

EIT Climate-KIC Nordic

Peter Vangsbo, Business Development Lead |
Saint-Petersburg State University of Economics |
24 June 2019

EIT Climate-KIC is a European **knowledge and innovation community** working to accelerate the transition to a **zero-carbon economy** through **whole systems** transformation



We educate the next generation of Climate entrepreneurs and change makers



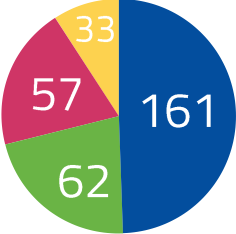
We run the world's largest climate change start-up accelerator



We bring together partners from academia, business and cities/regions on major innovation projects

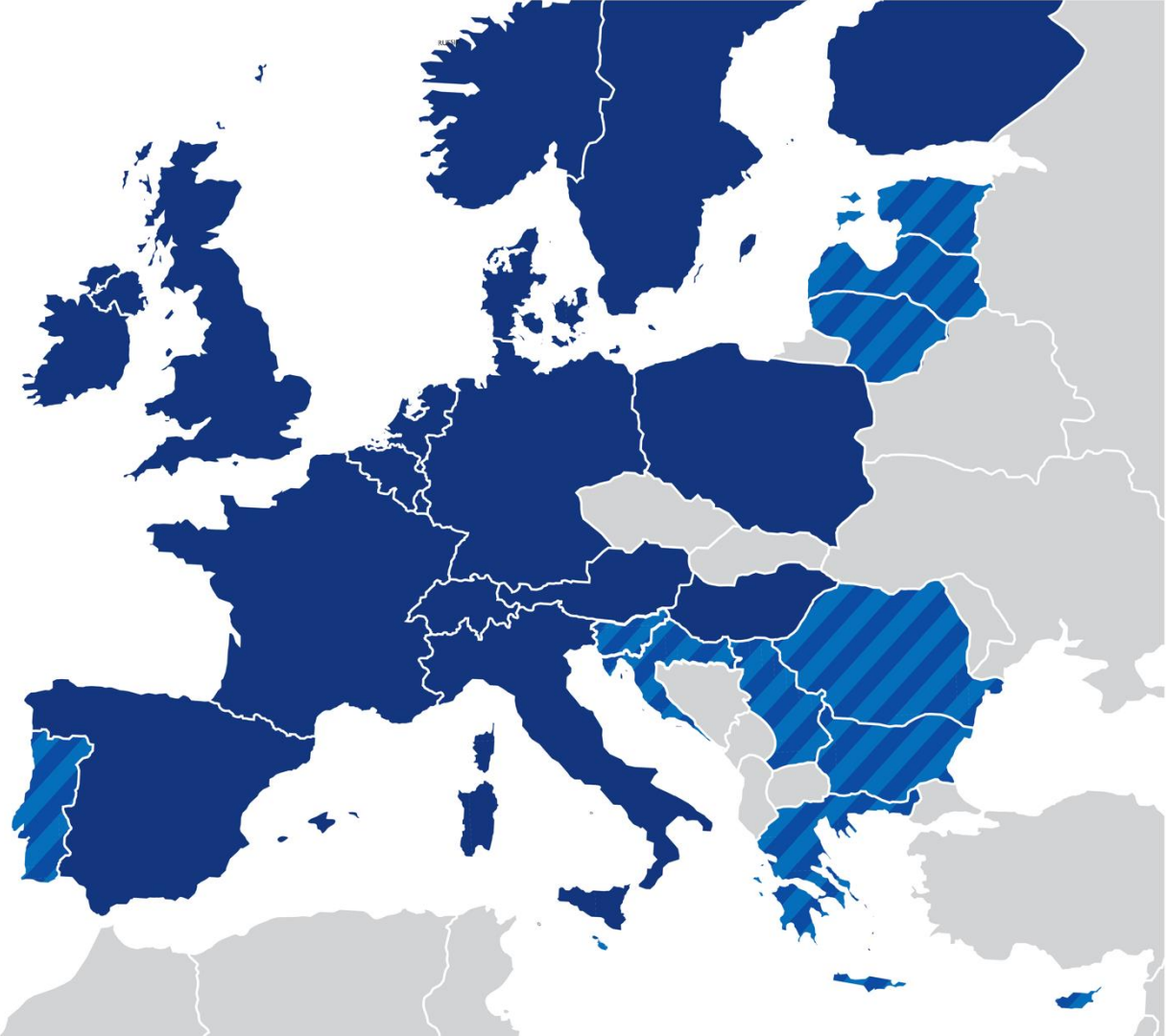
EIT Climate-KIC across Europe

-  EIT Climate-KIC countries
-  EIT Regional Innovation Scheme countries (RIS)



Number of partners distributed by sector

-  Higher Education
-  Business
-  Research
-  Cities, Regions & NGOs



Our Partnership Community



Core Partners

Nordic Partners

Total: 34 Core: 6

Cities and Regions

- Aarhus
- Copenhagen
- Gothenburg
- **Helsinki**
- Forum Virium
- Helsinki Uusima Region
- **Malmö**
- Stavanger
- Trondheim
- Vejle
- Reykjavik

Academia

- Aalto University
- Aarhus University
- **Chalmers University of Technology**
- **Technical University of Denmark (DTU)**
- Helsinki University
- Johanneberg Science Park
- Lund University
- Norwegian University of Science and Technology (NTNU)
- **University of Copenhagen**
- RISE – Research Institutes of Sweden

Companies

- COWI DK
- COWI SE
- **E.ON**
- NTU
- Rockwool
- Trivector
- EAT Foundation
- Projektengagemang
- Stockholm Green Digital Finance
- ISS Ethix
- Material Economics
- Furbish
- Climate Leadership Coalition

Innovation areas

We develop innovation across sectors with the most potential for environmental gain and continued prosperity.



Urban Transitions



Sustainable
Land Use

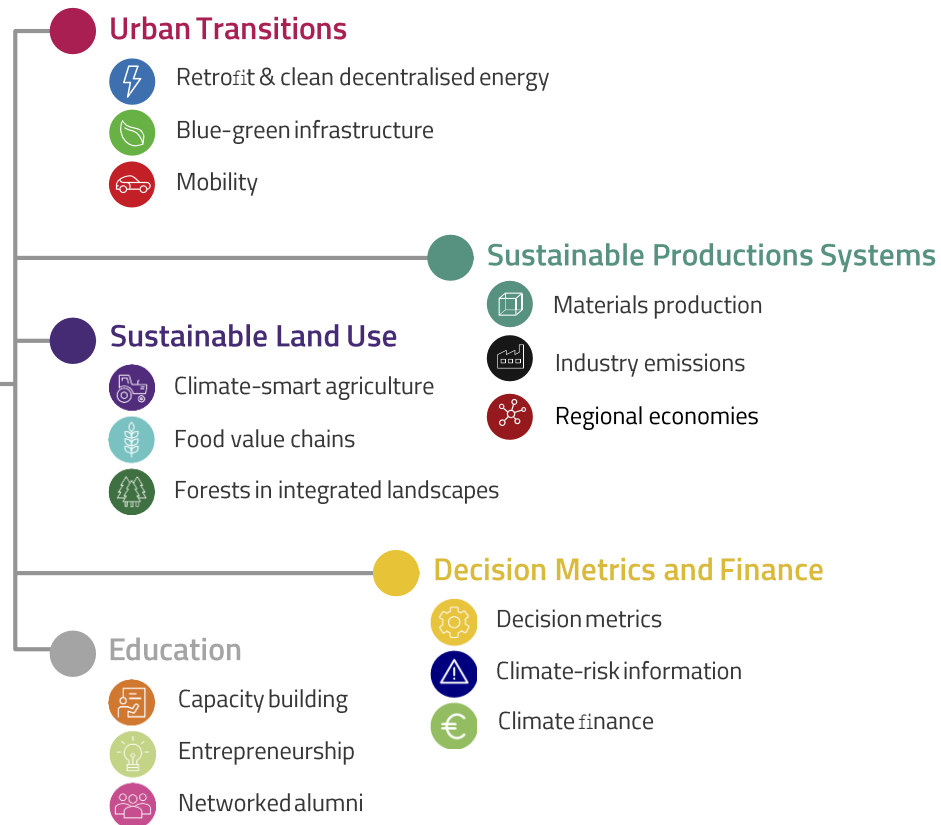


Sustainable
Production Systems



Decision Metrics and
Finance


2030 Impact Goals and Transformation Pathways



SDGs of Tomorrow

The purpose of this lecture is to explain concrete European cases and experiences of the use of sustainable development and implementation in both the public and the private sector. Practical use for business planning, business development and communication.



ЦЕЛИ В ОБЛАСТИ  **УСТОЙЧИВОГО РАЗВИТИЯ**

17 ЦЕЛЕЙ ДЛЯ ПРЕОБРАЗОВАНИЯ НАШЕГО МИРА



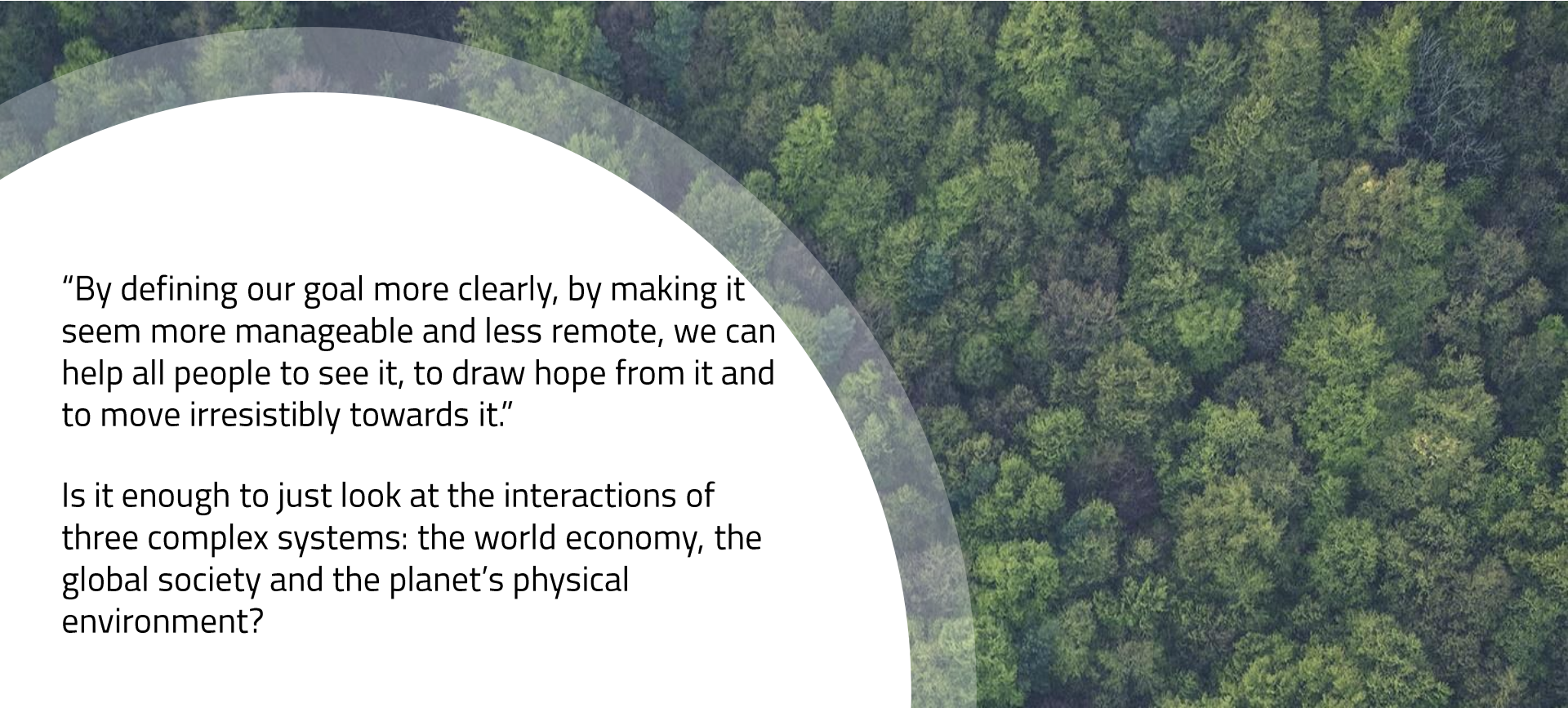
Education modules

Today 09.00 – 10.30 **Module 1:** Introduction to the 17 UN Global Goals - what do we know (background and status), challenges in regard to implementation, tools and games available

Today 11.50 – 13.20 **Module 2:** Presentation of different organizations and cooperates' strategic use of the SDGs and discussion about management of the implementation and use

Tomorrow 11.50 -13.20 **Module 3:** How can you benefit from using the SDGs around partnership-driven innovation in a unique community; Business incubation and entrepreneurship, Open Innovation, Education, Capacity Building and Communication

Why do we need Sustainable Development Goals?

An aerial photograph of a dense, lush green forest. A large, semi-transparent white circle is overlaid on the left side of the image, partially obscuring the trees. The text is placed within this white area.

“By defining our goal more clearly, by making it seem more manageable and less remote, we can help all people to see it, to draw hope from it and to move irresistibly towards it.”

Is it enough to just look at the interactions of three complex systems: the world economy, the global society and the planet’s physical environment?

Mapping Sustainability!

- What is sustainability for you?
- How do you work with sustainability?
- What is your institution doing, your city or yourself?
- What is your dream?



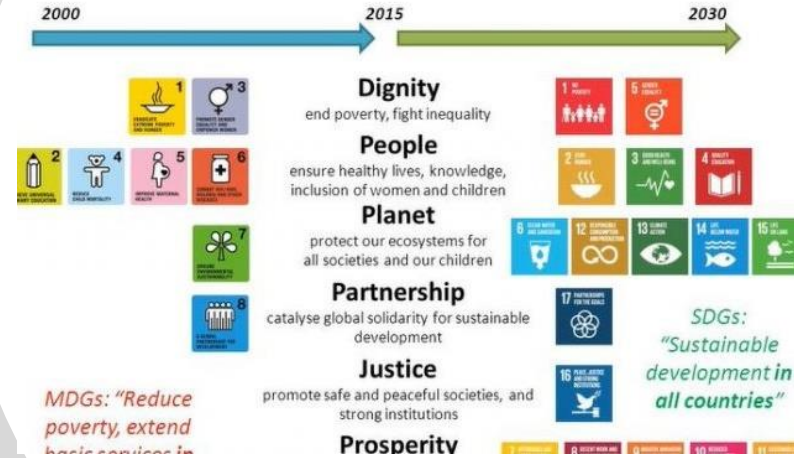
Module 1 Getting to know the Sustainable Development Goals

- In September 2015 Heads of State and Government agreed to set the world on a path towards sustainable development through the adoption of the 2030 Agenda for Sustainable Development
- The goals provide a framework for shared action “for people, planet and prosperity,” to be implemented by “all countries and all stakeholders, acting in collaborative partnership”
- 169 targets accompany the 17 goals and set out quantitative and qualitative objectives for the next 15 years. These targets are “global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities.”



The 2030 Agenda for Sustainable Development

- The Agenda 2030 is a commitment to eradicate poverty and achieve sustainable development by 2030 worldwide, ensuring that no one is left behind. The adoption of the 2030 Agenda was a landmark achievement, providing for a shared global vision towards sustainable development for all
- Development which meets the needs of the current generations without compromising the ability of future generations to meet their own needs
- Critics of the MDGs complained of a lack of analysis and justification behind the chosen objectives, and the difficulty or lack of measurements for some goals and uneven progress, among others.



The Sustainable Development Goals (SDGs)

1 NO
POVERTY



Goal 1. End poverty in all its forms everywhere.

2 ZERO
HUNGER



Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

3 GOOD HEALTH
AND WELL-BEING



Goal 3. Ensure healthy lives and promote well-being for all at all ages.

The Sustainable Development Goals (SDGs)

4 QUALITY
EDUCATION



Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

5 GENDER
EQUALITY



Goal 5. Achieve gender equality and empower all women and girls

6 CLEAN WATER
AND SANITATION



Goal 6. Ensure availability and sustainable management of water and sanitation for all.

The Sustainable Development Goals (SDGs)

7 AFFORDABLE AND
CLEAN ENERGY



Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all.

8 DECENT WORK AND
ECONOMIC GROWTH



Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

The Sustainable Development Goals (SDGs)

10 REDUCED
INEQUALITIES



Goal 10. Reduce inequality within and among countries.

11 SUSTAINABLE CITIES
AND COMMUNITIES



Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Goal 12. Ensure sustainable consumption and production patterns.

The Sustainable Development Goals (SDGs)

13 CLIMATE ACTION



Goal 13. Take urgent action to combat climate change and its impacts.

14 LIFE BELOW WATER



Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

15 LIFE ON LAND



Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.

The Sustainable Development Goals (SDGs)

16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS

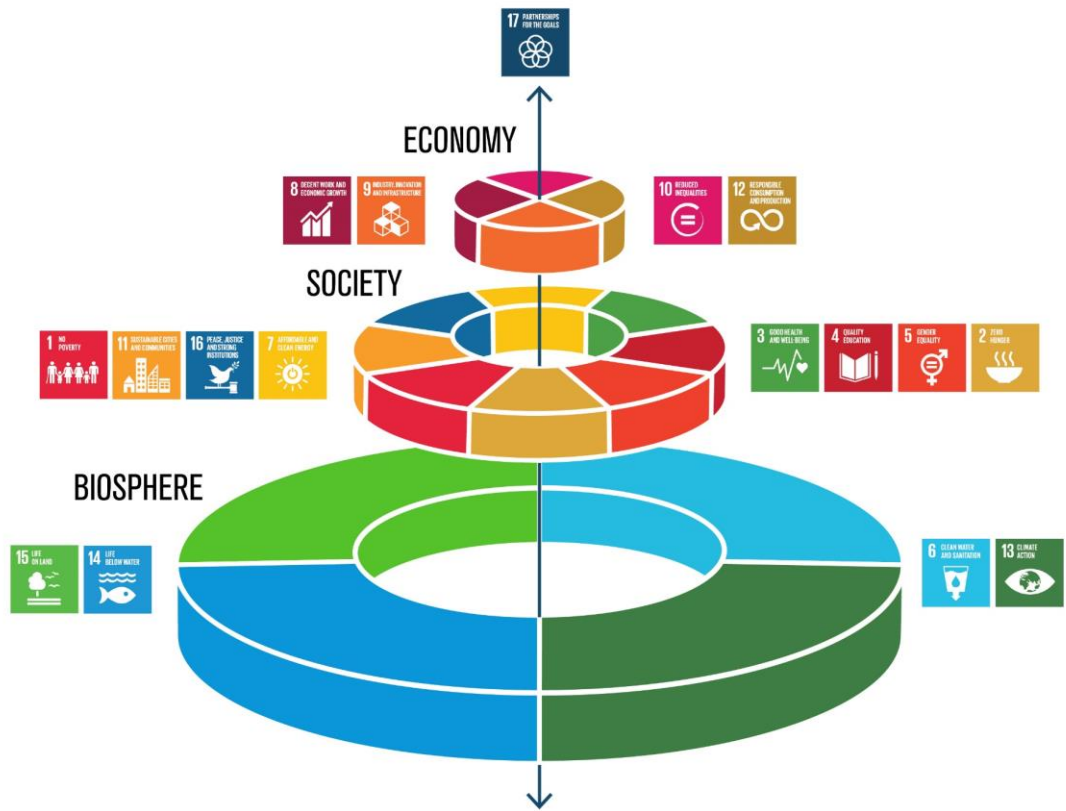


Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

17 PARTNERSHIPS
FOR THE GOALS



Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.



Challenges in regards to implementation

Achieving sustainable development on our crowded, unequal and degraded planet is the most important challenge our generation is facing.

- Good governance?
- Stick or carrot?
- Performance measurement?
- Will poverty reduction increase consumption?
- Growing cities
- Innovation and technology
- Will society act?



Sustainability in Russia?

- Who sets the Sustainability agenda in St. Petersburg and in Russia?
- What are the main topics discussed?
- Challenges for Green Development?
- Who inspire you?



SDG and Gamification

Serious Games – Mayor Table

- Target group: High school, policy makers, general public
- Learning objectives: Learn about key policy decisions in circular cities
- Players: 1
- Duration: 5-10 min pr. game session (around 1 hour)
- Context of use: Private or classroom
- Primary format: Smartphone
- Alternative format: Tablet and online

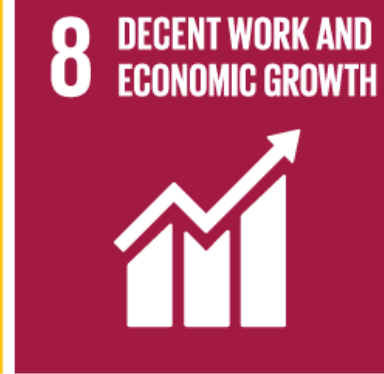


Working with SDGs in a more tangible way

[COWI SDG tool](#)

The project aims to develop a simple and scientific tool that can deliver measurable and understandable results for how companies and institutions affect the SDGs. This will contribute to more incorporating SDGs in their strategies and daily activities.

A vital part of the project involves establishing dialogue with companies and institutions on their wishes and needs regarding measurement and reporting of SDGs.



Break



Climate-KIC is supported by the
EIT, a body of the European Union

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EIT Climate-KIC Nordic

Peter Vangsbo, Business Development
Lead | Saint-Petersburg State University of
Economics | 24 June 2019



Module 2

Cooperate strategic use of the SDGs

- The global market for sustainable solutions is expanding rapidly. Global megatrends such as population growth, urbanization and economic progress in emerging and frontier markets, coupled with resource scarcity and climate change, continue to increase the need for sustainable solutions - including leapfrog solutions that enable emerging and frontier markets to avoid repeating the industrialisation process that has characterised the Western world.
 - The Sustainable Development Goals (SDGs) represent a new global paradigm in which development needs and business opportunities are increasingly becoming two sides of the same coin.
 - Module 2 will take basis in two global companies` use of the SDGs, namely Rockwool and Carlsberg

Rockwool – Impact built-in

Building a better future

- **Rockwool**; fire safe insulation for all types of buildings and installations
- **Grodan**, growth media for the horticultural industry
- **Rockpanel**, Exterior cladding for building facades
- **Rockfon**, acoustic ceiling solutions
- **Lapinus**, engineered stone wool for composition application, noise and vibration control and water management

Beating the 2°C challenge

Global challenges – Energy/ CO₂ Efficiency



>33%
Buildings account for over 33% of the energy used globally

If no action is taken, energy consumption is expected to rise by

50%

by 2050

Up to

90%

The potential for energy savings in new and existing buildings globally is 50-90%



Global challenges –Resource efficiency

35%

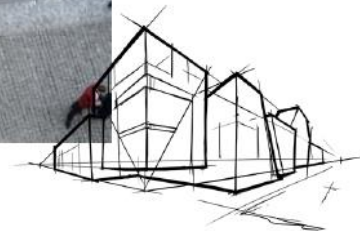
of total waste generated globally comes from the building and construction industry

1M

People move to urban environments every week

50%

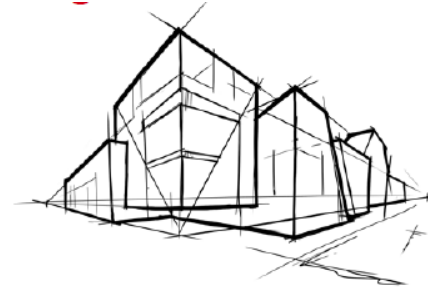
More food will be needed by the urban population by 2050



Global challenges –Water management

17%

More water will be needed by the urban population by 2050



4%

Only 4% of available global water resources is freshwater of which close to 2% is frozen.

1.2bn

More than 1.2 billion people lack access to clean drinking water

The Global Goals steer Rockwool's ambitions

Rockwool has made a commitment to driving an increased positive contribution to 10 SDGs

Rockwool evaluate the SDG performance based on the effects of their products as well as their operational impact. Rockwool track performance through a combination of sustainability goals and product impact metrics where possible

Enabling more effective food production.	Reducing noise and creating acoustically sound buildings.	Enhancing water efficiency in horticulture.	Creating more energy-efficient buildings and industry.	Providing local jobs and economic growth.	Enabling more durable and fire resilient infrastructure.	Supporting more affordable housing and energy.	Expanding product recycling services.	Enabling more carbon-efficient buildings and industry.	Engaging in effective collaboration.
2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	17 PARTNERSHIPS FOR THE GOALS
									
		Improving water efficiency in factories.	Improving energy efficiency in own office buildings.	Zero fatalities and reducing Lost Time Incidents.			Reducing landfill waste from production.	Reducing CO ₂ emission intensity in factories.	

- Positive impact on society through use of our products
- Reduction in operational impacts
- SDG target selected by ROCKWOOL
- Sustainable Development Goal selected by ROCKWOOL

More effective food production systems through sustainable, soilless, Precision Growing solutions.

Sustainable food production systems



2 Zero Hunger

Positive health & economic impact of acoustically sound buildings and reduced noise and vibration from cars and trains.

Reduce deaths/illnesses from hazardous chemicals, air, water and soil pollution.



3 Good Health and Well-being

More efficient water-use in horticulture through sustainable, soilless, Precision Growing solutions.

Increase water efficiency in factories.

Increase water-use efficiency.




6 Clean Water and Sanitation

More energy efficient buildings and industry through insulation.

Increase energy efficiency in own buildings.


Double the global rate of improvement in energy efficiency.



7 Affordable and Clean Energy

Zero fatalities and reduction in Lost Time Incidents.

Protect labour rights and promote safe and secure working environments.



8 Decent Work and Economic Growth

More durable and resilient infrastructure through fire resilient insulation and more.


Develop sustainable and resilient infrastructure.



9 Industry, Innovation and Infrastructure

More safe and affordable housing and thereby less energy poverty through energy efficient insulation solutions.

Access to safe and affordable housing.



11 Sustainable Cities and Communities

Increase the number of countries where we offer take back services.

Reduce landfill waste from production.

Substantially reduce waste generation.



12 Responsible Consumption and Production

More carbon efficient buildings and industry through insulation.

Reduce CO₂ emissions in factories.

Strengthen resilience and adaptive capacity.



13 Climate Action

Effective collaboration within our key business areas across sectors and geographies.

Encourage and promote effective public, public-private and civil society partnerships.



17 Partnerships for the Goals

Combatting climate change

Launch of new innovative wall system

Rockzero

– pioneering nearly zero-energy homes built with stone wool.



ROCKWOOL technical insulation sold in 2018 can save energy in its lifetime equal to

57%

of the total annual energy use in the U.S. industrial sector.

CO₂ intensity reduction from production of

4%

against the 2015 baseline year.



Launched the global renovation campaign 'Renovate today. Reshape tomorrow' based on collaborative research.



Growing the circular economy



Recycling services in

5 more

countries.

Grodan products sold in 2018 will save an estimated

94 million

litres of water.



ROCKWOOL became the Trucost SDG Evaluation Tool's highest scoring company.

Grodan growing solutions enabled

76%

more vegetables to be grown compared to soil-based horticulture.



Prime rating for sustainability with ESG rating agency ISS-oekom for the third year running.

Safeguarding citizens' wellbeing

Consistently advocated for use of non-combustible insulation in high-rise and high-risk buildings.



The acoustic solutions Rockfon delivered to schools in 2018 improved the learning conditions of more than

300 000

students globally.

3.1

Lost Time Incident rate in 2018.



Living Wage accreditation in the UK.

Global employee engagement campaign on the UN Sustainable Development Goals.



5

/ 44



— Makes precision irrigation possible

- GroSens is an indispensable tool for growers who want to use precision irrigation professionally to achieve optimum yield and quality
- Accurate water content measurements in the stone wool substrates gives growers optional control over their crops
- With the GroSense Handheld, an excellent overview of the water content can be obtained quickly and easily by taking measurement at representative location thought-out the greenhouse

6

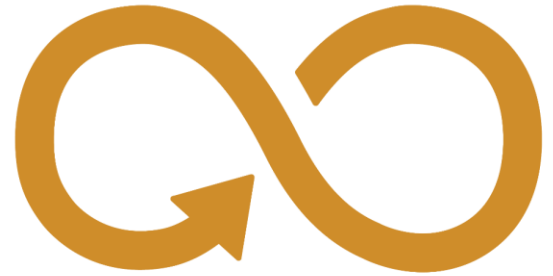
CLEAN WATER AND SANITATION

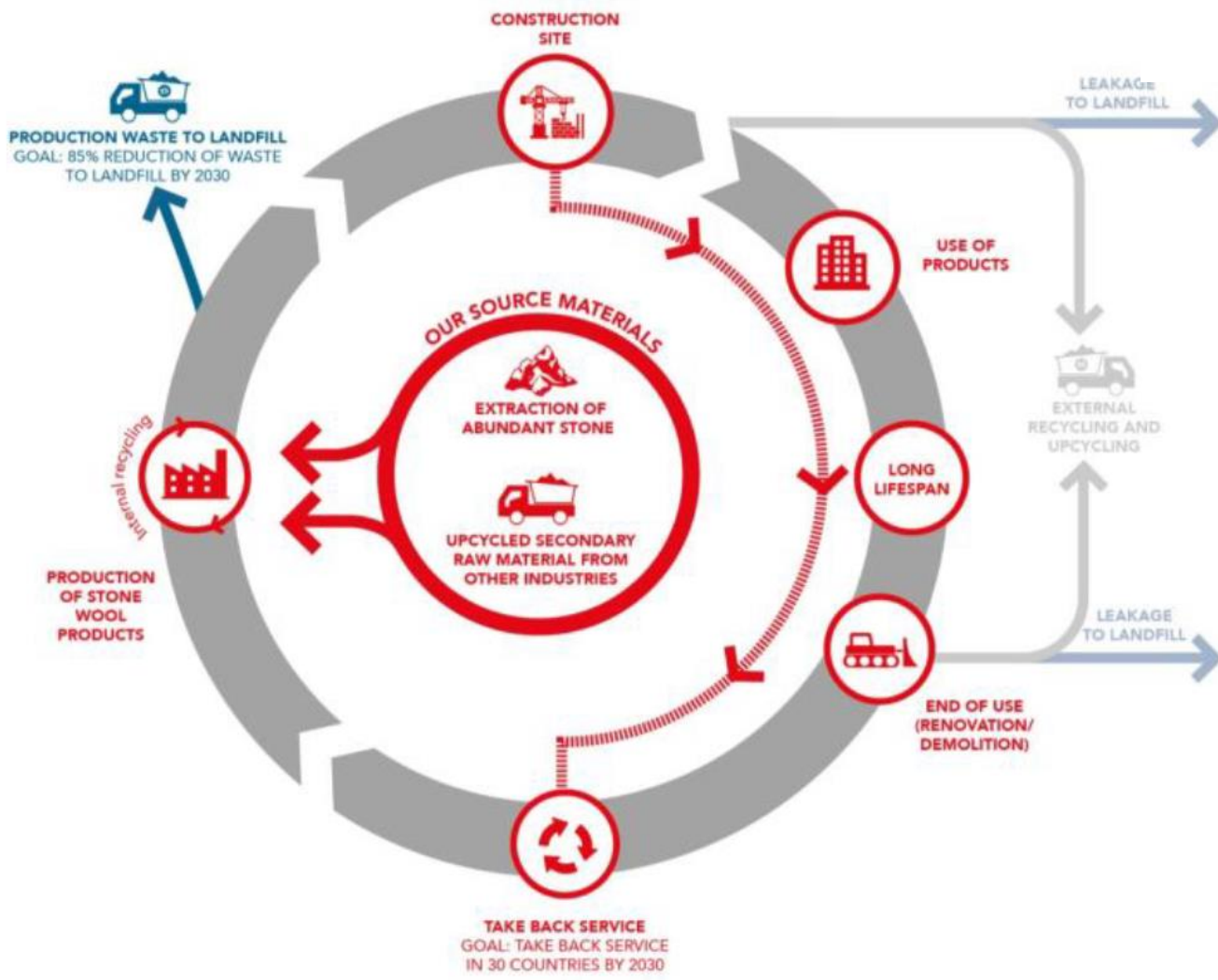


Closed loop products for modern living

- The building sector produces approximately a third of all waste, much of which ends up in landfill.
- Rockwool turn abundant raw materials and upcycled secondary materials into a range of long-lasting stone wool products.
- Owing to the ease with which Rockwool products can be separated when a building is renovated or demolished, Rockwools products can be transformed back into materials with commercial value, including via our take back services.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION





Net Carbon Positive

- From households walls and roofs, to the vast tanks and pipes of power stations – stone wool keeps heat where it's needed
- Rockwool building insulation can become "net carbon positive" in as little as 200 days – meaning the carbon emitted during the production of building insulation is offset by the avoided emissions of the insulations' used in buildings
- For industrial insulation, this can happen in as little as half an day

13 CLIMATE ACTION



Collaborating to make your homes and cities more sustainable

“Because ROCKWOOL pursues the same passion, we are delighted to work closely together to share with, learn from and inspire each other.”

David van der Leer Executive Director, Van AlenInstitute

“ROCKWOOL’s stone wool products are a natural fit with the vision (of circular economy), and they are on the leading edge of evolving and accelerating circularity.”

Per-Anders Enkvist, Founder and CEO of Material Economics.

17 PARTNERSHIPS FOR THE GOALS



Using SDGs in cities

- How does it work in a city?
- Is SDG in procurement possible?
- What is the role of society?
- Ensure credibility – quantify if possible



Carlsberg - brewing for a better tomorrow

Brewing with purpose

- Carlsberg is a global brewery. Founded in 1847 by J. C. Jacobsen. The company headquarters is located in Copenhagen, Denmark. Since Jacobsen's death in 1987 the majority owner of the company has been the Carlsberg Foundation.
- The company's flagship brand is Carlsberg. It also brews Baltika, Grimbergen and more than 500 local beers.
- The Company employs around 41.000 people



Why is it important for Carlsberg to work with the SDGs?

"The world needs strong, collective action in the face of complex sustainability challenges such as climate change, access to resources and public health concerns. The UN's Sustainable Development Goals (SDGs) and the Paris Climate Agreement are helping to accelerate change, deepening the commitment of governments, civil society and businesses globally. They highlight how important it is for us to work together if we are to succeed in delivering change"

Flemming Besenbacher Chair of the Carlsberg Foundation

"Together Towards ZERO, is our contribution to this urgently needed change. It sets new industry standards for science-based and partnership-driven sustainability. We believe our approach is not only good for the planet, but also for business and for society as a whole. It increases our efficiency, reduces risks and builds resilience in our supply chain, while resonating with our customers and consumers in an increasingly sustainability-conscious world."

Simon Hoffmeyer Boas, Director of Sustainability

The Proportion of greenhouse gas emissions related to each stage in the life cycle of a Carlsberg product



TOGETHER TOWARDS ZERO

Last year Carlsberg launched the sustainability programme Together Towards ZERO which has four areas with the greatest relevance for their business and society

Together Towards ZERO states Carlsberg's ambition within each of these areas: ZERO carbon footprint, ZERO water waste, ZERO irresponsible drinking and a ZERO accidents culture across our business. Under each ambition, Carlsberg have set measurable targets for 2022 and 2030 respectively.



How do the SDGs influence the way Carlsberg works on the global stage?

- With Together Towards ZERO, Carlsberg have set their direction for the next decade, and the most pressing question is if Carlsberg through their work can help others to see the urgency in the challenges Carlsberg are facing.
- This includes business partners and companies in other industries. They cannot drive the entire change alone, so Carlsberg need likeminded partners to join them on the journey towards zero. If Carlsberg are not able to inspire and drive change outside their own business, Carlsberg will not achieve the targets



Sourcing

Global sourcing is handled by our central procurement function.



Brewing & bottling

We have brewing facilities in more than 35 markets. Overall responsibility lies with the central supply chain function.



Distribution

Distribution varies from direct to indirect.



Customers

Our customers range from on-trade to off-trade, from big to small.



Consumers

We serve consumers in more than 150 markets worldwide.

Actions “Together Towards ZERO”

Besides the Snap Pack, Carlsberg have also launched other innovative packaging solutions which further contribute to reducing our impact on the environment. These include:

- 1. The use of Cradle-to-Cradle™ certified inks on its labels to improve recyclability,
- 2. The application of coating to refillable glass bottles to make them last longer,
- 3. Improved bottle caps that remove the oxygen from the bottle to make the beer taste fresher for longer,
- 4. Recycled content in wrapping where plastic is still needed



Zero Carbon footprint

Carlsberg want to achieve ZERO carbon emissions at breweries by 2030. Carlsberg recognise that this will be a huge challenge, only achievable with highly focused actions and innovation.

In addition, Carlsberg have set a target that extends beyond Carlsberg own breweries to include the full value chain. Carlsberg call this “beer-in-hand”, and Carlsberg are aiming for a 30% reduction in emissions by 2030 against a 2015 baseline.

- Eliminating emission at Carlsberg Breweries
- Increasing the share of renewable energy and improving the rate of energy efficiency
- ISO Certification



**ZERO
CARBON
FOOTPRINT**

2030 TARGETS

ZERO CARBON EMISSIONS AT OUR BREWERIES
30% REDUCTION IN BEER-IN-HAND CARBON FOOTPRINT

2022 TARGETS

50% REDUCTION IN CARBON EMISSIONS AT OUR BREWERIES
100% ELECTRICITY FROM RENEWABLE SOURCES AT OUR BREWERIES
ZERO COAL AT OUR BREWERIES
15% REDUCTION IN BEER-IN-HAND CARBON FOOTPRINT
100% LOW-CLIMATE-IMPACT COOLING
30 PARTNERSHIPS TO REDUCE SHARED CARBON FOOTPRINT



Zero Water Waste

No water, no beer. But supplies are becoming scarce in some of the regions where their beers are brewed.

Carlsberg's targets include reducing water consumption at their breweries and the formation of partnerships to safeguard shared water resources in high-risk areas.

15 Priority sites identified by Carlsberg Water Risk Assessment

- Using cleaned wastewater as service
- Protecting local water resources
- Innovation



**ZERO
WATER
WASTE**

2030 TARGETS

50%

**REDUCTION
IN WATER USAGE
AT OUR BREWERIES**

**PARTNER TO SAFEGUARD SHARED WATER
RESOURCES IN HIGH-RISK AREAS**

2022 TARGETS

25%

**REDUCTION IN
WATER USAGE
AT OUR BREWERIES**

**EXPLORE GOING BELOW 2.0 HL/HL AT ALL
HIGH-RISK BREWERIES**

Zero Accidents Culture

Carlsberg are determined to protect the welfare of all employees by pre-empting the potential risks of their operations to provide a safe working environment.

Carlsberg pursue a reduction in the number of accidents year on year, with the ambition to reach ZERO lost-time accidents by 2030.

To complement the health & safety communications initiated centrally, they continued to support local initiatives and highlight specific workplace hazards.



ZERO
ACCIDENTS
CULTURE

2030 TARGETS

**ZERO LOST-TIME
ACCIDENTS**

2022 TARGETS

**REDUCTION IN
ACCIDENT RATE
YEAR ON YEAR**

Zero Irresponsible Drinking

Carlsberg beers are often at the heart of social occasions, just as they have been for centuries. That is what Carlsberg want. But Carlsberg also want them to be enjoyed responsibly.

To provide more choice on these occasions, Carlsberg have set a target of 100% distribution of alcohol-free brews by 2022 – meaning that wherever Carlsbergs beers containing alcohol are found, there will always be an alcohol-free option as well.

Carlsberg are also embedding responsible drinking messages in all Carlsberg's marketing communications

- Enable, inform, encourage



ZERO
IRRESPONSIBLE
DRINKING

2030 TARGETS

100%

OF OUR MARKETS
IMPROVE ON
RESPONSIBLE DRINKING
YEAR ON YEAR

2022 TARGETS

100%

AVAILABILITY OF
ALCOHOL-FREE
BREWS (AFB)

100%

RESPONSIBLE DRINKING
MESSAGING THROUGH
PACKAGING AND BRAND
ACTIVATIONS

100%

OF OUR MARKETS RUN
PARTNERSHIPS TO
SUPPORT RESPONSIBLE
CONSUMPTION

What is the biggest challenge in incorporating sustainability in Carlsberg's business strategy?

- Credibility?
- Carlsberg cannot drive the entire change alone, so Carlsberg need likeminded partners to join them on the journey towards zero in all geographies
- No-one can do everything, but every-one can do something.
- Time and speed
- Carlsberg Foundation and society
- Others?

Using SDGs commercially

- Can all companies use SDGs – does it make sense?
- Green washing?
- CSR or SDGs?
- Ensure credibility – quantify if possible



Using SDGs commercially

- Map your current business model against the SDGs
- Identify where you currently have most impact
- Priority areas where this impact can be increased through commercial activities
- Ensure credibility – quantify if possible



Thanks for your attention



Climate-KIC is supported by the
EIT, a body of the European Union

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