

2021 ANNUAL REPORT



LETTER FROM THE CHAIRMAN

Climate change and how we adapt and mitigate is an intergenerational, species level, challenge for humanity.

The last 2 years of the COVID-19 crisis pandemic required that humanity respond at a species scale. Some of this response was ingenious, the innovation and collaboration in medical health was spectacular. While many other responses found their orientation in nationalism and left much to be desired.

Climate change is an intergenerational species threat that requires collective action at a scale that has not yet been achieved. This collective action will need to cross borders, states, regions and continents for the threat of climate change to be averted. We must learn how to cooperate across our planet more elegantly than we have ever done.

Collective action toward a Green and Clean economy will require cooperation, it will require new institutions to deliver collaboration, it will require innovators and green entrepreneurs to work smarter and harder than ever before.

Finding new partners, collaborators and solutions from across the globe to give humanity the best chance of surviving this species level threat.

The ICN, with a reach across 4 continents representing some 15 000 companies in Cleantech has been building the platforms to unlock the sort of innovation and collaboration in Cleantech that will contribute to solving climate issues at scale. The ICN has achieved a number of measurable highlights in the past year - and there is a lot to be proud of in this annual report, but we dare not linger as there is much to be done.



Mike Mulcahy,
Chairman of ICN Board

WHO WE ARE

The International Cleantech Network (ICN) is a network of 19 clusters which spans across 4 different continents with the secretariat based within Copenhagen, Denmark. The clusters within ICN adhere to the triple helix framework whereby their membership consists of corporations (mainly SMEs), public authorities and also research bodies. The SMEs which belong to the ICN clusters are global frontrunners in relation to environmental sustainability and spearhead the green transition through providing the burgeoning international demand for innovative cleantech solutions. Through membership of ICN, the clusters are able to access and provide business opportunities to grow their network and gain access to project partners outwit of their national borders meaning that a framework is in place to ensure cleantech implementation at a global level.

OUR OBJECTIVES

ICN creates tangible value for cluster members and their community of cleantech stakeholders through leveraging resources for projects, generating business for SMEs through partnerships with leading international organisations and global platforms, and facilitating knowledge sharing amongst the ICN members.

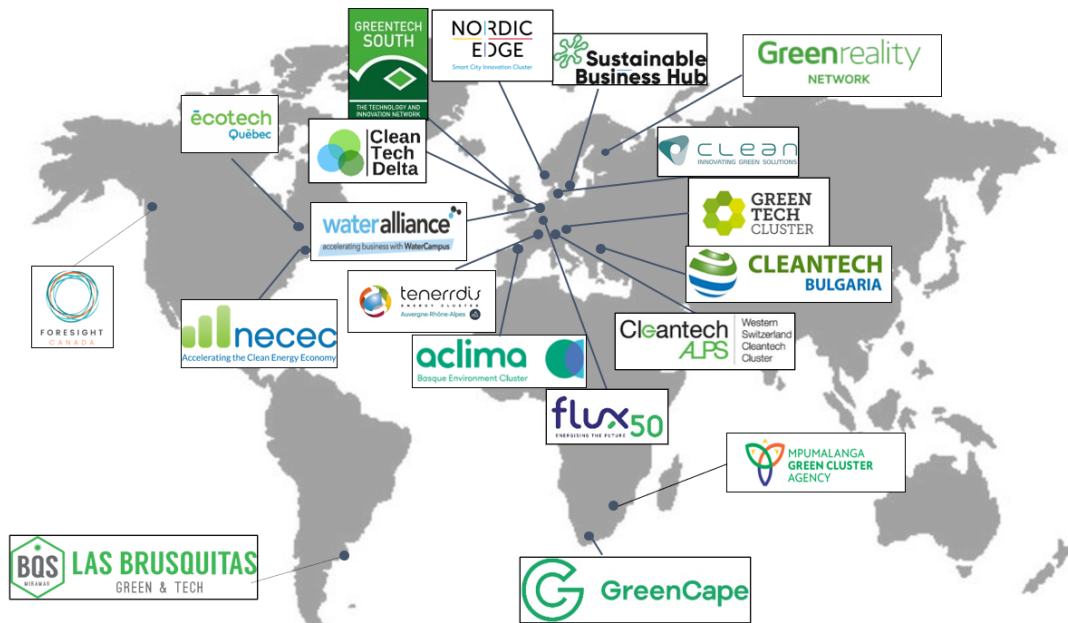
In order to satisfy the objectives laid out above and create value for our members ICN carries out 5 essential services:

- 1) Ecosystem Access;** Give access to ecosystems with intergovernmental organisations, investors, and corporations
- 2) Visibility;** Provide our members with visibility in strategically important circumstances e.g events and achievements promotion
- 3) Project Development;** Enable project development by forging solid relationships and trusted partnerships
- 4) Knowledge Sharing;** Facilitating the exchange of essential information between members
- 5) Market Access;** Open foreign markets for member SMEs through allowing access to concrete international business opportunities.

OUR MEMBERS

Our members are characterised by a cross-sector framework which involves SMEs and other stakeholders from within ICNs three core thematic focus areas (Water, Energy and Circular Economy). Together, the ICN clusters mobilise a large variety of cleantech ecosystems. ICN members meet on a regular basis, know each other personally and have developed mutual trust, all of which are key to the organisation's activities.

ICN's 19 members represent the world's leading cleantech regions, together mobilising a large variety of cleantech ecosystems. In total, ICN connects well over 15 000 organisations consisting of businesses, public authorities, and research institutions. Each cluster represents businesses and knowledge institutions that are leading within their field of cleantech, providing the ICN network with valuable expertise.



2021 BREAKDOWN

2021 has been an extremely challenging year for everyone and this has been no different for ICN and our members. Despite this we have still had ambitious targets and have managed to achieve a lot this year.

PARTNERSHIPS



This year saw ICN and the **New York State Energy Research and Development Authority (NYSERDA)** go into a partnership through the signing of a Memorandum of Understanding (MoU). NYSERDA is a public benefit corporation which works with stakeholders throughout New York including residents, business owners, developers, local government officials, university researchers, investors, and entrepreneurs. The corporation aims to attract much needed private sector capital investment to expand New York's clean energy economy.

The MoU was designed to enhance collaboration on decarbonising high-rise buildings in the state of New York through engaging ICN member companies to bring forward innovative solutions for the **Empire Building Challenge (EBC)**

The core objective of the EBC is to drive economic growth through attracting leading manufacturers, solution providers and entrepreneurs internationally to assist the City of New York transform the existing building stock and create a more energy efficient city. Through investing in the most innovative and novel methods to retrofitting the cities tallest buildings there is the potential to transform the cities high rise building market and make NYC the hub of the low carbon retrofit industry.

ICNs partnership with NYSERDA has thus allowed an entry point into the NYC housing market and access to end users within North America. Indeed, the partnership provides SMEs with access to 10 real estate partners who collectively control 130 000 000 Sq Ft of NYC real estate which represents an estimated net worth of more than 195 000 000 000 USD.

Since its kickoff in June this year:

- 16 applications have been submitted through ICN
- 3 SME have had 1-1 meetings with the challenge owners
- A number of these companies have been interviewed about the barriers to the NY market and the needs of international companies to enter US market

PROJECTS

EU TECHBRIDGE

Project development and delivery is a core competency which ICN and its members carry out. Currently, 17.6M EUR of joint ICN projects are being carried out through our trusted international partnerships and relationships.

This year we had the first mission of the ICN affiliated EU Techbridge project. The EU Techbridge project matches innovative European SMEs with North American based end-users/corporate buyers which are looking for innovative water and energy solutions. Through setting up an intensive matchmaking programme (virtual and physical), concrete challenges from North American corporate buyers are matched with innovative solutions from European SMEs.

The primary objective of the project is to organise 5 match making missions from Europe to Canada and the United States. Prior to each mission, the project partners specify the technology needs of the North American challenge owners. Following this, European SMEs are invited to pitch their solutions and challenge owners decide which SMEs they want to proceed with.

Since the programme commenced at the beginning of this year the project has:

- Recruited EU SMEs and had 1-1 meetings with New York stakeholders in energy, green infrastructure and buildings including New York Department of Environmental Protection, ConEdison, Hines, NYSERDA
- Hosted webinar with Vancouver Neighbourhood Energy Utility and the Vancouver Economic commission and recruited SMEs for 1-1 meetings within energy
- Hosted webinar with Massachusetts Water Resource Authority (MWRA) and later had 1-1 meetings with selected EU SMEs within stormwater & waste solutions technologies
- Hosted webinar with LA Sanitation & Environment and later had 1-1 meetings with selected EU SMEs within wastewater technologies
- Hosted webinar with the Milwaukee Metropolitan Sewerage District and currently recruiting for SMEs for 1-1 meetings within wastewater challenges

September 2021 also saw the kick off of the new COSME project, African EU Water and Energy Network (AEWAN), where ICN member Tenerrdis is part of the European energy cluster consortium. The primary objective of the project is to develop and implement a joint internationalisation strategy to help European SMEs go international in three specific selected African countries, (Morocco, Senegal, and Tunisia) and help respond to the African demand for green energy and water solutions.

The project is responding to the effects rapid population and economic growth will have on Africa's energy sector. This trend, together with the falling costs of key renewable technologies, will lead to a new period of dynamism among the African policy makers and the African business communities, opening to new avenues for innovation and growth. At the same time the investments from public and private agents related to achieve water supply, sanitation and water resources management SDGs goals targeted in Africa, create new opportunities to EU companies to collaborate with local organisations. The project will be running for 30 months, until March 2024.

In addition to the projects currently under way ICN also has 10M EUR worth of joint projects under evaluation meaning we have much in the pipeline to look forward to going into 2022.



COP26

Providing visibility to our members is an essential service which ICN carries out. ICN aims to promote the network and its members at a number of events throughout a calendar year in order to gain notoriety and raise awareness of the ICN brand.

In November, the international community gathered in Glasgow for the 26th annual United Nations Climate Conference (COP26) with the primary goal of “accelerating action towards the goals of the Paris Agreement and the UN framework convention on climate change”.

As an alliance of a leading cleantech innovation ecosystem spanning 16 countries and 4 continents COP26 provided ICN with a great opportunity for members to create even more international connections and be present at arguably the world’s largest climate focused event. With this being the case a delegation of 3 ICN representatives travelled to Glasgow in order to be ambassadors of ICN’s cleantech agenda and scope out potential new opportunities for the clusters triple helix stakeholders.

Below Jeanette Jackson, CEO from Foresight Canada, recounts her experience from attending COP26 and outlines benefits being there as an ICN delegate brought.

“The opportunity to attend COP26 was hugely beneficial to me, personally, and to Canadian cleantech.

In just seven days, I had hundreds of conversations with dozens of Canadian cleantech companies and was reminded of the urgency of Foresight’s work to support the growth of these ventures. I also made new connections with colleagues in the global cleantech community and had inspiring brainstorming sessions about how we can collaborate. From Europe and Africa to Asia and South America, our team is prioritizing follow-up with some amazing thought leaders and climate champions.

Of particular note, I took part in two great sessions:

- A meeting with our Prime Minister Justin Trudeau was a terrific opportunity to hear our federal government’s vision for climate solutions including engaging with youth, industry, and innovators.

- The major announcement by fellow Canadian Mark Carney regarding the Glasgow Financial Alliance for Net Zero (\$130 trillion is serious money!).

Arguably, some of these connections could have taken place in Canada or via Zoom. So why was it worth traveling to COP26? Two reasons: international connections and being part of an important global event.

Collaboration is in Foresight's DNA, so to have the chance to learn from counterparts from around the globe was spectacular. I discussed agtech innovation with experts from the Netherlands, dove into hydrogen and CCUS opportunities in Western Europe, and debated policy with folks much more embedded in the policy side of the climate equation.

Thank you to ICN for inviting me to join as a delegate"

Jeanette Jackson, CEO, Foresight



**Foresight CEO Jeanette Jackson and
Canadian Prime Minister Justin Trudeau**

MEET THE NEW MEMBERS

Cluster growth is a core task which the ICN secretariat carries out in order to expand the network. This year we have brought in three new members to join the ICN family. With the addition of these new members we have expanded our presence further within Europe through welcoming Water Alliance from the Netherlands, and our first Finnish cluster The Greenreality Network. ICN also welcomed a second South African cluster to the fold, The Mpumalanga Green Cluster*. ICN is delighted to welcome these three clusters to the network and we look forward to welcoming more clusters to the network into 2022 as ICN continues to grow its international presence.

*The Mpumalanga Green Cluster are still in the process of establishing cluster operations and it will not be until the start of 2022 until they are up and running fully. This is the reason for their absence in the Q&A section below. More information regarding the cluster will be published in the coming months.



What made you want to join ICN?

There are many reasons why joining ICN was an attractive proposition. Among one of the main drivers was internationalisation. Internationalisation has been enclosed to the strategy of Greenreality Network (GRN) in order to bring new possibilities to members via international contacts, joining a global network of 19 different clusters thus seemed an attractive opportunity to reach this goal. Joining in international/EU project consortiums, enhancing the GRN image and accelerating the development of new business and products were also key drivers behind the decision to join ICN.

What are your cluster's main strengths?

We believe we possess many strengths here at GRN, one being the active interaction we have with our members and between members. We are also very proud of our close ties with Lappeenranta-Lahti University of Technology (LUT) which gives our cluster access to vital new science research.

What is your cluster's proudest achievement(s) to date?

We are extremely proud of all pilot projects run by our members e.g. Europe's largest energy storage, which was the first connected to Finnish electricity network, Elstor heat storage connected to Lappeenranta district heating grid, Tuulimuukko wind park and Kivisalmi pumping station to improve the water quality at Pien-Saimaa, these are but a few of the pilots our members have carried out. We are also very proud of the Green Electrification Ecosystem deal with the Finnish Government to support the innovation driven growth, competitiveness, vitality, employment and internationalization of the region.

What is in the pipeline for you in 2022?

We are looking forward to a busy 2022. We will be preparing for the Future Energy Solutions conference in August 2022. We will also be promoting the P2x pilot plant, South Carelian Electric Test Lab and PV Plant to the region. In addition to this we will have plenty of lobbying work; solar power property tax processing and wind power permissions in Eastern Finland.

**What made you want to join ICN?**

To extend Water Alliance's network in the cleantech sector and to connect business opportunities originating from this network to the Dutch water technology sector

What are your cluster's main strengths?

The strength of the Water Alliance lies in the water technology field. We are a network organisation for the Dutch water technology sector with more than 110 members (mostly innovative water technology providers). The companies in our network have innovative solutions for global water challenges. Making connections between water related challenges/innovation needs and innovative water technology solutions is our daily business.

Furthermore, Water Alliance is part of WaterCampus Leeuwarden. This is the European innovation ecosystem where companies, research institutes and governments cooperate in the field of water technology and where new breakthrough water technology solutions are developed and scaled-up. At Water campus it is all about accelerate the time to market.

What is your cluster's proudest achievement(s) to date?

We are proud of a lot of achievements from the last 10 years but we are specifically proud that we can make relevant business connections for our members on a daily basis. Furthermore, we are proud of the fact that we can support water technology companies with different services and facilities within our WaterCampus Ecosystem. An example is our Water Alliance Innovation Stimulation Award (WIS-award) where the winner receives a marketing package of €10.000. Please see hereby testimonials of past winners: <https://wisaward.nl/past-winners/>.

What is in the pipeline for you in 2022?

In 2022, we are part of several projects wherein we connect the European innovative ecosystem in the field of water (technology) to case-owners/end-users with a water challenge/innovation need. For example via the project EU Techbridge. In this project we connect innovative European companies with end-users from North America which are looking for innovative solutions for their energy or water challenge/innovation needs. Furthermore, next year we hope we can travel again to attend several international events and trade fairs. One of the most important events for us next year is the European Water Technology Week from 19 till 22 September which we organise in our hometown Leeuwarden. During this week we organise a conference and trade fair where all aspects of water technology innovation will be addressed.



Arto Nikkanen,
Greenreality Chairman



Hein Molenkamp, Managing
Director of Water Alliance