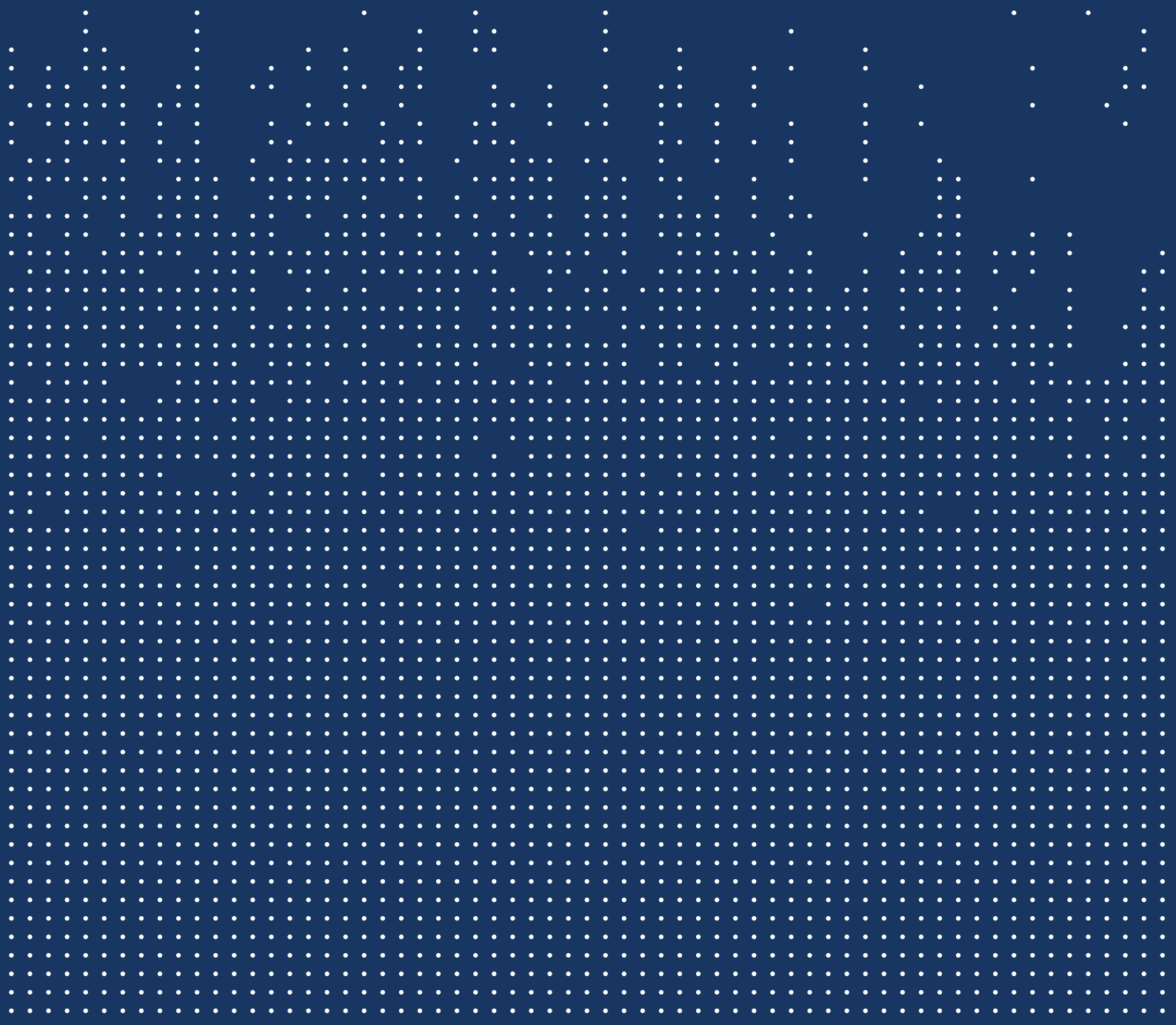


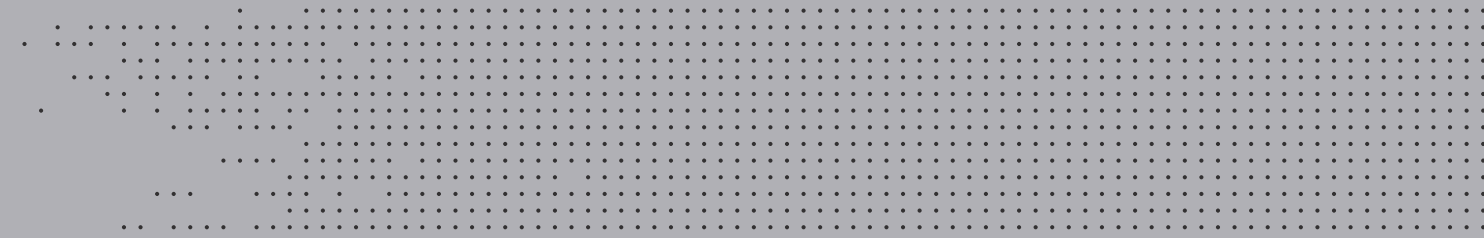


# Ten Year Report

2010 - 2020



# Foreword



**This publication tells the story of IDN’s contributions to a more sustainable future, in a bold attempt to sum-up ten years of intense and diversified activities.**

From the outset in 2010, we at IDN have shared experiences with diverse people in different countries from around the world. By fostering an interdependent network of professionals through our work in multiple projects, we overcame challenges directly connected to local realities, understanding the different consequences of global scenarios for governments, businesses, and communities.

From this contrast between global and local, we saw opportunities arise for new ways of building a path towards a better future for all of us.

In 2020, the year we complete our first decade of operations, it could be no different.

At first, this year might not sound like one that offers much opportunity to celebrate: the ongoing pandemic, the point-of-no-return for climate changes, distrust in democracies and democratic processes, the rise of nationalism and discredit for multilateral cooperation, and systemic racism making yet more victims. To cite only a few, these were the news that filled the first pages, no matter where we stood, geographically speaking.

Nevertheless, completing ten years of activities remains an indisputable landmark in our history, and a unique opportunity to revisit the reasons for our existence, our relevance, and motivations. This past year has made us, in different ways and degrees, examine why we are in business and why do what we do - both as a company and as professionals. We have questioned what keeps driving us forward, the ways in which we have evolved and contributed to global, national, and local challenges, how far we’ve come since we started our activities, and, ultimately, how we are contributing to address the problems that 2020 was so adamant in presenting.

Our main takeaway? To work together globally for sustainable local development.

IDN's very core purpose as a business serves to shift the scales in the opposite end of the issues we are collectively facing. We strongly believe, as a company and as individuals, that diversity and international cooperation are the keys to a sustainable future. It is only through a shared sense of existence that we can come up with new and more beneficial ways to produce and consume, to interact, and to find value in every individual. This publication tells the story of our efforts to contribute to change, in a bold attempt to sum-up ten years of intense and diversified activities in a few pages.

You are more than welcome to join us and, hopefully, feel inspired by a different future that is not only possible, but is already in the making.

**The IDN Team**  
November 2020

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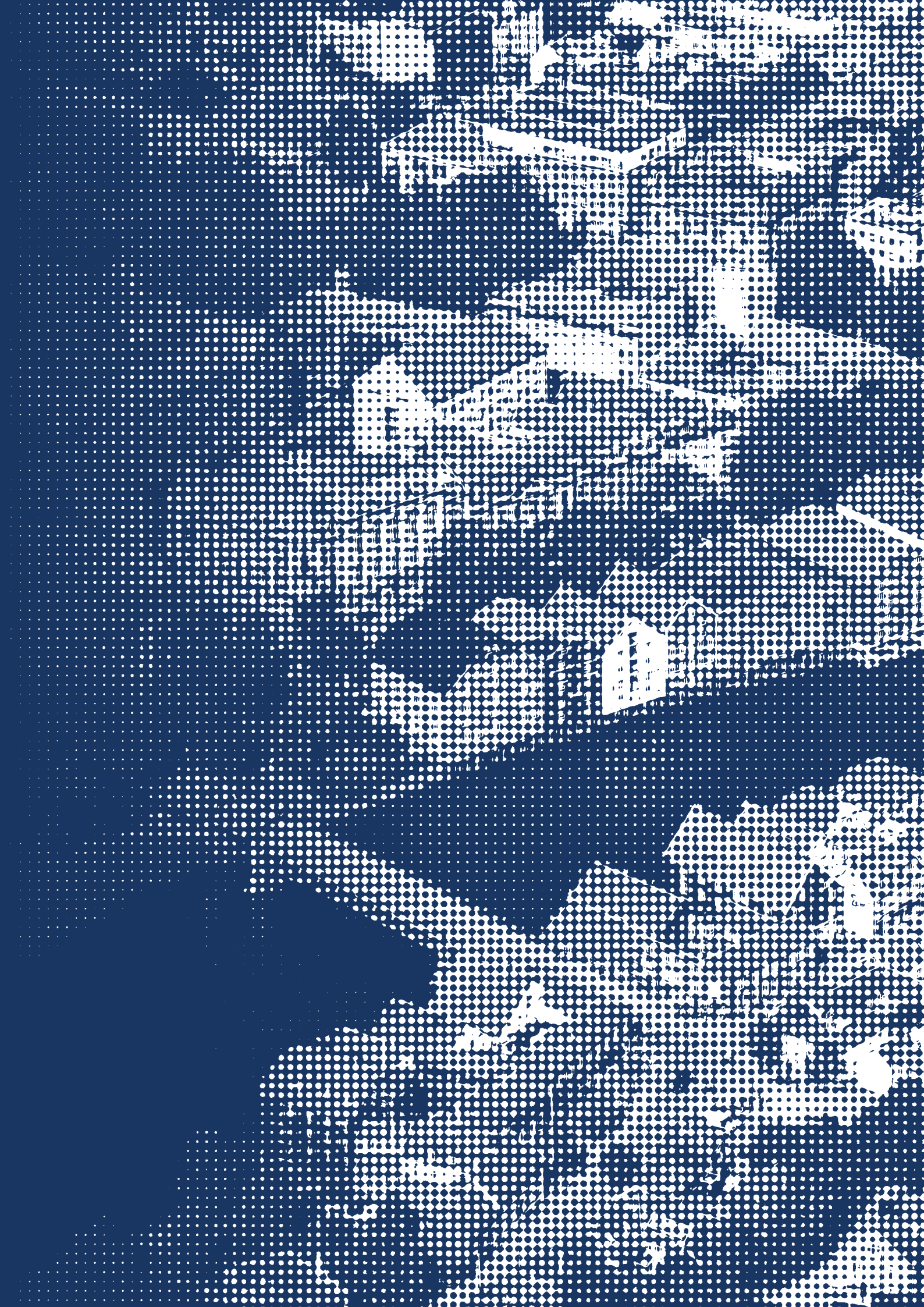
# Introduction

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# 01

With every new challenge we took on along our history, we saw boundaries expand. Explore our organizational purpose and get to know how we honed our skills to become a valuable player in promoting mutual development and knowledge transfer.

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# IDN is a spin-out of SINTEF Foundation, the largest contract research institute in Scandinavia.



Our main office is located in Trondheim, a city known for innovation, and technology especially since it is home to the Norwegian University of Science and Technology (NTNU) and SINTEF. This creates a highly qualified hub for cooperation on vanguard issues from many sectors.

With an extensive project portfolio, we have successfully contributed to building more innovative, sustainable and prosperous futures for local economies around the world. We facilitate knowledge exchange and project cooperation through a global network of experts, one that expanded consistently as we made sure to have the best teams to deliver impactful solutions.

Our offer to clients is centered around the preparation of feasibility studies, especially for development projects based on our long-term presence in CEE countries. In addition, we perform research and analysis to find new market opportunities for our partners.

**Along with our core team, we provide assistance throughout the whole project lifecycle, from the early steps of the application process, to management, expert tasks, and reporting.**

The expertise we developed along the years is further refined by constantly performing in a multicultural setting, proving that there is power in diversity. Also, we count on the highly qualified background of the different experts we source from around the globe to contribute according to the needs of each project.



The need to motivate and support young people classified as NEETS led to the creation of the Active Youth Entrepreneurship Network, a project that uses international collaboration to support a generation to dream a new future.

→ [GO TO PROJECT](#)



In the BOGBI project, we assisted this cargo bike initiative as a solution for urban mobility, social inclusion, and economic development in Colombia.

→ [GO TO PROJECT](#)



# We provide consulting and management services to projects that require international cooperation.



An autonomous power-line inspection grid that uses drones, sensors and immersive technologies, uBird is an innovative project that we helped to establish in Estonia.

→ GO TO PROJECT



Renewable energy is a priority for the Straldzha municipality in Bulgaria, which is why they collaborated with IDN to explore their geothermal potential, paving the way to a greener and more sustainable model.

→ GO TO PROJECT

Constant experimentation leads to an adaptive and innovative environment, where experts are free to propose solutions that address global issues. Such as the need for new and leaner production systems, better alternatives for waste-disposal and more equal and inclusive businesses.

**A flexible approach allowed us to expand our scope of activities, which now reaches six business areas: Circular Economy, Entrepreneurship, Green Energy, Manufacturing, SME Development, and Strategy & Policy.**

Our projects have so far reached 28 countries in four continents, with the work from more than 50 connected universities, Norwegian authorities, bilateral and multilateral agencies, international institutions, governmental organizations, local businesses, and other institutional partners.

**Our focus is set on supporting circular economy innovation, fostering local business environments, and promoting international cooperation to drive inclusive and sustainable growth.**

Since 2010, we have also taken part in more than 50 EEA Norway Grants projects. During this period, we have consolidated a constant global presence, strengthening the connections among multi-faceted players in different regions of the world and, most of all, sharing the expertise to achieve results that have a long-lasting local impact. Technological innovation plays a central role in our projects. Beyond developing and facilitating models of technology transfer, we assist institutions in promoting proprietary technologies, identifying possible funding and markets for them.



The prisoners in Bulgaria's largest detention facility can now count with training in solar panel production through this EEA Norway Grants backed project.

→ GO TO PROJECT

We have worked with more than 100 projects amounting to €77.9 million in budgets financed by diverse multiple sources.



Amount of projects by funding sources

# Our Process



## 1 Verify Requirements

Dealing with the demands of different international parties requires a full and thorough assessment of needs. Our solutions are customized to deliver what is required at every level.



## 2 Analyze Context

To get a full grasp of the bigger picture we take a deep dive into the reality in which the project will be implemented. This allows us to refine potential solutions and adequately address systemic needs.



## 3 Transfer Knowledge

True growth can only be achieved by allowing everyone to benefit from technological advancements. The experts we bring into our projects set out to facilitate the development of solutions on-site, along with local partners.



## 4 Provide Support

We are committed to the success of every project, from beginning to end. By covering the whole lifecycle, we deliver reliability and continuous assistance to our partners.



## 5 Promote Autonomy

Our relationships are mutualistic, but not codependent. We help to set a legacy of positive impact, one that will only be sustainable if it can be carried on by local agents autonomously.



## 6 Report Results

Understanding the outcomes of our actions is what sets the base for future improvements. Our reports give valuable information to private and public authorities interested in learning with us.



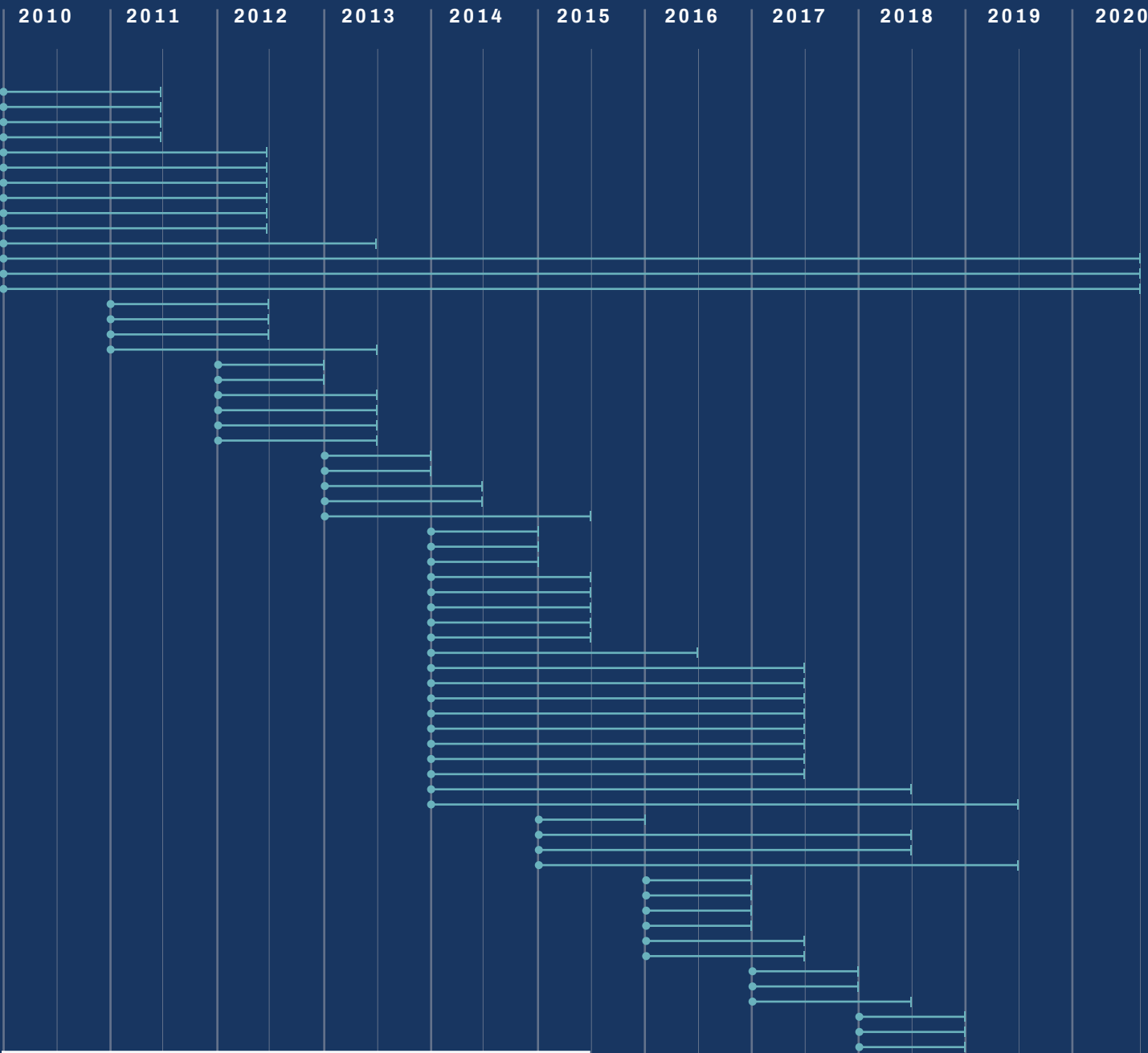
# A Decade to Experience and Confirm our Mission

Along the past 10 years, we have constantly revisited our mission statement and felt how important it is to have it resonate with the work we do. We have developed our network through visits, workshops, and collaboration with research organizations; focused on overseeing long-term projects that are changing realities through access to knowledge, education and technology; innovated by working directly on the development of software for smarter manufacturing and integrated multiple agents in different countries to provide support for young entrepreneurs - all of this with the engagement of an international team connected to deliver positive social and economic impact locally.

Throughout our working journeys, we have noticed how social dimensions and technological solutions have increasingly become the focus for numerous realities. So we found it important to increase IDN's partnership in such projects, building on our previous experience working with vulnerable populations and formulation of evidence-based policies aimed at development and innovation. We specifically see entrepreneurship as a vector that can address questions of poverty reduction and active citizenship.

See how we helped to promote green innovation with POLNORECO, the Polish-Norwegian cooperation for environmentally friendly and innovative solutions that took place in the city of Lublin, Poland.

→ [GO TO PROJECT](#)



## Project duration

Each project has a determined period to be implemented and deliver its expected outcomes. Despite the inherent differences among them, IDN is present during their whole life-cycle, whether it lasts several months, or it is an ongoing initiative with more than ten years.



# 2.237

**Our track record of coordinating multidisciplinary projects to create relevant local solutions has given us a broad knowledge of different aspects that projects need to succeed, and this experience is invaluable for dealing with social issues - notably the ones that arise from shifts in macrotrends, such as digitalization.**

In the coming years, many regions of the world will be presented with challenges regarding digital transformation and greener practices, especially regarding the organization - and reorganization - of production and the way the public sector can provide support through the transition. This means we must work on digital readiness for businesses and society, while assisting them through change management, from planning through the implementation of these new technologies.

organizations  
benefited from  
the innovations  
and programs  
we promoted

Furthermore, IDN has become increasingly more recognized as an organization with analytical insight. Due to the nature of our work, we are constantly in touch with businesses, governments, and civil society, researching and advising on public strategy on one side and experiencing their results on the other. This understanding of theoretical development models and macroeconomic data, combined with the fieldwork that can check the theories in practice, gives us a differentiated solid ground in which to stand as a service provider.

It also puts us in a special position to find partners and build the networks that can put ideas into practice and implement the necessary solutions diagnosed via research. We can therefore perceive that IDN is truly working together globally for sustainable local development.

Our projects  
are directly  
connected to  
drivers of global  
megatrends



Automation & Digitalization

Cloud Technology

Climate Change

Environmental Awareness

Internet Of Things

Knowledge Workforce

New Partnership Models

Political Fragmentation

Regulatory Landscape

Resource Scarcity




# Snapshots from Our History

Start of activities


Rapid expansion with projects in multiple countries

Focus on stimulating SME competitiveness, and promoting sustainable practices across CEE




2010

A SPIN-OUT FROM SINTEF

 IDN 

2011



Awarded first two contracts with OECD

NORAD commission to evaluate the Norwegian Development Cooperation with Afghanistan

Establishing innovation hubs in the Balkans



Incorporated entrepreneurship and innovation specialist


Multiple initiatives culmination in the creation the Masovian Network of Consulting and Information Centers in the field of Innovation (MSODI) in collaboration with WYG PSDB in Poland

→ GO TO PROJECT

2012

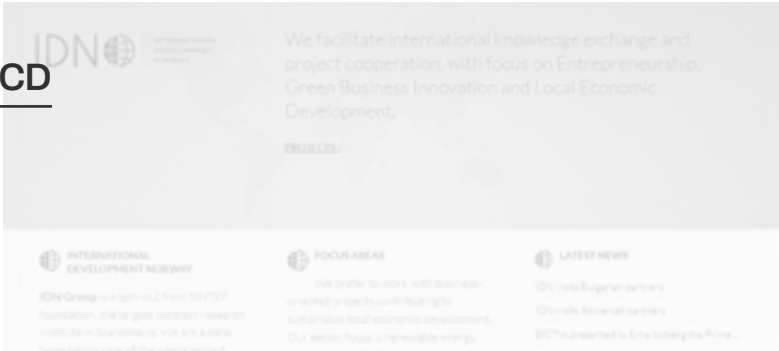


2013

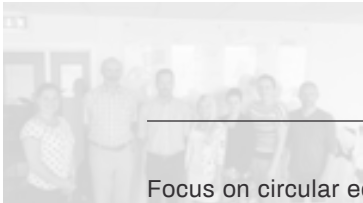


Becoming a reference for entrepreneurship and environmental training in Poland

Launched first website



2014




2015



Incorporated green energy specialist


Increasing the scale of knowledge transfer about energy efficiency in the industrial sector



2016




2017




Incorporated green energy specialist

Increasing the scale of knowledge transfer about energy efficiency in the industrial sector



2018





2019




Redesigning visual identity and organizational structure

NEW LOGO






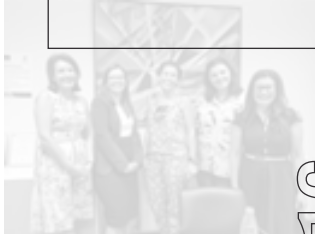
2020



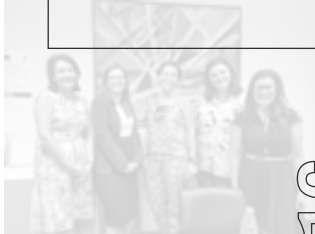
Consolidation of first ten years of activities



2015



2016



2017




Incorporated green energy specialist

Increasing the scale of knowledge transfer about energy efficiency in the industrial sector



2018




2019



Redesigning visual identity and organizational structure

NEW LOGO





2020



Consolidation of first ten years of activities



22

23

# Revisiting our Identity

In 2019 we took on the challenge to redesign our visual identity so we could better communicate our value to the wide range of audiences we come across while performing our activities. This new visual expression of IDN embodies our singular point-of-view on international cooperation for sustainable local development.

The initial challenge - to build an encompassing visual language to coherently communicate IDN's value to players in their business sector - was addressed by identifying personas created according to the brand's main target audiences, and incorporating their perspectives in the communication design.

**During the process, it was important to take into account both the path we have traced so far as well as our intentions for the coming years: to achieve growth and prosperity by working together globally.**

This had an impact on the graphic elements of the visual identity such as the cold color palette to reflect the professional company culture, with hints of contrast referring to the Norwegian landscape.

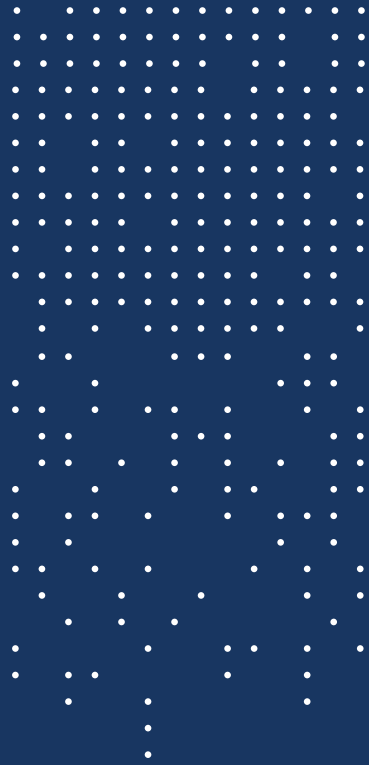
**The company's culture and way of conducting projects is also reflected in the final design: a sober, efficient and collaborative way, open to contributions from all levels and focused on getting the best results.**

The new logo and expressions of the brand, furthermore, retain the most central aspects behind the initial design from 2010, while expanding on central aspects of our business model: global reach, partnering and transferring knowledge.

These elements were applied to a redesigned website structured around the body of work produced and knowledge accumulated by our growing team since the company was founded. Projects are now divided into the six business areas we understood could encompass our multidisciplinary network and expertise and can be viewed on their dedicated pages. Overall, it is a much more visual and coherent way to display what IDN has accomplished and what it has to offer to its partners.

## Dotted Grid

The base for the identity system, the dotted grid symbolizes the sourcing of projects and partners, scattered indifferent places ,



## Globe

There are no boundaries for outstanding talent and opportunities to make the word a better place. From Norway to South Africa, Colombia to Uzbekistan, we are ready to engage in new projects.



## Connections

Our work really starts when we can establish the connections among projects, teams and outcomes. These are the symbols of active cooperation and knowledge exchange.





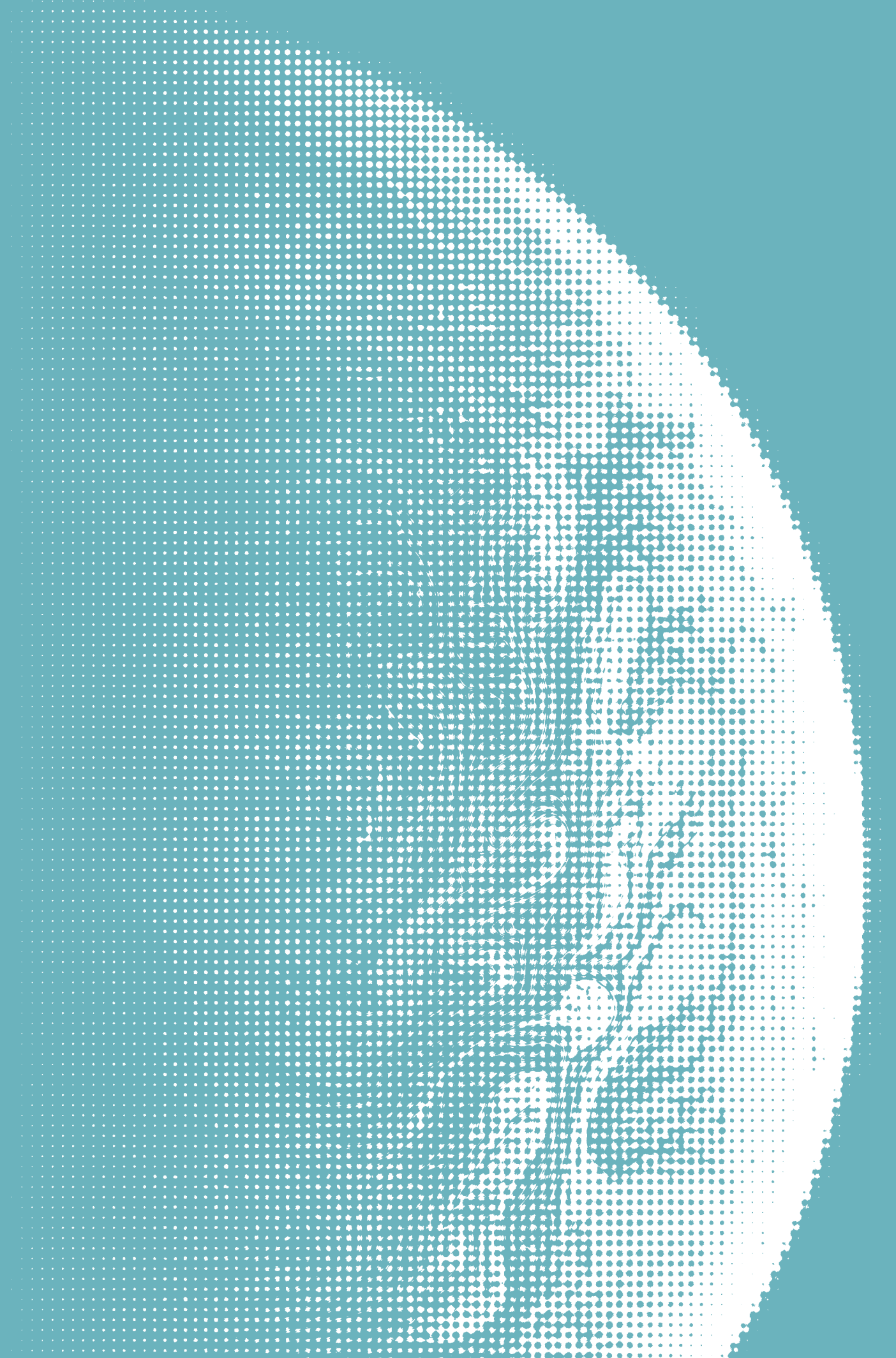
# Working together globally for sustainable local development

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## 02

In the following sections, we will break down this statement and delve into what it symbolizes, from the people behind our organization to the network we mobilize and the projects that shaped our history.

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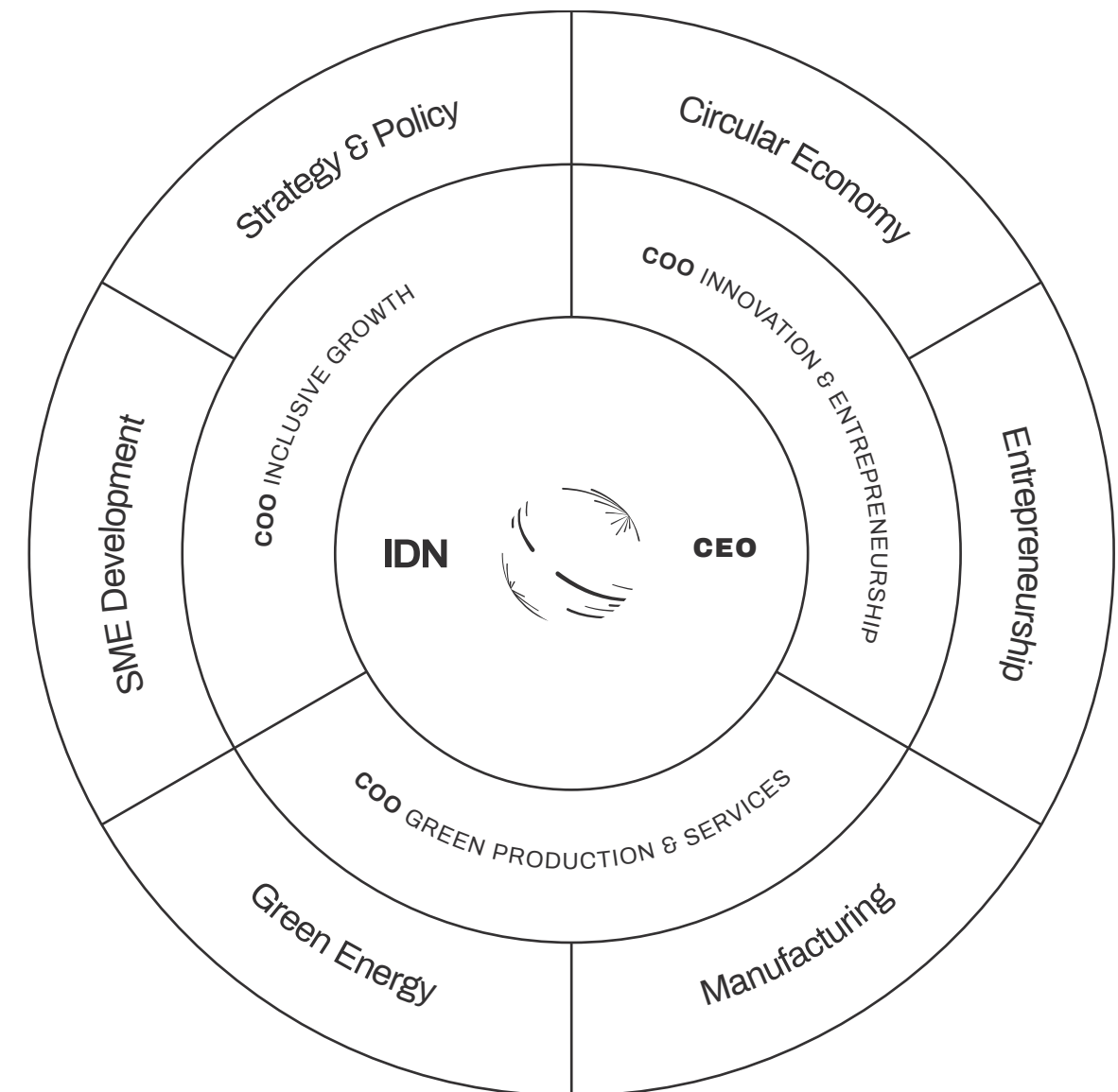




# Working together

Collaboration is at the center of our activities. It is only through the integrated efforts of different players that we can have such a reach around the world. Engaging both highly qualified professionals and organizations invested in and sharing our vision is an essential - and usually the first - part of our work.

Our focus is to get involved with projects that help to address real-world issues, be it with better discussion forums for small entrepreneurs or technological innovation for a greener and more sustainable industry. In a truly cooperative manner, we work by following a process that offers meaningful exchanges at every step.



We have adjusted our organizational structure to replace Project Directors and Managers with Chief Operations Officers that act along with the CEO.

# Our Core Team



Anders Stølan

CEO

The founder of IDN, Anders holds an MSc degree from the Norwegian Institute of Technology (NTH), within technical-economic planning in regional and urban areas. He acted as Research Director at SINTEF from 1997-2003 and again from 2004-2008. He has also participated as a scientist in SINTEF Industrial Management, Economics and Logistics, was engaged at Surrey Technology Center in the UK from 2003 to 2004 and has experience as an Assistant Professor in the Department of Economic and Operations Research Manager at the Norwegian University of Science and Technology (NTNU).

Anders has extensive international experience in project development, management and consulting, local economic development, innovation, and trans-national technology transfer as well as direct access to numerous institutions and networks regarding technological innovation, innovative SMEs, regional development, and policies for the advancement of science and technology.



Katarzyna A. Kazimierczuk

COO INNOVATION & ENTREPRENEURSHIP

With a solid background on the development, management, and implementation of projects related to technology transfer, innovation and SME support funded by public mechanisms, Katarzyna has been a part of IDN since its foundation and is currently researching the legal and administrative framework of innovation support as a PhD candidate at the University of Warsaw.

She also holds an MA in Administration from the Law Faculty of the same university, as well as a BA in International Relations from the University of Wrocław. Based in Warsaw, she has led competence building and network development in Poland, counting on her experience as country manager for SINTEF (2005-2010), along with feasibility studies, application and tendering documentation for many other countries focusing on innovation support.



Rune Stølan

COO GREEN PRODUCTION & SERVICES

Part of IDN since 2015, Rune is an experienced project manager with a demonstrated history of working in the management and consulting sectors. With an MSc in Political Science from the Norwegian University of Science and Technology (NTNU), he specialized in international political economy, political risk analysis, and foreign direct investment, with further studies on Lean Production at the same university.

Based in Oslo, he is now focused on the future of manufacturing and production processes. Since 2017 he has also been in charge of building up IDN's daughter company ICB Digital, working on agile and low-cost Industry 4.0 solutions for SMEs from the manufacturing sector, assisting them to meet the demands of the future. This allowed him to witness the impact that digital transformation can have on the wider social, economic and environmental context.



Caroline Tissot

COO INCLUSIVE GROWTH

After joining IDN in 2016 as a research intern for her MSc program in Globalization, Politics and Culture at the Norwegian University of Science and Technology (NTNU), Caroline is now in charge of developing the inclusion dimension of IDN's projects, both in general and specific projects that focus on social development. Always with a genuine concern for the individuals involved, she is aware of the broader systemic impacts foreign investments can have on local realities.

She holds a BA in International Relations from ESPM (Brazil) and has substantive experience in project creation, development, and management in the corporate and development sectors with an emphasis on international development and youth, continuously working with diverse teams in multinational organizations like Hyundai (India), AIESEC (Brazil) and PwC (Mexico).

# Network Development

Our global presence is further reinforced by visiting partners, participating in meetings, workshops, conventions, matchmaking and other events directly related to our business areas. IDN's team is always ready for productive interactions with people and institutions interested in cooperating to accelerate development through new and cleaner technologies.

Besides, we are aware that we can't go far in creating effective solutions for different regions without the local players, who are the most aware of the intrinsic aspect of their realities - and all their idiosyncrasies. Thus, bonding with different agents is a key element of our work, so that we can act together in creating a more sustainable future.

**We incentivize cooperation among our partners through matchmaking events. These are unique opportunities to find a supplier of that much needed new technology or to learn how another business tackled similar challenges.**



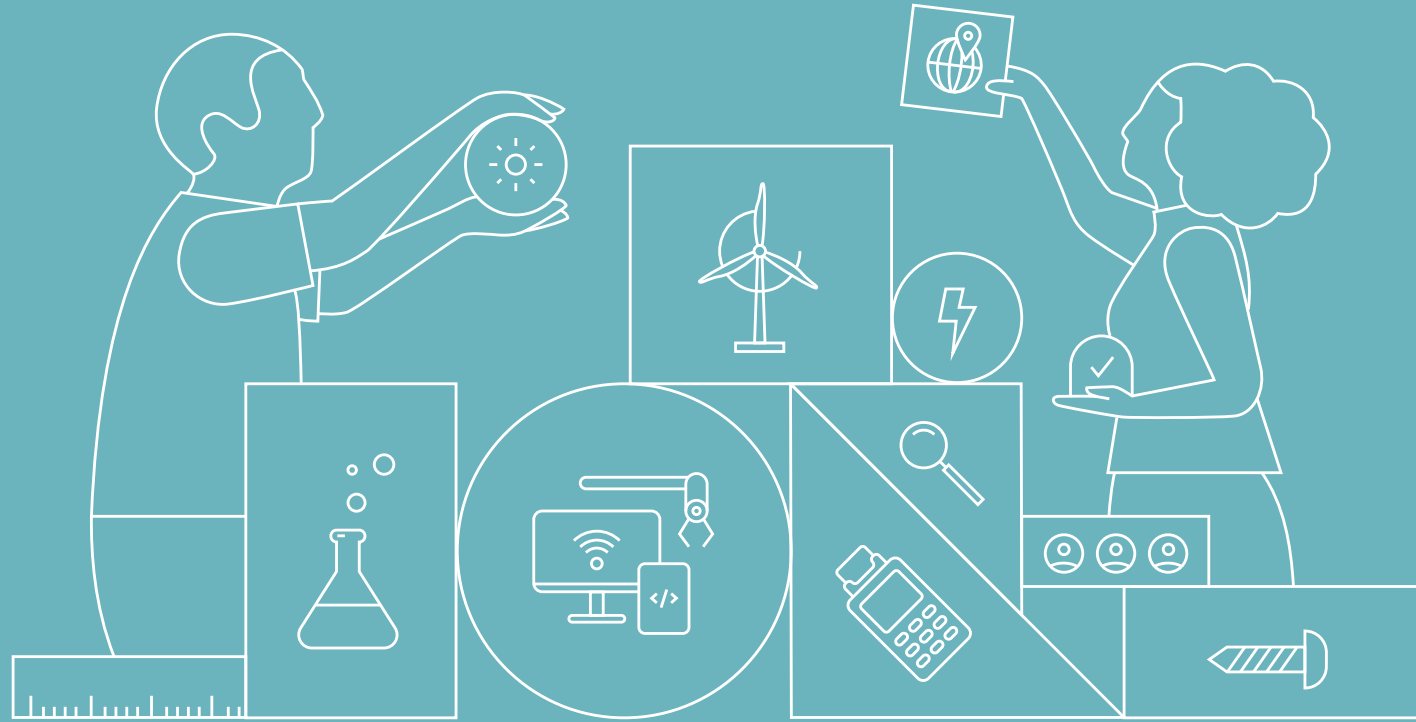
# 200

companies were  
matched for new  
business due to  
our initiatives

# 665

forums and  
events were part  
of our projects





# 1.390

professionals from  
diverse areas and  
levels contributed to  
our projects



Our partner network is made-out of incredible experts that made the last ten years more productive and fruitful. Here we portray some of the people that made it all happen.

**We couldn't achieve the results we did without the cooperation of serious and prestigious organizations.**

**Their committed work and support are considered an asset by us at IDN, and the positive impact generated through the projects is as much their accomplishment as ours.**

We have worked with more than

500

institutional partners

**CNCC**

Colombian-Norwegian  
Chamber of Commerce

**ECORYS**

Ecorys

**Iceland  
Liechtenstein  
Norway grants**

EEA Norway Grants

**siva**

Industrial Development  
Corporation of Norway

**Innovation  
Norway**

Innovation Norway

**IKADA**

Ikada Consulting

**KPMG**

KPMG Serbia

**National Chamber of  
Commerce in Poland**

National Chamber of  
Commerce in Poland

**NORSKOG**

NORSKOG

**Norad**

Norwegian Agency for  
Development Cooperation

**Norwegian-Bulgarian  
Business Group (NBBG)**

Norwegian-Bulgarian  
Business Group (NBBG)

**NIBIO**

Norwegian Institute of  
Bioeconomy Research

**Norwegian Ministry of  
Foreign Affairs**

Norwegian Ministry of  
Foreign Affairs

**NTNU**

Norwegian University of  
Science and Technology

**OECD**

Organisation for  
Economic Co-operation  
and Development

**OXFORD  
RESEARCH**

Oxford Research Group

**PROBOGOTA**

ProBogota

**SEED  
FORUM  
GLOBAL**

Seed Forum Global

**SINTEF**

SINTEF Foundation

**Technology University of  
Warsaw**

Technology University of  
Warsaw

**University of Maribor**

University of Maribor

**UNIVERSITAS PRESOVENSIS  
1997**

University of Presov

**V A T P**

Ventspils High  
Technology Park

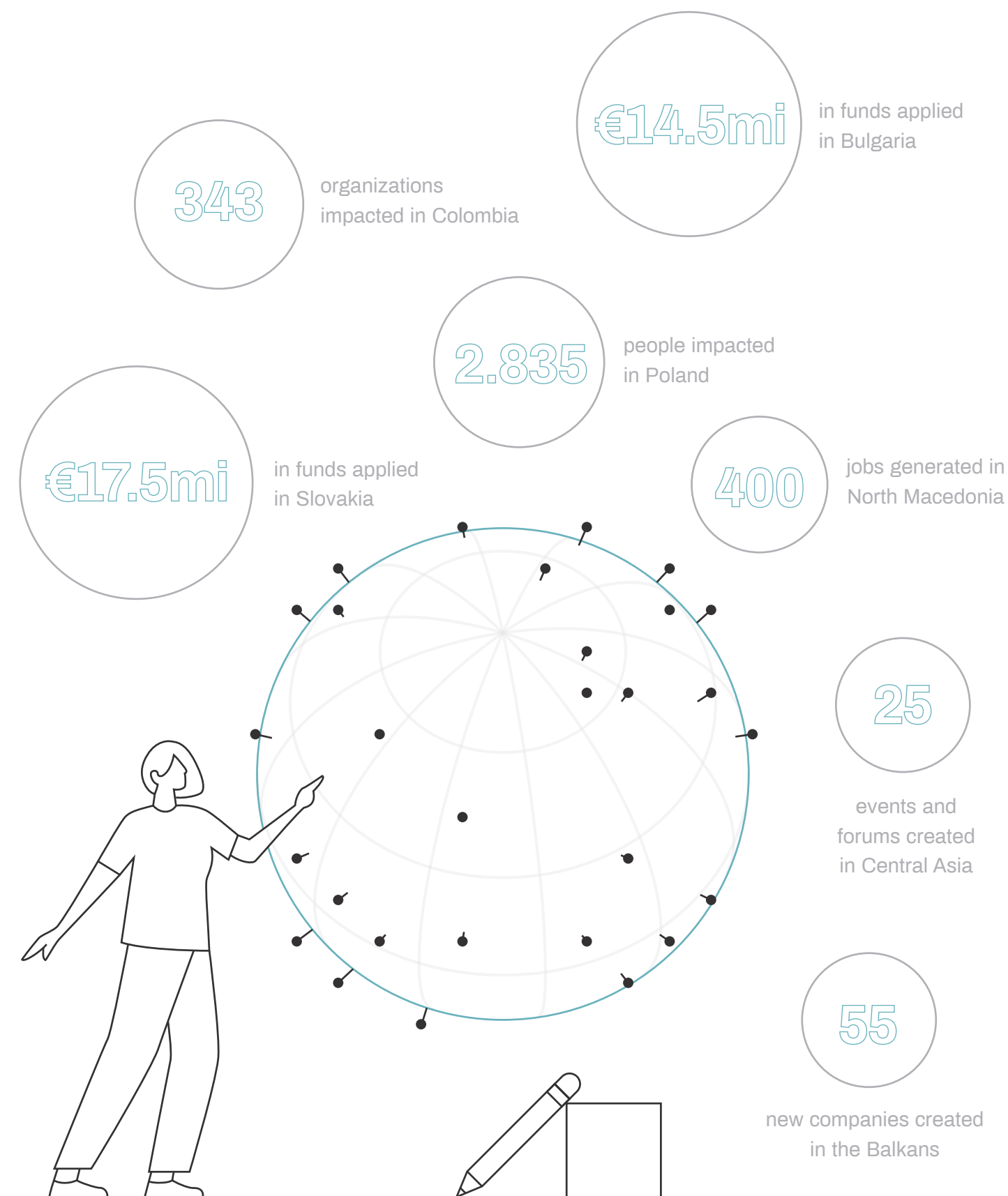
**wyg**

WYG

# Globally

Weaving a network of global connections is a means and an end for IDN. Bringing countries and cultures together has been an integral part of our activities throughout our history. In this timeframe, we have directed efforts from our team according to similarities in culture, approaching countries by valuing their perspectives and inputs to come-up with truly effective solutions.

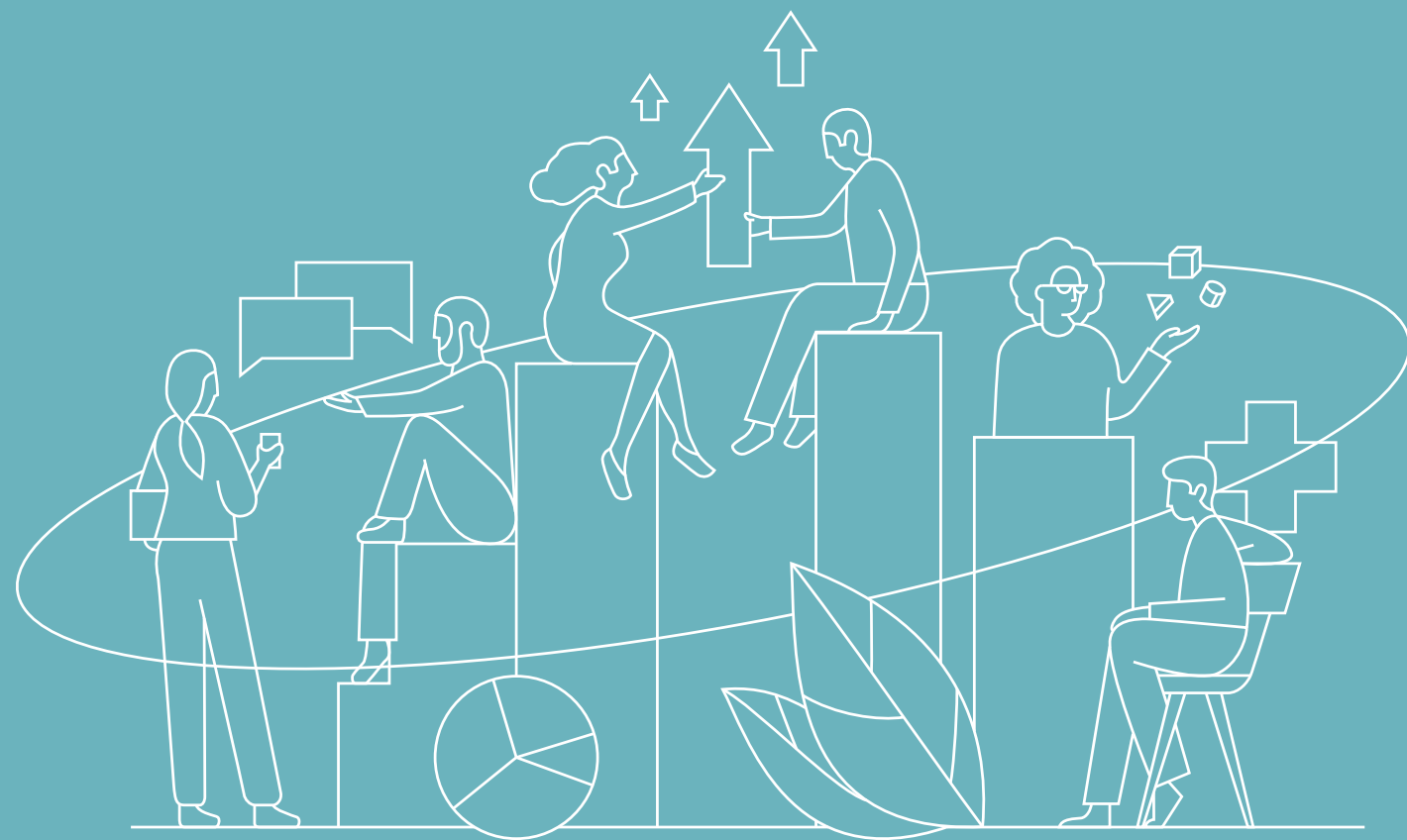
We also directed an attentive look to regions where we have ongoing projects to diagnose relevant development gaps that could be addressed with the help of our network's expertise. Overall, we have seen improvement in the local economies in which we took part, with countries gradually becoming more sustainable and competitive. This process is reinforced by multilateral initiatives, as well as by Norwegian grants and funds, who support the work we do.





# 21.695

people were positively impacted by our projects



This makes an average of 6 people for every day we have been in business

We are proud to look in retrospect and see the numbers we've accomplished. They are a testament for the benefits and possibilities international cooperation can bring, and also serve as an incentive for us to keep pushing forward.

# 861

**jobs created**

# 148

**innovations**

# 126

**new companies**

# 72

**new business models**



# Expansion across the years

2010	2011	2012	2013	2014	2016	2018	2019	2020
ALBANIA	AFGHANISTAN	CUBA	KAZAKHSTAN	BULGARIA	GEORGIA	COLOMBIA	PORTUGAL	ESTONIA
BOSNIA & HERZEGOVINA	KOSOVO	POLAND	TURKEY	HUNGARY	MOLDOVA	GREECE		
CROATIA	NORTH MACEDONIA	SOUTH AFRICA		LATVIA		ITALY		
SERBIA				LITHUANIA		NORWAY		
ROMANIA				SLOVAKIA				
UKRAINE								
UZBEKISTAN								

# for Sustainable Local Development

From the start of our activities in 2010, we have provided evaluations, assessments, feasibility studies, business partnering, technology transfer, and project management services to a wide range of clients across different fields, with the common goal of promoting sustainable local development.

As our project portfolio and network increased, we were able to reach new sectors, so a big part of our structural redesign from the past year was dedicated to shaping business areas that could cover all of our multidimensional efforts. In the following pages, we present the six business areas that came out of this process, and the main solutions we can provide under each one.



## Circular Economy



## Entrepreneurship



## Green Energy



## Manufacturing

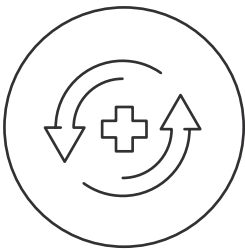


## SME Development



## Strategy & Policy





BUSINESS AREA

# Circular Economy

Looking beyond the current extractive and wasteful industrial model, a circular economy aims to redefine growth, focusing on positive society-wide benefits.

It entails gradually separating economic activity from the consumption of finite resources and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital.

## Solutions

Design for Closed-loop Production

Water Treatment and Reuse

Waste Management

Analysis and Consulting for Circular Production

## Featured projects

SELECT TO NAVIGATE

- Better Plastic Packaging ..... p. 56
- GaIN: Green Irrigation ..... p. 58
- Recycling Water from Stone Processing ..... p. 60
- A New Life to Used Tires ..... p. 62



BUSINESS AREA

# Entrepreneurship

The perspectives around work and job opportunities have drastically changed in recent decades. The pervasiveness of technology and the quick-pace of change in a country's economic configuration gave rise to the need to incorporate entrepreneurship skills both in young and older professionals. This can be seen as an answer to a looser social welfare fabric as well as a means to empowering individuals to withstand the growing instability.

## Solutions

Support for innovative and inclusive business models

Increased access to incubators and accelerators

Multilateral cooperation for sharing best practices

Workshops and training for future entrepreneurs

## Featured projects

SELECT TO NAVIGATE

- AYEN: Active Youth Entrepreneurship Network ..... p. 64
- BICTIA: Bogota ICT Incubator & Accelerator ..... p. 66
- UNINI ..... p. 68
- uBird ..... p. 70



BUSINESS AREA

# Green Energy

No path to the future can be built without overcoming our dependence on fossil fuels. There is an urgency to optimize energy consumption and to modernize systems so they can make the most of clean and renewable sources. This can be done by transferring technology for innovative and state-of-the-art solutions already available in different countries, which means achieving true sustainability through cooperation.

## Solutions

Environmental Technology Transfer

Energy Efficiency

Educational Activities for Best Sustainable Practices

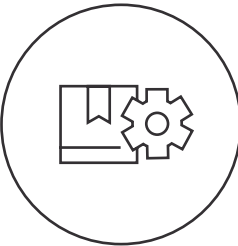
Innovative Fuel Solutions

Assessing and Implementing Renewable Energy Production

## Featured projects

SELECT TO NAVIGATE

- Energy Efficiency for Saveni City Buildings ..... p. 72
- Geothermal Energy for Straldzha ..... p. 74
- Green Energy Roundtable ..... p. 76
- POLNORECO ..... p. 78
- Solar Panel Production in Detention Facility ..... p. 80



BUSINESS AREA

# Manufacturing

The productive sector is in a special place to connect the current technological, environmental and social demands. Tomorrow’s manufacturers won’t be able to operate with the same resource intensity as past generations, and more than ever, we must find ways to remain competitive and sustainable. Incorporating new and more integrated solutions - notably regarding technology - can help manufacturers access new levels of efficiency as well as enabling more sustainable business models.

## Solutions

Digital Transformation

Assessing and Improving IT Infrastructure

Smart Factories and Industry 4.0

Automation and Predictive Maintenance

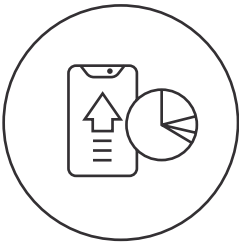
Innovative Business Models

Auditing and Optimizing Energy Use

## Featured projects

SELECT TO NAVIGATE

- BOGBI ..... p. 82
- CM4Smart ..... p. 84
- Greener Automotive Industry ..... p. 86
- Industry4SME ..... p. 88
- Optimizing the Textile Industry ..... p. 90



BUSINESS AREA

# SME Development

Small and medium-sized enterprises make crucial contributions to job creation and income generation: they account for two-thirds of all jobs worldwide, according to the International Labour Organization.

Projects in this area are invested in unlocking the potential of creating more and better jobs in small businesses, integrating different economic and social aspects for promoting large-scale growth.

## Solutions

- Business Partnering
- Technology transfer
- Assessment and Capacity Building
- Assistance to Government Programs
- Job Recovery in Disadvantaged Areas
- Access to New Markets

## Featured projects

SELECT TO NAVIGATE

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- Digitalizing Recruitment and Staffing ..... p. 94
- Learning for Industry 4.0 ..... p. 96
- Timbeter ..... p. 98



BUSINESS AREA

# Strategy & Policy

Different bodies work together to establish policies that are in the public interest, also keeping in trend with demographic, economic and environmental changes.

We advise public authorities and organizations in the fields of innovation, entrepreneurship, energy, waste management, and SME support to develop coherent and productive strategies and also evaluate the effectiveness of implemented public policies.

## Solutions

- Local, National and Regional Strategies for Sustainability
- Support in Achieving Program Goals
- Multilateral Forums for Cooperation
- Facilitating Knowledge and Technology Transfer
- Establishing Hubs for ICT Innovation

## Featured projects

SELECT TO NAVIGATE

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- MSODI: Mazovian Network for Innovation Development ..... p. 104





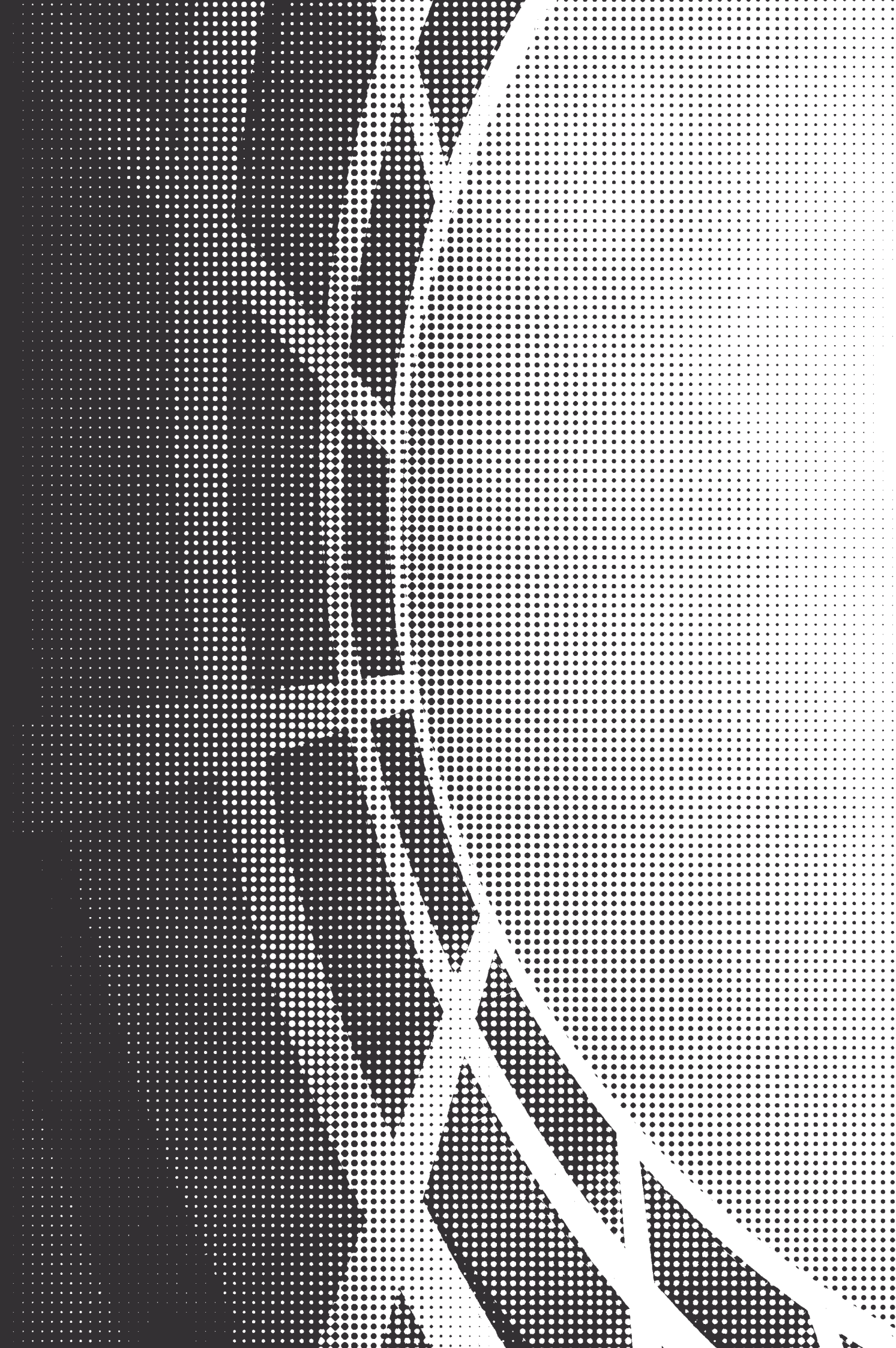
# Selected Projects

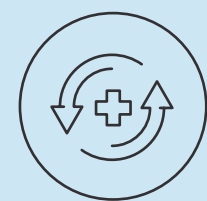
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# 03

To fully grasp what IDN is all about, one needs to read about our projects. They are at the center of what we do and are the means with which we can accomplish our purpose. This session presents featured projects in each business area with their respective stories.

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# Better Plastic Packaging

FUNDING BY	EEA NORWAY GRANTS	PERIOD	MAY 2019 - SEP 2020
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COUNTRIES	PROJECT PARTNERS
Romania	<ul style="list-style-type: none"><li>• Greiner Packaging</li><li>• SINTEF Foundation</li></ul>

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IMAGE CREDITS GREINER PACKAGING

## Developing environmentally friendly packaging products through new and greener technology.

The packaging industry supports the logistics - from factory to shelf - that help sustain our contemporary everyday life around the world. The ominous presence of all types of packaging reflects the intensive use of materials necessary to cover all their uses, which amounts to a considerable environmental impact. Greiner Packaging is a subdivision of Greiner AG in Romania, and is the market leader for thermoformed packaging - a manufacturing process where a plastic sheet is heated to a pliable forming temperature, formed to a specific shape in a mold, and trimmed to create a usable product.

The company wants to invest in green innovation by understanding the environmental impacts and resource consumption profiles of different packaging options and installing a new machine that offers a new inline thermoforming solution that allows for the use of different materials.

The main objective of the project is to give the company a competitive edge on the plastic packaging market, by implementing new green innovative products, improving the environmental impact while ensuring sustainable growth.

In collaboration with SINTEF, the project will continue to investigate alternative materials for Greiner’s products. We will also study scenarios and solutions to test and implement a new combination of elements that uses more recycled material, which in turn helps to reduce their CO<sub>2</sub> emission. IDN provides assistance to the project with three main bilateral components:

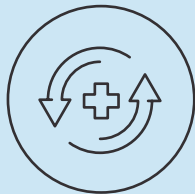
- » Product Life Cycle Assessment
- » Sustainable Strategy & Branding
- » Dissemination Activities

These undertakings cover a wide range of analysis that can help Greiner Packaging understand, improve and communicate how they manage their environmental impact.



Greiner Packaging is a big player in the packaging sector, with multiple facilities around the world. Our collaboration in Romania is a part of a larger initiative to promote sustainability within the entire company.

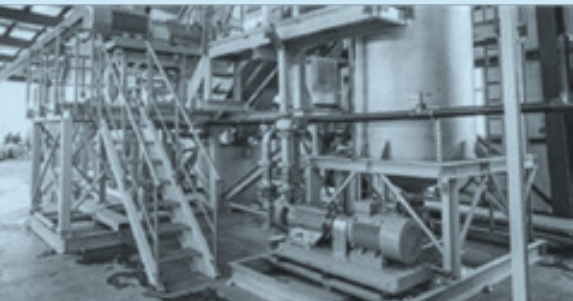
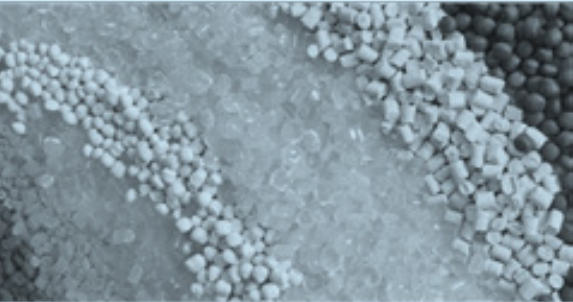




# GaIN

## GREEN IRRIGATION

FUNDING BY	EEA NORWAY GRANTS	PERIOD	JUN 2018 - MAY 2021
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COUNTRIES	PROJECT PARTNERS
Bulgaria	<ul style="list-style-type: none"><li>Kaskada</li></ul>

### Increasing the competitiveness of Bulgarian enterprises through green industry innovation.

Despite the changes to the Bulgarian economic model in the last decades, agriculture still plays an important role in the country’s activities. The country has seen smaller properties give place to larger and more productive ones, and even though the relative contribution of the sector to the country’s GDP has decreased, there is a larger business environment covering the food value chain which has produced significant results.

A next step for this industry is to achieve new degrees of competitiveness, both to boost the value added to the domestic production and to even the country’s condition to the rest of the EU. Investing in green technologies, products and services is a way to achieve this since it improves resource use efficiency as well as reduces the impacts on the environment and on human health.

The main purpose of this EEA Grants-funded project is to increase the competitiveness of Kaskada - a Bulgarian business that offers a wide range of solutions in the world of plastics. To accomplish this, new production technologies will be purchased and installed in Kaskada, so they can begin mass production of fully recycled irrigation pipes.

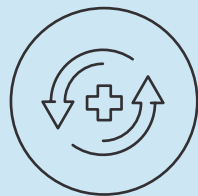
The final product will be a more efficient irrigation drip tape, a device with various applications in agriculture in which 80% of the normally used prime-grade high-density polyethylene (HDPE) is replaced by a recycled polymer compound. The material for this innovative mixture will be collected from irrigation pipes and other HDPE waste from tubes, barrels, and canisters. GaIN contributes to circular economy models by:

- » Extending existing recycling process of used irrigation pipes and introducing the new irrigation drip tape extrusion line;
- » Improving material efficiency by using a new material for production of polymer irrigation pipes that is a result of 80% recycled residue;
- » Increasing the reuse of recycled materials by reorganizing the production and operational processes in Kaskada.

The project also contributes for larger, more strategic outcomes such as:

- » Increased competitiveness of the project partner and their business area;
- » Enhanced business cooperation between Bulgaria and Norway;
- » Reduction of economic disparities in the European Economic Area;
- » Increase value creation and sustainable growth in the Bulgarian business sector.





# Recycling Water from Stone Processing

FUNDING BY

EEA NORWAY GRANTS

PERIOD

MAY 2014 - SEP 2015



COUNTRIES

PROJECT PARTNERS

Bulgaria

- Cherkezov OOD

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IMAGE CREDITS

CHERKEZOV, IDN

## Introducing circular principles as part of a Green Industry Innovation project in a stone processing factory.

Cherkezov OOD is a Bulgarian company that has been working with the processing of marble, limestone and granite since 2005. This type of activity makes intensive use of water, which then becomes saturated with dust and residues from the process and is readily discarded into the sewage system. This project introduced water recycling into the company's production, a measure that allows for the reutilization of water and the improvement of the company's green performance.

The investment done in the project covered the installation of a wastewater treatment plant which reduced water consumption from 50.000m<sup>3</sup> to 5.000m<sup>3</sup>. In parallel, a new polishing line was installed in the factory to increase sales and business opportunities.

IDN provided expert knowledge to the project, support in designing terms of reference, and advising the production layout and operation. Most of all we helped to develop possible solutions to efficiently manage the waste and sludge - the original biproduct of the operation.



Aside from its standard business activities, Cherkezov is an active community stakeholder, working closely with the Strumyani Municipality, the Blagoevgrad Municipality (the capital of the south-west region) and the Blagoevgrad Chamber of Commerce.

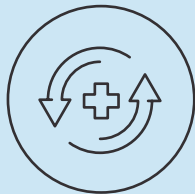
Due to the relevance of the project for the regional economic and environmental development, the opening of the new water treatment plant counted with the presence of the Mayor of Strumyani, Mr. Emil Iliev, Norway's ambassador to Bulgaria, Guro Katharina Vikør, and representatives from Innovation Norway, the program operator, as well as local media and partners of the project.



Cutting the ribbon in the opening of the new water treatment plant.







# A New Life to Used Tires

FUNDING BY

EEA NORWAY GRANTS

PERIOD

JUN 2015 - APR 2017



COUNTRIES

Poland

PROJECT PARTNERS

- Vinderen Group Ltd

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IMAGE CREDITS

DAVID EDELSTEIN, VINDEREN GROUP

## Reintroducing tire residues into production cycles.

Used tires are not biodegradable and, due to their size, make any storage attempt more difficult. Occupying large spaces, they become a serious and growing ecological problem. Every year about 3.2 million tonnes of used tires are generated in the region comprising the Euro Zone, Norway and Switzerland. Poland alone generates 190 thousand tonnes of this type of residue annually.

To tackle a part of this issue, this project partners Vinderen and IDN to reintroduce used tires in the production cycle, so they can become new materials. The initiative is supported mostly by the partner's facility in Sławno – for purchase, delivery and a new production line necessary to start-up production of the Refuse Derived Fuel (RDF) and improved steel cord and briquetting. The target group for the new material are suppliers of used tires and new customers. Indirectly, this initiative will also benefit partners in Scandinavian markets and environmental stakeholders around the region.

The objective of this project is to introduce a technology that makes complete use of old tires to create fuel and improve steel cords.

This contributes to reducing the negative impact of used tires on the environment. Cleaning and briquetting of the steel cord from the tires, obtained as the result of the mechanical recycling, also improves distribution time, by delivering it directly to the final recipient. IDN's task is focused on business development – market research and CSR strategy developed for the company needs.

The output of the project is, mainly, creating business opportunities for greening the European economy, which will be achieved by extending the existing recycling process of used tires and introducing a new product for the company product (RDF) and improving an existing product (steel cord).





# AYEN

ACTIVE YOUTH  
ENTREPRENEURSHIP NETWORK

FUNDING BY

EEA NORWAY GRANTS

PERIOD

JUN 2018 - MAY 2021



## COUNTRIES

## PROJECT PARTNERS

Bulgaria	• Hellenic Management Association – HMA
Croatia	• TecnoPolis Science and Technology Park
Greece	• Regional Agency for Entrepreneurship and Innovations Varna
Italy	• Cluster for Eco-Social Innovation and Development - CEDRA Split
Romania	• IPA – R&D Engineering and Manufacturing for Automation Equipment and Systems

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## Connecting and supporting young people to become entrepreneurs in Southeastern Europe.

The need to motivate and support young people classified as NEETs (youth Not in Education, Employment or Training) to start their own business has brought together six organizations from across Europe under this three-year project.

Many young people that are nowadays classified as NEETs have the necessary education and skills to contribute to the development of their societies, but, according to the European Commission, are often disconnected from the demand side (economy). The objective of project AYEN was created to build a transnational entrepreneurial network that facilitates NEETs primarily in the age group of 25-29 to see needs/opportunities within their community that can be developed into new businesses and jobs. Through a comprehensive set of innovative tools, the partners from five Southeastern European countries made use and strengthened existing regional entrepreneurial communities to foster sustainable job creation.

The project's main output is a strengthened regional entrepreneurial support communities with integrated support schemes for NEETs with entrepreneurship potential. This is achieved through 300 empowered former NEET youth establishing 150 startups and generating 600 new jobs across the five countries where AYEN takes place.

AYEN aims to develop entrepreneurial skills through innovative and exploratory activities:

- 1 • Recruit, include and integrate NEETs into existing entrepreneurial environments;
- 2 • Assist in the development of individual and team business ideas, based on local needs, opportunities and resources;
- 3 • Provide access to skills and markets through international study visits, local and transnational internships;
- 4 • Engage experienced entrepreneurs and retired experts in mentoring;
- 5 • Use and test digital tools in daily operations, networking and as input to product/service development and internal supply/demand.
- 6 • Establishment of a digital exploratory gamification motivation system and Local Economy system to stimulate oriented local business creation.

IDN provides extensive knowledge and experience on entrepreneurship, management, and innovation from their transnational network, which benefits the startups participating in the AYEN project. The team also advises on all aspects of the project, serving as a sparring partner for the network, contributing especially to:

- » Capacity Building and Digitalization: IDN was an important part of the training of key personnel in the project, contributing to quality control throughout the partnership;
- » Access to finance and internationalization;
- » Implementing CSR and Green Business; Development standards among all startups in the AYEN project;
- » Accessing network and know-how including matchmaking with business partners in Norway.





# BICTIA

BOGOTA ICT INCUBATOR & ACCELERATOR

FUNDING BY	NORAD	PERIOD	2018 - 2020
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COUNTRIES	PROJECT PARTNERS
Colombia	<ul style="list-style-type: none"><li>ProBogota</li><li>Oslo International Hub</li><li>McKinsey &amp; Company</li></ul>

## Stimulating Colombian entrepreneurship with international best practices.

Entrepreneurship in Colombia is seen as an economic development driver. However, access to financing, training, networking and other common characteristics of a thriving ecosystem are still either missing or in their initial stages. The entrepreneurship and innovation ecosystem is beginning to take shape across the country, primarily in Bogota, but it is still far from its US and European counterparts – especially when it comes to growing out of the home country. Having access to international best practices, knowledge and successful experiences could provide an important boost to accelerate and optimize its development.

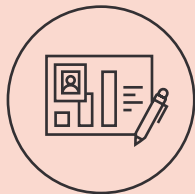
In accomplishing ProBogota’s mandate of contributing to transforming the capital into a better place to live, work and invest, economic and social development is a key strategic focus. We truly believe that an effective way to boost job creation and income generation is through promoting entrepreneurship and strengthening SMEs in specific sectors already defined as a strategic focus for the city and the region.

**Bogota ICT Incubator & Accelerator (BICTIA)** is dedicated to strengthening and providing support along its value chain, to ICT start-ups and SMEs mainly focused on the B2B market; building capabilities to deliver affordable and pertinent high impact ICT products and services to SMEs on the five specialization areas defined by Bogota’s Smart Specialization Strategy.

IDN’s role in the project is to assist ProBogota in Project Management including monitoring and reporting. Furthermore, we assist startups in improving their place in the ICT Value Chain and target business opportunities in other sectors. An incubator and accelerator to converge technology, new businesses and venture capital for a new digital economy. BICTIA’s portfolio has been structured over three main intervention axis:

- 1• Knowledge and capabilities building to strengthen ICT start-ups and existing SMEs to deliver affordable and pertinent high impact ICT products and services for SMEs.
- 2• Matchmaking understood as providing scenarios, platforms, and opportunities to conduct strategic goal-oriented networking covering financing, market access and other specific resources needed.
- 3• Funding, through the structuring and operation of a financing vehicle (structure and terms to be defined during project execution) able to provide seed capital to specific promising entrepreneurs identified as high potentials.

The project has received USD1.9 million to support 300 startups and entrepreneurs, train 600 people with digital skills and to invest seed capital into 25 innovating businesses from the region.



# uBird

FUNDING BY	EEA NORWAY GRANTS	PERIOD	NOV 2020 - SET 2023
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COUNTRIES	PROJECT PARTNERS
Estonia	<ul style="list-style-type: none"><li>• Hepta Airborne</li><li>• IDN / ICB Digital</li></ul>

## Improving power grid maintenance with drones, sensors and a digital twin for an autonomous power-line inspection.

New technologies are providing ways to ensure the faultless work of power grids. Today, many administrations already have digital twins to keep up with operational metrics and to simulate power losses. Such endeavors make intensive use of data, which can be expensive to store and analyze, as its quantity increases. As a consequence, much of the raw data collected during inspections is deleted after it is used. Hepta Airborne believes that eliminating raw data is a waste of the hard work put into harvesting it. By continuing to do this, we are neglecting potentially useful information that could provide rich insights about how to keep our power-lines safe and functioning.

To address this issue, Hepta is counting on the partnership with IDN and funding from EEA Norway Grants to develop uBird: the first end-to-end power line inspection technology. The solution uses high-end technologies to automate data analysis of power-lines, as well as enables digitalization of the whole grid infrastructure on a large scale. It consists of the following modules:

- » Real-time machine learning capability for sensors;
- » Autonomous data collection and automated drone post-flight data analysis;
- » Big data platform processing;
- » Digital Twin for Maintenance.

The company's technology has proven to detect anomalies not visible by any other means and to track and pinpoint how defects develop over time. Thus, it is expected that the implementation of uBird will help to move towards more proactive maintenance practices, which will save millions of euros in repair costs for an average client.

**A central element of the project is to increase the capacity of data processing, which will increase automated analysis from 30% to 90% of the data collected during inspection. Furthermore, a digital twin will utilize and merge, into one coherent environment, the diverse data streams.**

- The project consists of five interlinked tasks:
- 1 • Research and analysis for business validation: completing a detailed analysis in close cooperation with end-users;
  - 2 • Fine-tuning core technologies to create robust and high-performance sensors;
  - 3 • Progressing the current data processing minimum viable product into a fully market-ready and highly scalable solution;
  - 4 • Developing the prototype of the digital twin framework;
  - 5 • Piloting the solution and new business model with potential direct clients and partners.

This cooperation brings about new ways to see and analyze crucial infrastructure. It is putting the most advanced technologies to work and innovating for the improvement of services that will have direct positive effects for individuals and governments.





# UNINI

FUNDING BY	EEA NORWAY GRANTS	PERIOD	NOV 2020 - SET 2023
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COUNTRIES	PROJECT PARTNERS
Ukraine	<ul style="list-style-type: none"><li>Seed Forum</li></ul>

## Reducing the brain-drain from Ukraine by stimulating entrepreneurship and innovation.

It was identified that Ukraine's economy could profit from the creation of value-added products to slow down the rapid brain drain – which significantly obstructs the social and economic development of the country. Such a leap forward could lead to an increase in employment rates, including among IDPs and minority groups, along with the development of a more democratic and economically sustainable society.

The main purpose of the UNINI project is to open the way for competence transfer from the Norwegian Innovation System to institutional capacity building for the Ukrainian Innovation System. This comprehends a series of priorities identified by the Norwegian team that goes from private sector development, to gender equality in business and good governance. The final aim is to develop and support SMEs and start-ups with innovative business ideas and investment opportunities.

The project's main target groups are:

- » Newly started companies with the need to get connected to professional networks, potential partners, markets, investors;
- » Entrepreneurs and SMEs with ambitions of starting or developing commercial technology companies;
- » Established SMEs with ambition for the internationalisation of business activities.

- » Norwegian Innovation Network players interested in the Ukrainian innovation potential and partnership opportunities;
- » Norwegian and international private sector players interested in cooperation opportunities with Ukrainian private sector players;
- » Ukrainian state/municipal institutions and chambers responsible for supporting innovation and SMEs on the regional level;
- » Ukrainian professionals with the ambition to lead Innovation infrastructure – future iHUBs and Technology Park managers.

UNINI accomplished the development of a vibrant startup ecosystem. This new environment brought a heightened level of business and management skills among young entrepreneurs, a strong collaborative ICT and tech community and a significant growth in technology based SMEs. The UNINI project also paid great attention to equal opportunities, implementing and promoting social, economic and gender inclusion within the entrepreneurial ecosystem. In numbers:

- » One fully operational iHUB in Kyiv which expand its activities and capacities into Techno-Park;
- » Three new regional iHUBs opened in Chernihiv, Lviv and Vinnytsia;
- » 371 residents across iHUB network;
- » 148 resident and alumni startup companies;
- » 362 events held across iHUB network;
- » 4,663 unique events attendees across iHUB network;
- » 15,000+ Facebook community members;
- » 8,000+ Email subscribers.



# Energy Efficiency for Saveni City Buildings

FUNDING BY	EEA NORWAY GRANTS	PERIOD	MAR 2019 - JUN 2020
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COUNTRIES	PROJECT PARTNERS
Romania	<ul style="list-style-type: none"><li>Saveni Municipality</li></ul>

## Implementing energy efficiency measures in public buildings to reduce greenhouse emissions.

Public buildings are not always perceived as the standard for innovation or efficiency. But, in the current fight against global warming, governments have a central role to drive their constituencies forward in adopting measures that will reduce greenhouse emissions. However a small part of what is needed to accomplish the international agreements this represents, it holds great symbolic meaning, especially since it brings concrete measures to schools, where new generations will learn to uphold the efforts.

In this project, IDN and the Saveni City administration are partnering to implement efficiency measures to four buildings under city hall administration: the City Hall building itself, the Petricani Local Public School, the Bodeasca Public School and the Public Library.

The project develops new knowledge and sets best practices which are summarized in a report with recommendations for the replication of such initiatives. The main role of IDN is to advise on the best technical solutions, implementation and maintenance of the new technology and measures.

The project assembles a team of experts from the areas of green energy, climate and environment, building temperature efficiency, and technical feasibility for energy efficiency measures. Together, they will focus on quality assurance, and perform a set of activities around three main tasks:

- » Joint elaboration of the technical terms of reference, based on experiences both in Norway and Eastern Europe;
- » Development of the Quality Assurance for Commissioning and Maintenance Plan, focused on the best and most cost-effective solutions;
- » Development of and Energy Investment Plan for 2021 - 2027 based on local planning and experiences in Norway.

To increase cooperation and further develop bilateral relations, three workshops will be organized in Saveni. This local presence and exchange is the type of kick-off this long-term initiative needs, since it aims to be an inflection point in how the whole municipality deals with its energy efficiency initiatives and contributes to the larger efforts in mitigating global warming.





# Geothermal Energy for Straldzha Municipality

FUNDING BY	EEA NORWAY GRANTS	PERIOD	MAR 2019 - JUN 2020
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COUNTRIES	PROJECT PARTNERS
Bulgaria	<ul style="list-style-type: none"><li>Straldzha Municipality</li></ul>

## Achieving integrated local development and increased attractiveness of the region.

The main goal of the project is to achieve sustainable, integrated local development and increased attractiveness of the region. This was done by improving the conditions in the municipality's energy grid, comprising the Municipal and State Buildings as well as the heating in local districts. An international team put into operation a centralized heating system using two inactive geothermal wells – a renewable energy source and an existing drilling operation.

IDN organised a three day knowledge transfer visit to Norway and provided experts on local energy planning for an energy planning conference in Bulgaria organised by Straldzha municipality. The full outcomes from the project were:

- » Successful partnership between Straldzha municipality and IDN;
- » Carried out public procurement procedures and signed contracts with the selected contractors/
- » Constructed pumping station;
- » Delivered and installed heat exchangers;
- » Carried out joint training seminar in Bulgaria for 25 participants;
- » Five representatives of the applicant informed of good practices on the territory of the partner country;
- » Visibility and publicity measures applied;
- » Reduced exhaust CO<sub>2</sub> emissions by 306 tonnes/year.

As part of the knowledge transfer component in the project, a delegation from the Straldzha municipality visited Trondheim in September of 2016. During the visit, meetings were had with the Deputy Mayor of Stjørdal Municipality, Ole Hermod Sandvik, and the head of the technical department of the SARA-sewage facility, Arild Moen.

The visitors also got to experience a demonstration of energy efficiency and the ENOCO-control system in the city's Town Hall with advisor Tore Hagnes. Other points of interest during the stay were the Stjørdal District Heating facility (biofuel), and SINTEF, where they met geothermal energy researcher Marit Mazzetti.



# Green Energy Roundtable

FUNDING BY	NATIONAL FUNDS	PERIOD	JUN 2015 - APR 2017
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COUNTRIES	PROJECT PARTNERS
Norway	• Institute Innovative Economy (IIG - Instytut Innowacyjna Gospodarka)
Poland	

## Fostering discussions and spreading knowledge about energy efficiency.

Even though there is widespread consensus on the urgency of adopting more efficient energy practices, it remains a challenge for European companies and governments. While the first struggle with their actual implementation, the second are lagging in systemic policies to both incentivize and regulate such practices. In light of this discrepancy, the National Environment and Water Management Fund - the most relevant public body working with environmental protection in the country - and the Fund for Bilateral Relations under the Norwegian Financial Mechanism supported the Institute Innovative Economy (IEE) and International Development Norway (IDN) to promote Polish-Norwegian Roundtables.

Making use of the partner's network and the credibility of the event, organizers were able to gather very important stakeholders working directly with energy efficiency, both on the market and regulation sides, to discuss and promote best practices in both countries. Their exchange centered around two main objectives:

- » To establish and strengthen cooperation with public institutions and agencies working with energy efficiency;
- » To share experiences and possibly influence system practices supporting energy efficiency, program organizations, and funding directions

The project received, from the Polish side, representatives from the Ministry of Environment, the Ministry of Energy, the Energy Regulation Office, the Chamber of Industrial Energy and

Energy Receivers, as well as energy producers, like Tauron, Polska Energia, PGNIG, Energa, Enea, the Energy Market Agency, the Institute for Renewable Energy, the National Agency of Energy Preservation, and the relevant energy chambers.

On the Norwegian side, the roundtable gathered representatives from the Norwegian Water Resource and Energy Directorate (NVE), the Norwegian Environment Agency, ENOVA, the Centre for Sustainable Energy Studies (CenSES), Innovation Norway, the Norwegian Research Council, STATKRAFT, STATNETT, NORDPOOL, NCE Smart Energy Markets, the Norwegian Smart Grid Centre and the Smart Grid Services Cluster.

The main issues discussed during the two-day meeting were:

- » Effective resource management;
- » Implementation of new technologies;
- » Development of dispersed energy;
- » Operational and management practices on a system level;
- » Policies and regulations and finally forthcoming challenges in the Polish energy system.

The roundtable left a strong impression on participants, with hope and a clearer vision for a greener future among the main takeaways. Despite the many differences between Poland and Norway, it is clear that cooperation opens the path for better strategies. By exchanging real-life experiences and looking at the inner workings of the mechanisms behind a transition the green energy, governments and companies realize they have the ability to take action towards a more sustainable future.





# POLNORECO

FUNDING BY	EEA NORWAY GRANTS	PERIOD	MAR 2016 - OCT 2017
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COUNTRIES	PROJECT PARTNERS
Norway	• Polish Chamber of Commerce
Poland	• Chamber of Commerce and Industry in Bialystok
	• Regional Chamber of Commerce in Lublin
	• Kabo
	• EDBAK

← BACK TO CONTENTS	IMAGE CREDITS	POLNORECO PROJECT, IDN, LUBLIN SCIENCE & TECHNOLOGY PARK
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## The Polish-Norwegian cooperation for environmentally friendly and innovative solutions is helping SMES implement better practices for the long-term.

Energy efficiency and sustainable resources management are critical factors for a competitive industry in Europe. Poland is still facing challenges in that aspect and Polish SMEs somewhat struggle to introduce good practices and solutions to implement sustainable energy management in their businesses. Apart from targets set up by European Union, energy efficiency is a vivid and important topic for many of small medium size businesses all over Poland. This specific project is addressed to SMEs in Eastern Poland – Podlaskie and Lubelskie regions.

The solution proposed for the project consisted of:

- » Strengthening Norwegian-Polish cooperation and the exchange of know-how and technologies.
- » Increasing the energy efficiency of SME and more effective management of resources.
- » Developing sustainable solutions in energy efficiency for participating SMEs.
- » Sharing bilateral knowledge and experience to support companies.
- » Promoting best practices in energy efficiency both in Poland and in Norway.

The activities performed during the project were:

- » Information campaign and recruitment of participants of the project
- » Cooperation with regional chambers of commerce, dedicated mailing, social and branch media, newsletter
- » Implementation of 2 pilot innovative projects in Lubelskie and Podlaskie Voivodeship – 2 audits, 2 reports, 3 workshops
- » Popularization of environmental innovation
- » Study visit in Norway, 3 conferences, web-based platform
- » Educational component
- » 13 seminars in Poland, e-education

IDN was responsible for:

- » Delivering innovation and competence building workshops based on innovation in network methodology;
- » Providing expertise to pilot company projects aiming to strengthen energy efficiency;
- » Organisation of an intense study tour for Polish companies to present Norwegian best practices in energy efficiency in SMEs;
- » Supporting PCC in promotional activities and project management.



# Solar Panel Production in Detention Facility

FUNDING BY	EEA NORWAY GRANTS	PERIOD	MAY 2014 - SEP 2015
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COUNTRIES	PROJECT PARTNERS
Bulgaria	<ul style="list-style-type: none"><li>Sofia Prison</li></ul>

## Developing skills and helping the environment with a green production facility inside Bulgaria’s largest prison.

The prisoners now get valuable training producing solar panel collectors and water heaters. The purpose of the project is setting up a new “green” workshop in place of detention in Sofia for production of solar panel collectors and water heaters for environmentally friendly manufacturing of heat power for heating and hot water. The usage of solar panel collectors reduces the electricity cost of households and industrial manufacturers, turning the sun energy into heating power. The project was funded by Green Industry Innovation Programme in Bulgaria and covered adaptation of the building and provided equipment in order to set up a new “green” workshop in place of detention in Sofia for production of solar panel collectors – black, selective and vacuum-tubular and water heaters for environmentally friendly manufacturing of heat power for heating and hot water.

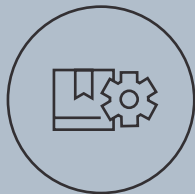
Main activities of the project included the construction and renovation works in the production hall; development and improvement of manufacturing units (workshops) in places of detention and their equipment with security and technical facilities, construction; delivery of the necessary equipment for the production of water heaters and solar panel collectors; prisoners are occupied in production activities in the following fields and respective workshops: Construction/ Repairs / Livestock and crop / Metallurgy / Furniture manufacture / Clothing manufacture / Production of PVC window frames / Woodworking / Ceramic manufacture / Industrial services.

IDN provided consultancy services and was involved in delivering expertise on equipment and design of the production workshop as well as delivering expertise on EU regulations regarding working conditions and environmental impact. We also contributed to the project with providing training, know-how and best practices. The results of the project could be summarized as follows:

- » Modernizing of the production hall for solar panel collectors in place of detention in Sofia and purchase of new energy efficient equipment. The workshop is equipped according to the recent environmental standards and ecological parameters. The production process is based on the principles of efficiency, recycling and almost no waste.
- » 130 prisoners have been trained to work with the specific production equipment.
- » Application for registering a trademark (SINOX) has been submitted by the Project Promoter for the new product, based on the Law on patterns and utility models registration.
- » Guide for “best practices” in the field of environmentally friendly technologies and solutions has been developed.

The project is innovative at the company level – it is a new green production process that has not only economic, but social impact (new skills for future professional realization of prisoners, low costs and bills for customers) as well as environmental impact (encouraging the use of alternative energy sources).





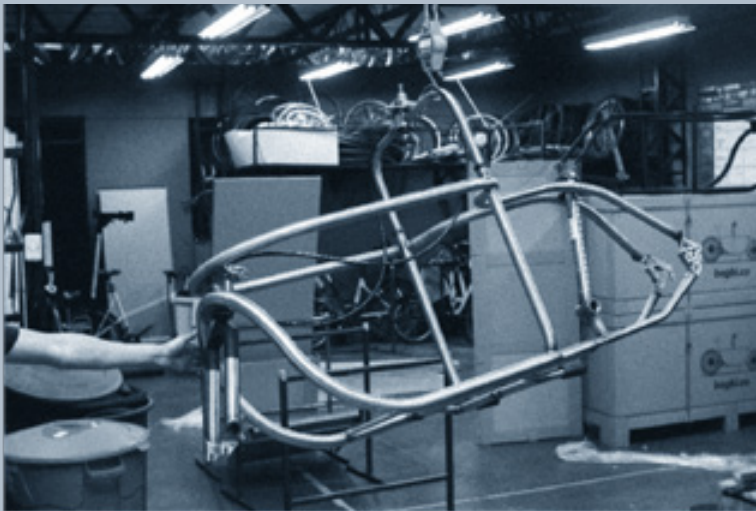
# BOGBI

FUNDING BY

INNOVATION NORWAY

PERIOD

FEB 2018 - APR 2018



COUNTRIES	PROJECT PARTNERS
Colombia	<ul style="list-style-type: none"><li>Mejor en Bici</li><li>Norwegian Refugee Council - NRC</li><li>Servicio Nacional de Aprendizaje - SENA</li></ul>

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IMAGE CREDITS

BOGBI PROJECT

## A multidimensional solution for urban mobility, social inclusion, and economic development.

Cities represent 80% of the world's CO<sub>2</sub> emissions and, in 2016, more than 5.5 million people died from air pollution-related diseases. All the while, Colombia has initiated a peace process after years of civil war, where large groups of young people immediately need education and work experience to be integrated into working life. With the rise of e-commerce, consumer preferences have grown increasingly important in the formerly business-oriented parcel-delivery market. Large e-commerce players, as well as various startups, have identified last-mile services as a key differentiator.

Bogota is the perfect testing ground for the development of new technologies for last-mile. With a large population and already a mature market for home delivery, the market is mature enough to receive new services and provide valuable feedback for a feasibility study. By developing the product and services on the ground in Bogota, we can adjust the products rapidly, and at the same time provide important vocational training- what provides us with important feedback.

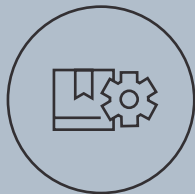
In close cooperation between Norwegian and Colombian competence in technology, design, and industrial production, IDN and its partners developed a local business concept for the use of bicycles in green urban transport solutions worldwide, all integrated with a vocational training component. This is done by Bogbi and Mejor en Bici (MEB) as experts on bicycle logistics and production of urban cargo bikes and IDN as a Norwegian expert on business development and upscaling with social impact. The long-term aim is to create a business model that enables partners in other developing countries to produce cargo bikes and create local urban logistics services.

In collaboration with the Refugee Council, Bogbi and MEB offers vocational training for intermarried refugees and demobilized guerrilla members as a component of a major reintegration program. Young people are trained to become highly qualified bicycle mechanics and bicycle contractors in a strongly expanding market in Bogota and Colombia. Vocational training is conducted in cooperation with the state agency for vocational training SENA. Improving this vocational training will be one of the most important components of the main project.

Developing green mobility products with integrated technology to promote environmentally friendly and efficient transport solutions, as well as offering vocational training will contribute to sustainable development in Colombia and globally, as well as the development of innovative products for smart cities with Norwegian expertise and design. We included one test pilot with the largest Supermarket chain Exito – group in Bogota. This requires a small investment for personnel to conduct the study and some physical investments in software and physical infrastructure. We are also exploring how the products and experience can be amplified to other countries in the region and other countries on a long-term basis.

By combining physical bike production and vocational training we believe the two components will mutually strengthen each other in a project that contributes both to smart logistics solutions and bike production. We would like to use the development of technology to strengthen the market position of the other products, as well as developing a service that can be easily adapted globally.





# CM4Smart

FUNDING BY	RESEARCH COUNCIL	PERIOD	MAR 2019 - NOV 2020
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COUNTRIES	PROJECT PARTNERS
Norway	<ul style="list-style-type: none"><li>• ICB Digital</li></ul>
Romania	<ul style="list-style-type: none"><li>• Norwegian University of Science and Technology (NTNU)</li><li>• HTS Makinteknikk</li><li>• ICPE</li></ul>

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## A cloud-based maintenance Industrial IoT platform for smart manufacturing.

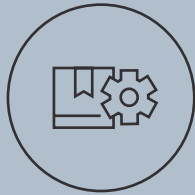
For manufacturing companies to be able to compete in an ever more cutthroat sector with a continuous focus on margins and delivery at all costs, the maintenance on the machine park is expected to be faultless. To maintain high-performance and prevent any breakdowns, factories need to be warned of faulty equipment beforehand and this is where CM4Smar project comes in. It will develop a Smart Maintenance Module that enables manufacturing SMEs to move from a state where machines are fixed when broken to a state where you receive a notification from an app letting you know that a part needs to be changed. By turning the machine park digital and part of an IoT system the concept of maintenance changed dramatically.

Building on the Industry4SME product range, this project is interconnecting business-level software systems with operational data from the field thus aligning production schedules with maintenance activities. Innovative machine learning algorithms for predictive maintenance will analyze data, identify hidden insights and propose both preventive and optimization actions before machine failures take place thus aiming at zero downtime, zero defective manufacturing and greener enterprises.

By utilizing the predictive and preventive maintenance functionalities, companies using this solution will be able to:

- » Improve production planning schedules and machine utilization by implementing proactive corrective and preventive maintenance activities.
- » Reduce the unplanned breakdowns in production, caused by unpredictable machine failure
- » Produce correct parts first time (reduce scrap)
- » Extend machine and lifespan machine tools
- » Save on water, lubrication, energy and other production materials consumption by implementing smart quality measurement algorithms

Also, part of the project scope is to connect the existing production planning systems in the manufacturing enterprises with the cloud-enabled environment to improve availability and reliability while reducing unplanned breakdowns and waste production. IDN's daughter company, ICB Digital, is the lead partner for the project, other partners are NTNU (Norway), HTS Maskinteknikk (Norway) and ICPE (Romania). The project is funded by the European initiative Manunet with national support in Norway from the Norwegian Research Council.



# Greener Automotive Industry

FUNDING BY	EEA NORWAY GRANTS	PERIOD	JUN 2018 - SEP 2020
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COUNTRIES	PROJECT PARTNERS
Romania	<ul style="list-style-type: none"><li>• Compa</li><li>• NTNU</li></ul>

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IMAGE CREDITS      COMPA, WIKIMEDIA COMMONS

## Adapting to the new automotive world using green processes for green components under Industry 4.0.

Mainly since the 2000s Romania has been receiving incentives from the EU for green industry development, blue growth, and ICT as ways to make the industrial sector more innovative and in tune with current environmental necessities. Equating a traditional industry with contemporary guidelines is a challenge Compa is undertaking through this project. A 130 year-old manufacturer for the automotive industry, the company is implementing new innovative and green technologies to manufacture new components with reduced environmental impact.

The project consists of implementing a modern manufacturing line composed of three new equipments that will be used in production of automotive components. The equipment is capable of performing the whole machining operations, starting from a stainless steel bar for the Gasoline Direct Injection (GDI) pump body. The equipment acquired in the scope of the project will be used to produce a new and improved generation of body pump for GDI. GDI is one of the pillars of hybrid cars and electrification. The process design as well as Industry 4.0 compliance will be made together with our Norwegian partners. This will be a natural continuation of our already successful collaboration with Norwegian companies on R&D. The effects of the project related to profitability are:

- » Increased turnover and strengthening economic position and prestige of the company;
- » Highlighting the overall rising trend indicators throughout the period;
- » Improving the profitability of the company.

The environmental benefits of implementing the project are the following:

- » Introduction of a new technology with a minimal impact on the environment that reduces energy consumption;
- » Significantly reducing the waste output, especially oil. The actual oil consumption difference will in fact be significantly higher than shown above due to the huge difference in oil quantity required to run the machines and the fact that oil has a limited lifetime before it has to be changed;
- » Producing components for hybrid cars in the most efficient way possible which can increase the viability of the hybrid in general;
- » Improving our image to customers, partners, investors, environmental authorities, and the local community.

The Norwegian University of Science and Technology (NTNU) is also participating in the project by helping with preparation and data gathering, besides coordinating and reporting on workshops between partners.

The main activity of IDN as a partner in the project is the development, advisory and management of international projects. It can be summarized in four major activities: (1) Integrating the acquired machines and the innovative process into a workshop which will be fully Industry 4.0 compliant; (2) Industry4SME Pilot Assessment: jointly developing this program that offers an affordable pay-as-you-go Industry 4.0 cloud solution, tailored to the production processes of manufacturing enterprises; (3) Industry 4.0 Workshop and company visit Raufoss (Norway) and Industry 4.0 Workshop in Sibiu (Romania); and (4) To provide technical coordination throughout the project implementation period, participating in all relevant areas of expertise.





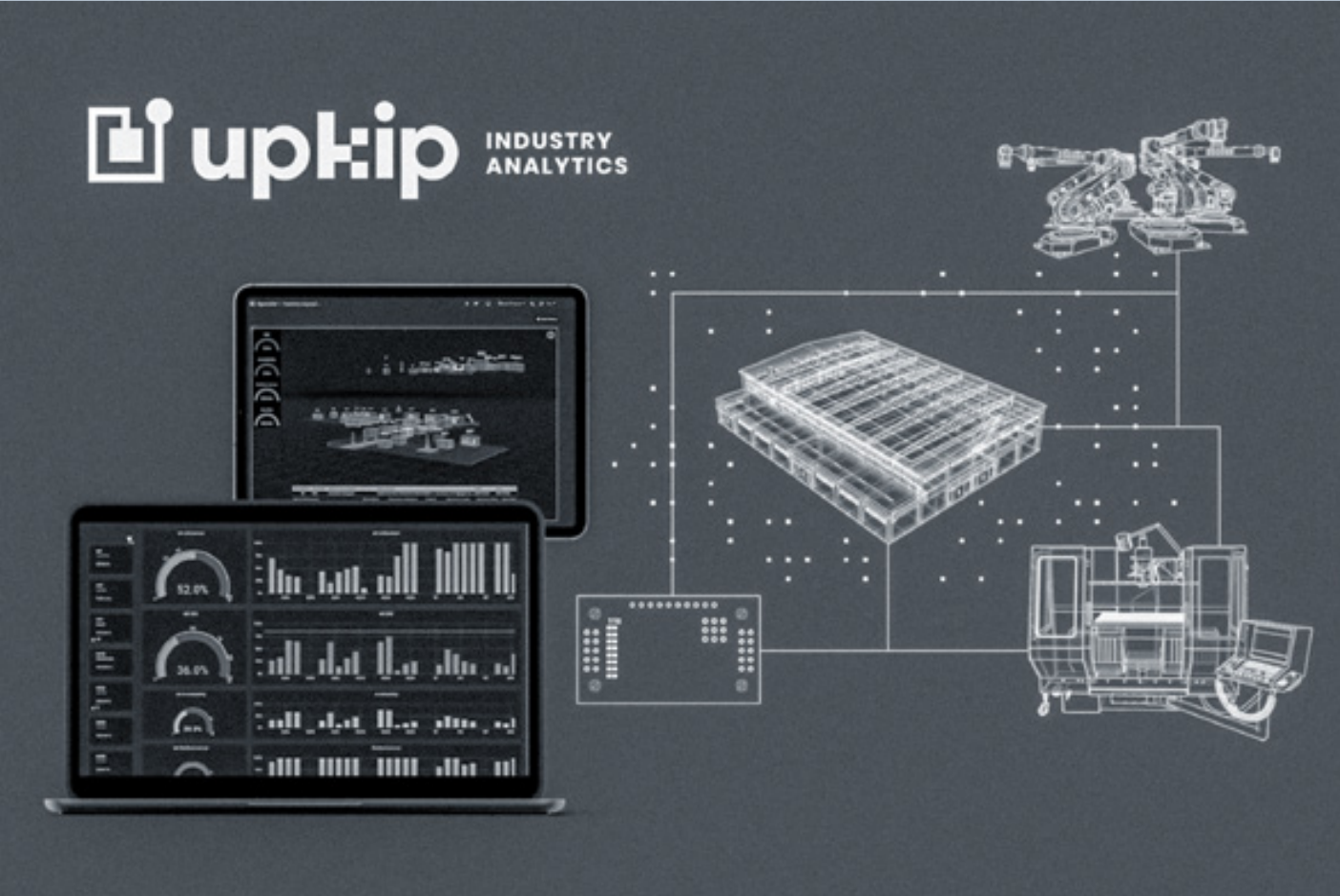
# Industry4SME

FUNDING BY

RESEARCH COUNCIL

PERIOD

SEP 2018 - JUN 2020



COUNTRIES	PROJECT PARTNERS
Norway	<ul style="list-style-type: none"><li>International Development Norway</li><li>HTS Maskinteknikk</li><li>Interconsult Bulgaria</li></ul>

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IMAGE CREDITS

UPKIP PROJECT

## Addressing the needs of the SME manufacturing industry with a cloud-based smart factory solution.

Going digital and running a digital transformation project has become the number one priority on the agenda for companies of all sizes and areas. Digitalization and automation are transforming manufacturing in several ways through intelligent product communication (IoT), digital supply chain, automation based on robotics and computer-aided manufacturing and automation of internal processes.

However, research shows that so far, only large enterprises have managed to implement and make use of this new trend, since they are supported by extensive investments into IT infrastructure and human capacity. Considering that, for these big companies, transforming their facilities in smart factories is solely a matter of planning and managing their available IT budgets, for the small and medium-sized businesses, keeping up with the new digital market trends is a challenge in terms of available financial and human resources.

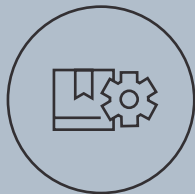
Looking at the statistics on a European level, only 5% of SMEs have started their digitalization projects. And even in a country like Norway, we don't see much bigger numbers. On top of that, the manufacturing sector has been struggling with the disruption of global value chains, not being able to generate profit and growth at the necessary levels. In the scope of this project, IDN and its partners are developing an Industry 4.0 solution that is accessible, easy to integrate and that can be tailored to the business needs of its customers. It is a cloud-based platform that will enable manufacturing SMEs to become factories ready to face the latest challenges and prepare them for the future of industry.

The platform will drive the digital transformation of the production in the direction of smart maintenance, digital supply chain, and new data-driven business models. Even though it is currently focused on the production of high-tech components, further developments will allow for it to be compatible with less complex production processes so it can reach more companies.

Following the key industry 4.0 design principles, the project is interconnecting business-level software systems (such as ERP, PLM, CRM) with operational data from the field, thus allowing observed manufacturing operations to be compared against planned. In a contribution to the third Industry 4.0 pillar, the system will support human operators in their day-to-day decision-making tasks. IDN is the project leader and owner of the tools developed within the Industry4SME project. The project is part of IDN's long term strategy to provide manufacturing enterprises with both methods and tools that enable them to optimize their business processes and production.

After research, development and testing, the project partners understood that a branding process was necessary to truly make the solution achieve its market potential. Having capabilities to match other name-brand softwares available to manufacturers, we needed to reach our target audience with a proper name, visual identity and website. With rounds of brainstorming, collaboration and exchanges between partners and our expanded network we landed on the name Upkip. The visual elements portray the solution at its core: a software layer between machines and the device screens with which people analyze production and make decisions.





# Optimizing the Textile Industry

FUNDING BY

EEA NORWAY GRANTS

PERIOD

JAN 2018 - SEP 2020



COUNTRIES

PROJECT PARTNERS

Romania

- Majutex Ltd

## Partnering with fabric manufacturers to bring up digital transformation, for a greener and leaner production.

The textile industry has gone through many changes over the past decades. Classic business models in the sector lost their competitiveness on the market, while adapting to newer ones that use standardized and automatized production could mean huge investments for a company. Majutex is a 30 year-old Romanian textile company with a production capacity of 60.000 ml of fabric per month, 32 employees and a production space of 1.500 square meters producing all kinds of fabrics. At this point Majutex does not have the capacity to adapt such a new business model and make this type of investment.

This is the reason why the company is changing its business model by focusing on developing and producing smart textile products. For this to be achieved, several investments are needed: purchasing of new production lines for smart textiles (including biomedical textiles), extending it's facilities with 250m², creating new jobs, researching and developing new products.

IDN has diagnosed the main needs of the company as follows:

- » Increasing the productivity and competitiveness of company;
- » Reducing the production costs, especially the energy costs;
- » Optimizing textile processing;
- » Developing a specialized line for smart textiles products and services;
- » Increasing production capacity in terms of quantity, quality and added value;

- » Increasing the products quality through procuring and installing last generation equipment;
- » Developing a waste management flow/plan able to handle securely this process and to be capable of re-using components of raw materials;
- » Increasing the company market share on textile and smart textiles international markets.

The project consists in a seven step activity plan that offers an integrated solution, handling the appropriate allocation of funds, research, training, communication and internationalization needs from Majutex. Another important component of the project is to develop a waste management plan for handling securely this process and to be capable of re-using components of raw materials (re-introducing in production flow – circular economy).

With the addition of a bilateral component, IDN can strengthen the partnership with Majutex and introduce new elements for green innovation as well as new market insights. We suggest three bilateral components:

- » Product Life Cycle Assessment (PLCA)
- » Greening Production Line (GPL)
- » Market Research & Partnering in Norway/ Scandinavia

The project will be a first step in a long-term partnership between Majutex and IDN. Our joint goal is to support the partner in moving the whole factory and supply chain into a Circular Economy by using IDN's concept of Zero Emission Factory.





# CorpoCampo

FUNDING BY	NORAD	PERIOD	JAN 2019 - DEC 2019
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COUNTRY	PROJECT PARTNERS
Colombia	<ul style="list-style-type: none"><li>CorpoCampo</li><li>Makondo</li></ul>

## Boosting the Colombian Amazon economy and empowering thousands of families in the agroforestry value chain.

Corpocampo is a company from Putumayo, Colombia, founded in 2003 to give farmers in the surrounding region alternatives to the growth of coca. With support from partners in the public and private sectors, they foster sustainable economic development in the Colombian Amazon and Pacific. This region has been strongly affected by violence and the illegal cocaine trade, and authorities have struggled to provide alternatives to the local population, who have been left to the farming of coca as the sole way of keeping their land and providing for their families.

Specializing in the production and distribution of acai berries and palm hearts, Corpocampo received support from the United Nations to develop sustainable farming practices that allow for a type of extractivism respectful of the original vegetation and the biome’s natural cycles.

Operating in several locations in Colombia (Cauca, Nariño, Valle del Cauca, and Putumayo) they work closely with local Afro-Colombian communities and indigenous people, providing jobs for over 240 female-headed households, impacting over 1.300 families.

Their business model takes advantage of a dynamic productive agroforest local system, driven by highly demanded locally grown sustainable produce, one that has caught the attention of the Norwegian Business for Peace Foundation, which recognized their contribution to economic and social value in vulnerable communities while building peace.

Now, IDN is supporting Corpocampo in establishing relations with NORAD, the Norwegian Agency for Development Cooperation, and developing the application targeting possibilities for co-funding projects. Local farmers in Colombia, who already have access to training, raw materials, and stable income - thanks to purchasing contracts - are taking back control of their land, and can expect further benefits from this new cooperation.

Other beneficiaries will participate in the productive chain, such as transportation, as processing capacity is increased and end-product is sold to international markets. With a profitable alternative to coca production, the local population will finally be able to break ties with the drug trade, becoming more autonomous and benefiting the environment in the process.

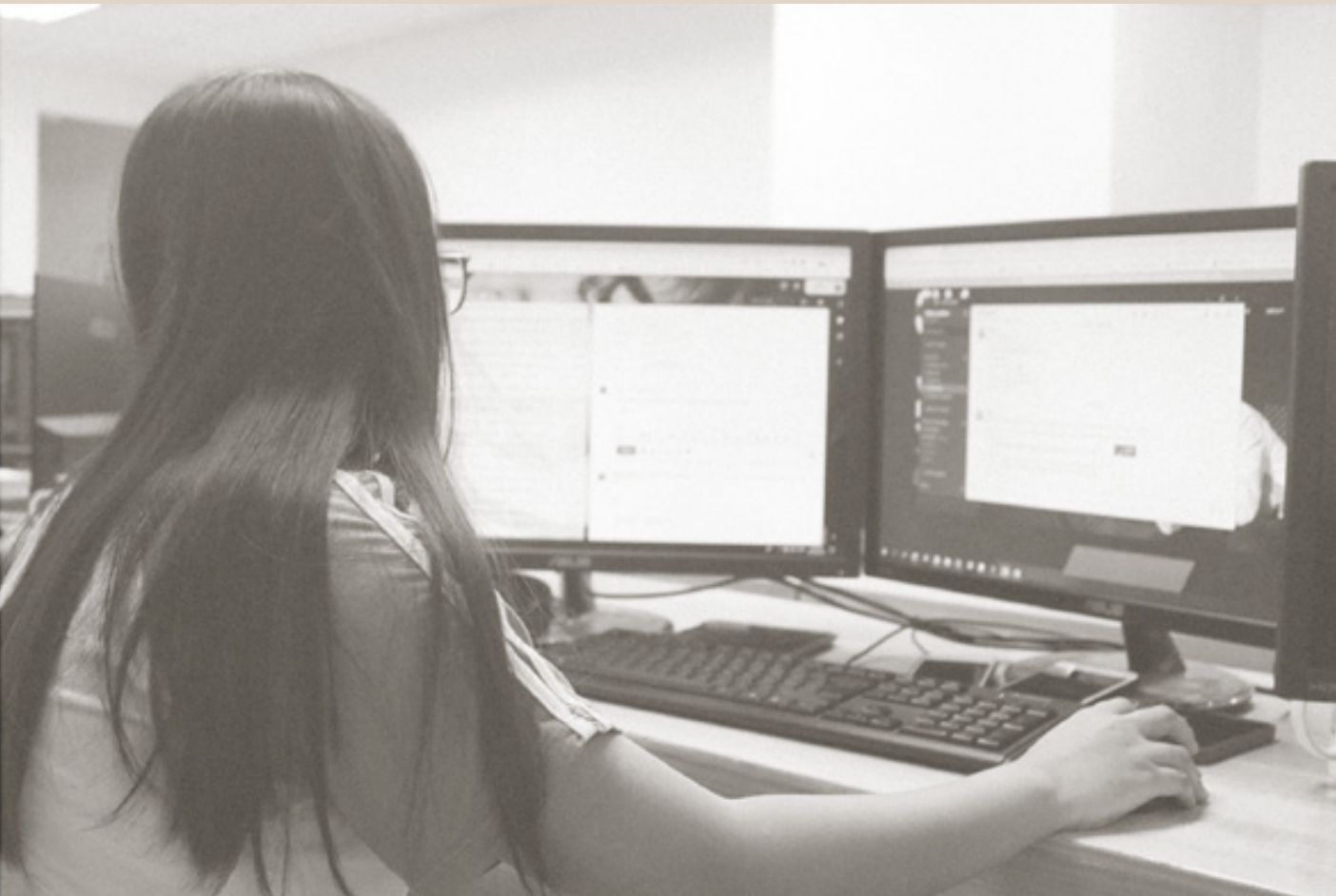






# Digitalizing Recruitment and Staffing

FUNDING BY	NORAD	PERIOD	JAN 2019 - DEC 2019
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COUNTRY	PROJECT PARTNERS
Colombia	<ul style="list-style-type: none"><li>Recman</li></ul>

## Recman and IDN work together on developing jobs and improving employment quality in the recruitment and staffing sector.

The third-largest economy in South America, Colombia has been a destination for foreign investment for many years, however, like its counterparts in the continent, it has very unique hiring and employment practices and complex laws. These can be a burden for international businesses who want to enter the market or even expand there, counting on their already developed workforce. Where the human resources sector is concerned, recruitment processes are still lacking employment of technology and, thus, can be time-consuming and dependent on manpower. Additionally, there is a high number of mismatches between professionals and positions, due to the difficulty in finding people with the right qualifications for the desired roles.

Facing this context, the enterprise resource planning (ERP) Norwegian company Recman set out on this project to enter the Colombian market and, ultimately, develop jobs and improve employment quality in the recruitment and staffing industry in the country.

For that to be achieved, there are at least three key steps that need to be taken into consideration: adaptation and sales of Recman’s platform to the Colombian market; training of local workforce for implementing and supporting Recman Colombia; and ultimately making recruitment processes more efficient and transparent, connecting those seeking a job with companies that are recruiting.

Therefore, the market segment for Recman Colombia is composed of companies dealing with recruiting, staffing, daily management/control, and project management in operations in the human resources sector. The main challenges diagnosed by the company have to do with: change management, internet penetration, labor laws, and informality. To be able to follow through with the project, it is essential to make partnerships with local agents that have already acquired the know-how for operating in Colombia and IDN has helped in facilitating these connections and to:

- » Adapt and offer Recman IT platform to the Colombian market;
- » Train the local workforce to implement and support Recruitment Manager Colombia;
- » Make the recruitment process more efficient and transparent, connecting those seeking a job with companies that are recruiting.

The expected results of this project are to employ 75 people in Colombia until 2024 - reaching a yearly revenue of more than USD15 million - and to give more people a fair chance to get a job based on their qualifications and not their social status or family connections. This way, the project partners can be active agents in the modernization of the staffing industry, making it more efficient and cost-effective, which in turn will make them able to employ more people than before.



# Learning for Industry 4.0

FUNDING BY

EEA NORWAY GRANTS

PERIOD

MAY 2019 - SEP 2020



COUNTRY	PROJECT PARTNERS
Poland	<ul style="list-style-type: none"><li>Jagiellonian University Extension</li><li>University of Technology in Rzeszów</li><li>Pratt &amp; Whitney</li></ul>

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IMAGE CREDITS

EDDIE KOPP

## A new technological paradigm requires qualified professionals to implement new solutions.

Devising an educational offer that corresponds with the requirements of the labor market is a challenge for the institutional partnerships of employers and the education sector. As stated by the OECD, a key characteristic of an effective vocational system is that it has mechanisms that ensure that the mix of vocational provision corresponds to the needs of the labour market. Currently in Poland, the so-called fourth industrial revolution is posing challenges to the labour force, which needs training if they are to guarantee their relevance in many sectors that are updating their equipment and systems. The project uses Vocational Education and Training (VET) to devise and disseminate knowledge about the technological challenges of Industry 4.0, since implementing new solutions requires upskilling employees' qualifications.

Activities proposed within the project underline the crucial role of VET institutions in terms of building a lifelong learning attitude, enhancing professional mobility and upskilling employees. The project offers the chance of devising new educational offers for Jagiellonian University Extension (JUE) and University of Technology in Rzeszów (UTR) in cooperation with Pratt & Whitney (P&W) and IDN. It will concern technological changes such as 3D printing, creating augmented and virtual reality, advanced human-machine interface, cloud computing, etc. and their effect on the social and economical environment. The product-oriented approach will guide the experts in coming up with high-quality outputs. They will later be included in the organization's portfolio and made available as OER.

The project's objectives are:

- » Acquiring the knowledge about the technological and training aspects of implementing the solutions of Industry 4.0 by 15 representatives of partners' managing staff during the study visit in Trondheim;
- » Devising 3 educational products based on the idea of dual education, including those facilitating social inclusion by education in cooperation with IDN and P&W in the period of April 2020 – March 2021;
- » Development and the promotion of VET sector by making available and spreading the offer of continuing education institutions during 6 multiplier events for 150 participants in May till November 2021;
- » Knowledge transfer regarding solutions of Industry 4.0 between IDN Norway, JUE, P&W and UTR. Those objectives are directly linked to the objectives of the Education Programme.

The idea of dual education, which ensures the cooperation of educational institutions and employers in delivering the theoretical and practical dimension of the learning process, is an approach proposed in this project. The diverse nature of partners in this profile of partners in this project allows us to carry out knowledge transfer about Industry 4.0 and the exchange of good practices with regards to dual education. This project envisages three products that address the above-mentioned demand:

- » A Virtual Reality (VR) technology module of studies;
- » The training program "Competencies of Industry 4.0";
- » A training game (for the development of logic and reasoning skills).





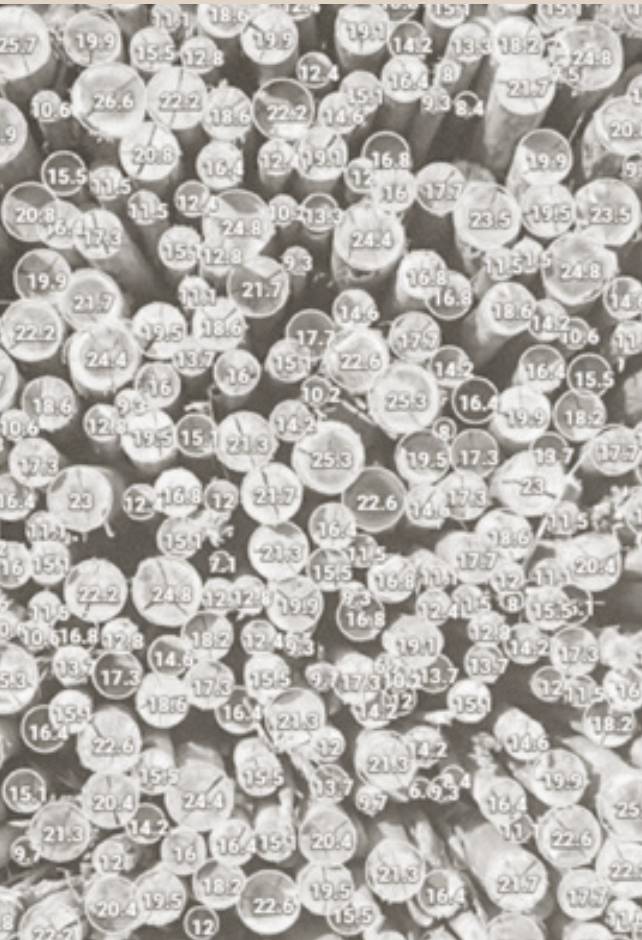
# Timbeter

FUNDING BY

EEA NORWAY GRANTS

PERIOD

JUL 2020 - FEB 2022



COUNTRY

PROJECT PARTNERS

Estonia

• Timbeter

## Using digital technologies to improve timber measurement and to reduce waste in the lumber industry.

The main input for the lumber industry, timber is responsible for a USD600 billion market that is expected to grow by four times by 2050. It also accounts for 50% of the costs in the sector, without counting the environmental and financial costs of illegal logging - currently estimated at USD5 billion annually. However, little has been done to optimize the timber production process, in a supply chain that still counts on pretty much the same methods as 300 years ago. This is due to an intricate and complex network of agents that lack the means and ability to make use of ICT and technological solutions, the type of digitalization that might hold the key to ensure global sustainability and to improve the efficiency in natural resource management.

Although it has been slow to take hold, automated plantations, digital forest soil quality measurement and corresponding automatic fertilization, forest accounting using drones and lidar-based scanners, and fully automated logging are the main paths for innovation in forestry. But to overhaul the entire wood cycle, it is necessary to issue mobile tools that support the people directly involved in moving the supply chain along. Especially bearing in mind that, in addition to harvesting, felling and transport, the final costs are significantly influenced by the labor used for estimating volumes of timber, data processing and inventory management.

These processes are ready for automation, from the actual log measurement to streamlining the paperwork and planning involved. With these issues in mind, Timbeter has developed digital solutions for timber measurement and data-driven supply chain management.

For this project, it is counting on cooperation with IDN and funding from EEA Grants to develop a smart, machine-learning and computer-vision based algorithm that enables to measure timber raw material ten times faster, five times cheaper and three times more accurate as compared to current industry standards, one that will also be offered to the Scandinavian market.

- » The following features are planned to be added to the current solution in order to develop a novel and highly enhanced product;
- » Logistics module for efficient logistics planning and tracking the cargo in real-time;
- » Sales module for generation of sales transaction documentation;
- » Interfacing with the data of harvesters for data analysis.

We expect to have a disruptive impact on promoting a green and sustainable forestry sector with:

- » Decrease in paper consumption and fast exchange of information
- » Reduction of fraud with shipment tracking
- » Highly accurate new measurement standard
- » Reduced costs for processes involved in timber measurement
- » Improved usability with intuitive applications
- » Reduction of waste

This is the continuation of an initiative committed to using new technologies to improve efficiency in sectors that are crucial for a sustainable future. And IDN is proud to be a partner in this process.





# Biomass Logistic Center

FUNDING BY	EEA NORWAY GRANTS	PERIOD	2014 - 2016
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COUNTRY	PROJECT PARTNERS
Slovakia	<ul style="list-style-type: none"><li>BIOPEL</li><li>Norwegian Forestry Group</li></ul>

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IMAGE CREDITS BIOPEL

## Increasing awareness and utilization of renewable energy sources through the creation of a Biomass Logistics Centre.

In an effort to promote the use of biomass and solar energy as renewable energy sources (RES), the EU launched the Action Plan for the use of Biomass covering every level from local to European. The government of the Slovak Republic, with an eye to the potential of biomass and solar energy and supporting their use, created a National Action Plan for energy from RES for the period 2014-2020, which points to the possibilities and likewise the necessity of using available raw materials that have so far been unused. Slovakia is committed to increasing the share of RES in its total energy consumption to the ambitious goal of 14% by 2020. BLC focused on securing wooden raw materials, processing, and sales of a whole array of biofuels, including pellets for domestic or industrial use, briquettes, wood-chips, dried woods, and alternative pellets and briquettes. The expectation is yearly sales of 25,000 tons of fuel ready for final use.

The project provides support for small and medium size businesses in Slovakia, in order to support their development and create new employment opportunities in the market for biomass. Beneficiaries received assistance acquiring quality tools and equipment to enhance the quality and safety of their work, thus increasing their competitiveness and mutual support for the market in biomass.

Another group of entrepreneurs was supported by the purchase of their goods by BLC for storage, sale and distribution. The project also connected students and young people to various activities, where they gained new insights in the area of biomass use, which is still little known in Slovakia.

A comprehensive demonstration of biomass and solar in use, will serve as an excellent learning tool for this public. The project will also target the general public who, through consultations and various organized promotional events, will receive information about renewable energy sources and the benefits of their use. Norwegian partners used their experience and expertise to contribute to the strengthening of bilateral relations with all partners in the project, as well as with other interested groups. In addition, the Norwegian partners will contribute to the project by presenting new technologies for biomass processing, and for the efficient processing and analysis of economic and financial development of companies in the field. The goal is to increase Slovakia's use of biomass and solar for heating and hot water in public and private buildings. With this aim, the project will markedly contribute to fulfilling the National Action Plan for energy from RES.

In addition, the project aims are in full accord with the EU strategy "Europe 2020". The key goals of that strategy relevant to the attached project are: achieving a 20% stake for energy from RES by 2020; a 20% reduction in emissions of greenhouse gasses; and 75% employment among people 20-64 years of age. The project outputs were:

- » Installation of equipment for the production of energy using biomass
- » Installation in BLC: one boiler (30 kW) will be installed in the administration building, a second (20 kW) in the packaging facility, eight additional devices will be installed or displayed in showrooms.
- » A mobile biomass-fuelled boiler (0.8 MW) will be used to dry wood chips and to sell heat.
- » Installation at the partner THERMO/SOLAR: one device will be installed for heat in the building and another will be included in the showroom.



# Cross-Border Development

FUNDING BY	EEA NORWAY GRANTS	PERIOD	SEP 2016 - JAN 2017
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COUNTRY
Slovakia
Ukraine

## Unleashing circular economy potential across the Slovakia-Ukraine border.

The border region is one of the least economically developed regions of Slovakia: its GDP per inhabitant in purchasing power standard presents only 51,7% of the EU-28 average in 2013 according to Eurostat. In order to facilitate further sustainable development, it is necessary to explore new innovative solutions on the regional level. Recently, several initiatives in Europe have been exploring the Circular Economy, as an alternative to the traditional linear systems. In this new model, resources are kept in use for as long as possible, and their maximum value is extracted whilst in use; they are then recovered and regenerated into new products and materials at the end of each service life. The significant component of the Circular economy presents the creation of Industrial Symbiosis partnerships as a way of fostering local economic development and enhancing environmental benefits for local businesses. By using the best available technology and unused or residual resources from different production lines, one creates mutual economic, social, and environmental benefits for all the companies involved, as well as the community. Such partnerships can help companies:

- » Reduce raw material and waste disposal costs.
- » Earn new revenue from residues and byproducts.
- » Divert waste from landfills and reduce carbon emissions.
- » Open up new business opportunities.

The main ambition of this bilateral project is to boost contacts and cooperation between local and regional institutions and NGOs on both sides of the EU external border. Institutional support is inevitable for changing the current model of industrial operation.

The project will present the starting line to support in the Slovakia-Ukraine border region thanks to the establishment of new cooperation between two partners – IDN and Centrum pre Inovačné Partnerstvá (Center For Innovation Partnerships), who’s main mission is to support the development of new innovative partnerships between businesses and/or education and R&D institutions in the Prešov region.

The main activities of the project were:

- » Identifying areas with certain industries and companies that fit well into the methodology of Circular Economy. In order to acquire proven data, IDN together with the Slovak partner will analyze the Industrial Symbiosis partnership's potential in the region.
- » Present and discuss the findings at a workshop where relevant organizations participate together with experts on Circular Economy. Findings of the first activity will be presented to relevant stakeholders (public organizations, NGOs, private companies, and others) during a workshop, aiming at the identification of future projects to establish a Circular Economy (Industrial Symbiosis partnerships) in Slovakia and its border region.
- » Initiating first partnerships with the aim to implement identified projects. During the workshop and as a follow-up, the project will facilitate and create at least three partnerships that will be confirmed by the letter of intent.

Conclusions from the workshop will be incorporated into the report, which will, in addition to the assessment findings and developed pipeline projects, consist of a Generated Assessment Procedure categorizing potential symbiotic partnerships.





# MSODI

## MAZOVIAN NETWORK FOR INNOVATION DEVELOPMENT

FUNDING BY	MASOVIAN MARSHALL'S OFFICE	PERIOD	JAN 2012 - SEP 2014
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COUNTRY	PROJECT PARTNERS
Poland	<ul style="list-style-type: none"><li>WYG PSDB</li></ul>

### Increasing SME innovativeness in Mazovia through knowledge transfer.

Innovation in SME sector is one of the most important topics in regions of Central Eastern Europe. The modern market requires suppliers of goods and services to offer an increasingly competitive offer that's usually above regular standards. Consumers are attracted by innovations and they are the driving force behind the development of further branches of the market. The Marshal's Office of the Masovian Voivodeship wants its region to be attractive and competitive both on the domestic and international markets therefore several activities were procured to innovation stakeholders in the region, among others IDN. Under the public procurement scheme, we have been awarded with the contract to organize three projects.

#### 1. Building capacity for innovation in the region

As a subcontractor to WYG PSDB, we delivered the expertise to implement a series of seminars that provide interested entities with specialist knowledge on how, where and for what to develop innovative business and ideas. The project was addressed to a wide audience: representatives of SMEs, large enterprises, students of strategic directions and local offices. Each of these groups has a different impact on the Mazovian market and, when integrated, can make a big push towards innovation.

Within the "local capacity building" component, IDN was responsible to provide expertise for 125 workshops realized in the period of November 2012-December 2013 in five regional hubs of central region of Poland. The topics covered various aspects of innovation in the company (strategy, tools) and its relevance for the local development.

#### 2. Matchmaking and technology transfer workshops

IDN was also awarded with the contract for the organization of a two-day match-making forum for the companies and researchers that had similar interests and opportunities. The activities included the overall organization of the event, recruitment, and pre-assessment for the ideas, along with practical organization and promotion of the forum. We invited over 100 people to meet and talk about pre-arranged appointments, coming from many business sectors. This match-making forum was designed as one of the coherent system activities run by the Marshall's Office of Mazovia, together with the educational component and small grants scheme launched during 2014.

#### 3. Small grants scheme

One of the important incentives to stimulate the partnerships between industry and academia was the Small Grant Scheme. IDN, supported by the vast experience of Trøndelag Forskning og Utvikling AS (TFoU), was awarded with the contract to prepare and organize the call for innovation proposals. 41 applications were submitted by the business-academia consortia, 20 of which received financial support of roughly EUR5.000 for small scale innovation. The profile of the prepared applications presented a great variety - from in-depth technical analysis in the area of waste management to mathematical models used in internet advertising. The Small Grant Scheme was finalized with the experts' debate on "Business, Science, Innovation in the region", summing up the experiences and the with the great pleasure to host the award ceremony for companies which received the grants for further innovative development of their businesses.

Now when six years have passed since the program, we are also proud to say that one of the awarded startups is widely recognized in the international market as the provider of e-health solutions, which proved the great potential of such incentives.



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# Thinking Forward

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The past decade presented us with the opportunity to interact with hundreds of people and organizations, visit and work in several different countries and realities. Most of all, we are proud to have collaborated with innovative and transformative projects that we believe have impacted our world for the better.

During these ten years, we saw the continuous validation of our work, the growth of our partner network, and the establishing of a global presence. Due to the thoughtfulness with which we conduct business, we are recognized as a reliable and insightful organization by prestigious institutions. It is a position that allows us to branch out and innovate, to develop new solutions to contemporary issues, and to advance the adaptation to more efficient practices.

Our continuous rapport with partners has let us witness changes in regions related to the work we have been performing for the past years. In the late 2000s, when we started our operation, most of the concepts we deal with - or the innovation models we propose - were considered unusual in many of the countries impacted by our projects.

Now, however, we can see substantial business communities built around knowledge transfer practices we helped to implement, with many regions making the shift to more technologically advanced and greener models. From IDN's side, to be better prepared and ready to look forward to future challenges, we worked on structural and visual redesigns that made us more aligned with our strategic, long-term goals.

Moreover, our focus on digital transformation, social impact, education, innovation, and efficiency has influenced the way we see our work adding to the changes the world demands in the upcoming years. In that sense, the results we see from our continuous efforts show that we are in a consolidated position to keep working together globally for sustainable local development for the upcoming new decade and beyond.



INTERNATIONAL DEVELOPMENT NORWAY  
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This report was prepared by a team led by Anders Stølan (CEO, IDN) including Caroline Tissot (COO, IDN), Ítalo de Rocco (Designer) Katarzyna A. Kazimierczuk (COO, IDN) and Rune Stølan (COO, IDN).

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