivating the seaweed at scale.

"..challenge is to build a business model for the feed supplement.."

Challenges

"The Republic of Cattle" ranks third in greenhouse gas emissions. Cows cannot digest the cellulose from plants by themselves, so instead the microbiome in their rumen helps them digest the cellulose through fermentation. Some of the bacteria though, will ferment cellulose and

produce methane as a by-product. Preliminary tests show that by adding only a small amount – 100 g per day of *Asparagopsis* to the cow's diet, their enteric methane emissions can be reduced by up to 80%. Now, the team is renovating a 500 sq.m. facility in Lysekil. This facility provides them with the perfect conditions for growing seaweed in a controlled environment. Aside from the production, the other challenge is to build a business model for the feed supplement. The precise business model is yet to be established as part of the ongoing industry pilot projects.

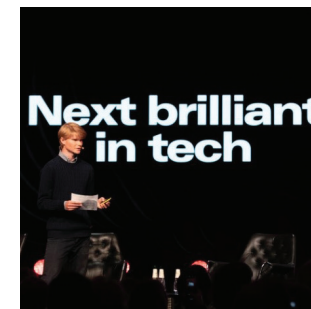
"..legislative action is a long-term ambition.."

Impact

The ambition of Volta Greentech is to make methane-reduced practices the norm, and ideally enforced by regulation. "Relatively speaking, legislative action is a long-term ambition, but both we and the industry know it is going to happen eventually because of the huge potential impact on climate change mitigation and all the positive side effects", says Leo.

Next steps

The challenge is to produce the biomass and get the business up and running. Volta Factory 01 is already underway and expected to be fully operational in 2022, with an initial capacity to feed some 12 500 cows with Volta Seafeed daily.



Cows are not the problem, but the system!



Full story

Jussi is a young farmer passionate about food production and carbon sequestration through sustainable farming. While finalising his bachelor's programme at Häme University of Applied Sciences, Jussi is also attending Savory Institute's online course where he has expanded his knowledge of 'holistic management'. Holistic management involves a combination of practices that ensure the health and wellbeing of land, plants, animals, and the community. Jussi is currently applying some of these practices and developing new methods at Qvidja Gård (manor house) in Southwest Finland. These are improving the quality of the soil and the wellbeing of the cows and lamb while capturing carbon from the atmosphere. In the near future, Jussi will take over his family farm and introduce his knowledge on sustainable farming, which he also hopes will set an example for other farmers to follow.



Jussi Nissi



Journey

Jussi was raised on a traditional farm, but he was not interested in farming. He moved to Tampere to study and work in IT. But later on, he realised that he was passionate about agriculture. It "started with small things" he recalls – "I got interested in food production, in the quality and sustainability of it". He decided to switch his career to farming. His parents had retired and rented out the family farm. Therefore, Jussi applied for an apprenticeship position at Qvidia Gård to gain experience in sustainable farming and rotational grazing. Qvidia Gård extends over 100 ha, mainly grasslands, where some 40 sheep, 40 cows and 15 horses grow in the open air. The main objective is not producing meat but capturing carbon from the atmosphere. At Qvidja Gård, Jussi uses a combination of management methods mostly based on 'holistic management'.

"..reasons for many farmers not to improve their management practices are a combination of tradition, lack of incentives and a 'broken system'.."

Challenges

According to Jussi, important reasons for many farmers not to improve their management practices are a combination of tradition, a lack of incentives and a 'broken system'. Holistic management practices from a business perspective "make sense", explains Jussi – "lower tractor and

"..the potential of holistic management is huge.."

machine work equals lower costs". Thus "farmers are not sacrificing earnings because of these practices; it is a matter of tradition". However, the transition to outdoor grazing, growing new pastures, amongst other practices, requires investment and time. Agricultural policies are also not ambitious enough to favour good practices. Bottom-low prices force farmers to compete with volume regardless of the environmental toll this represents.

Impact

"The potential of holistic management is huge" states Jussi – "by changing 10 to 15 percent of agriculture globally we could store as much carbon as farming has ever produced". Jussi thinks this is a realistic scenario based on Qvidia's own experience: "we are carbon negative on this farm; we fix more than we produce". "Everything we do produces emissions – so the question is how much we emit and how we counteract it." With sustainable farming practices, it is possible to fix as much carbon in the soil as produced.

Next steps

Once obtaining his bachelor's degree, Jussi plans to take over his family farm. More specifically, he wants to apply the sustainable farming practices in his farm and teach others by his example.



'Solar foods' for health and sustainable environment



Full story

Not far from Sci-Fi, the gamble of Sami Holmström and Solar Foods is to produce protein in a lab that can be placed in the Sahara Desert, the arctic, or even space. The resulting product, Solein®, promises to revolutionise food production by completely replacing the animal and plant-based standard. By cutting the use of water and land to a fraction of what plant and meat production requires today, Solar Foods foresees enormous environmental and social gains.



Sami Holmström



Journey

Sami has a biotechnology degree from Turku University of Applied Sciences and a background in bioprocess engineering. He spent some 10 years working at the Technical Research Centre of Finland (VTT) where he gained substantial experience in fermentation processes, including the screening and isolation of microorganisms. This was where he got to work with Juha-Pekka Pitkänen, Solar Foods co-founder and CTO, who then lured Sami to join the new venture. Right from the beginning of Solar Foods, Sami joined the company with the mission of producing protein out of renewable electricity and CO₂. "Everything happens in a fermenter – just like brewing beer" explains Sami. But instead of barley or wheat they feed the microbes with water, nitrogen and CO₂. The result is a single-cell protein powder containing up to 65% protein, which has the brand name of Solein®. It can then be used as a protein supplement in existing products, or be transformed into a variety of new ones.

Challenges

The biggest test now is how to communicate and reach market acceptance. "Like everything new, it takes time to introduce. We don't see people eating food as pills in the future; instead people will enjoy food with taste and common properties in the future as well." The challenge is therefore to get Solein to be used as a protein ingredient in existing foods that are familiar to most people such as bread, pasta and plant-based dairy, drinks and ready-meals.

Impact

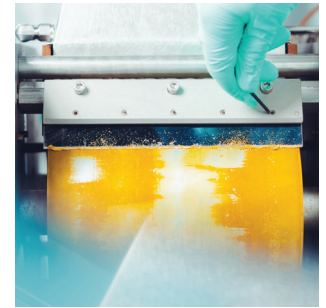
The expected environmental and social impacts of Solar Food products are huge. Today, one quarter of the global greenhouse gas emissions generated from human activity originate from

"..one quarter of the global greenhouse gas emissions generated from human activity originate from the food system.."

the food system. As the global population and standard of living continue to increase, the consumption of animal-based protein is expected to intensify significantly. This will lead towards a completely unsustainable track for the planet. Instead, Solar Foods proposes a fundamentally different and efficient food system. The idea of producing food from 'air with clean electricity' is based on the vision of disconnecting food production from agriculture. By doing so, economic growth can be decoupled from the increasing use of natural resources.

Next steps

Solar Foods is currently operating in a pilot plant producing 1 kg of protein powder per day. At the same time, they are building and designing a demonstrator, which "is a mini-scale version of the full-scale factory". The demo plant will be a replica of the full-scale facility to be built with a capacity to produce 300 kg of Solein per day. The next major step is to get the licence from the European Food Safety Agency (EFSA) to introduce Solein to the market. EU regulations for 'Novel Food', or food products that have not been consumed by humans before, "are the tightest in the whole world". Solar Foods expects to be on the market in 2022.



Nadine's 'slugs-are-gone' invention: an ecological repellent for slugs and snails



Full story

Nadine Sydow's unique invention, Schnexagon, or 'slugs-are-gone' in English, is a product to stop slugs and snails from climbing into slot gardens, while protecting biodiversity. In Nadine's words "it's transparent – you can't see it and can't smell it – the slugs don't die; they simply can't stick to it". Nadine, who is based in Kiel in Northern Germany, has a passion for developing new materials that can provide more sustainable solutions to existing products.



Nadine Sydow
Solvoluta



Journey

After receiving her master's degree in biology at the university of Kiel (CAU), Nadine joined the working group on "Functional Morphology and Biomechanics" at the same university. At that time, researchers had developed a tape that mimics a gecko's adhesive foot structure which sticks to surfaces just due to physics. When travelling to Thailand, Nadine saw the potential of marketing a related product, aiming to prevent a gecko's attachment for certain areas. However, getting rid of slugs appeared to be a much more relevant local problem. That was the day the story of Schnexagon, or "Slugsaregone" began. "Schnexagon" is an ecological alternative to chemical pesticides and works like a paintable protective fence against slugs. The product is applied directly onto vertical surfaces using a regular paintbrush.

A natural combination of natural oils and surfactants prevents slugs from sticking onto the surface and they simply fall off. In this way, slugs survive, and biodiversity is protected.

Despite winning a pitch competition for start-up companies, pulling-off this niche business-idea proved to be a big challenge. Yet, against all odds, Nadine's persistence finally paid off when she met her current business partner, who supported her idea. Together they founded the company Solvoluta and patented Schnexagon.

Challenges

Pulling off such an original business idea proved to be rather challenging. Before the business finally kicked-off, Nadine and her business partner had to go a long way to convincing people before receiving any funding. Also, most people did not really care or were not aware of the relevance of slugs in nature, so keeping them alive was not their top priority. Slugs are also getting rarer in Germany due to dryness related

to climate change, influencing the demand for her product. Moreover, being a woman working with natural sciences and sustainability in the DIY scene is still something rare and challenging. Nadine, however, has also found this to work to her advantage, as it catches attention and opens new opportunities.

"..being a woman working with natural sciences and sustainability in the DIY scene is still something rare and challenging.."

Impact

When spreading poison against slugs, we are altering the balance of ecosystems. Yet, slugs are an important part of our ecosystem. They eat vegetables, fruits and other plants and produce nutrient-rich compost, which is then used by animals and plants. By adding poison, we are affecting the native slugs disproportionately. Using Schnexagon, instead, can help protect native slugs and the balance of the ecosystem.

Next steps

Nadine is currently busy looking for new markets to expand the distribution of Schnexagon. At the same time, she is working on other environmentally-friendly products. However, her biggest ambition for the future is to develop a sustainable anti-fouling product for ships, but "this is very hard" she emphasises.





BeUBio

BeUBio aims to promote youth involvement across the Baltic Sea Region, in the transition to a bio-based economy. To achieve this objective, the project establishes bridges between young people and decision makers as well as companies. It also creates synergies with other actors and initiatives, enabling youth participation and addressing the United Nations Sustainable Development Goals.

The BeUBio project emerged from the 'Baltic Leadership Programme on Youth', 'Bioeconomy (BLP Youth)'; it supports 'ReGeneration 2030' and the 'Baltic Youth Festival'. The role of BeUBio is to harmonise this and other initiatives and methods for attracting and involving youth.

'Young people leading the way to a sustainable economy' is a continuous effort. New editions will come in the future as we identify new young enthusiasts whose stories can inspire others to join the 'green transition'.

If you wish to share your story with us, for more information contact:

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Nordic Council of Ministers
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Nordregio



Region Kalmar län



VIDZEME
THE ONLY WAY IS UPI



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