

Innovation for sustainable and resilient regions

Nordic-German roundtables

Åland islands, October 06.-08., 2021

Final report



Introduction

Between October 6 and 8, 2021, the Konrad Adenauer Foundation's Nordic Countries Regional program hosted a roundtable discussion on innovation for sustainable and resilient regions in Mariehamn, Åland islands. The roundtable discussion took place within the course of the Innovation for Sustainable Development in the Nordics Project.

Invited were representatives from several regions in Germany, Åland, Finland, and Sweden working with the implementation of sustainable development in their particular region and beyond. The goal of the roundtable discussion was to explore challenges and potential for innovation for sustainable development on a regional level and the interdisciplinary exchange of ideas and opinions. During the discussions the following topics were covered:

- › Climate Neutral and Fossil-Free Future Paths
- › Decoupling Growth from Resource use: Establishing the Circular (Bio) Economy
- › Digitalization
- › Regional Governance and the Just Transition

We have summarized the results of the talks in this document to provide insight into the participants' thoughts and ideas and to inspire discussion. We have concentrated on the questions that were raised, the obstacles that were explored, and the innovative solutions that were proposed.

In summary, the most significant obstacle noted across all concerns presented was the requirement for a paradigm change toward thinking in sustainable, circular, and resilient systems across all actors involved in the transition.

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With additions from the participants

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1 Summaries of Sessions

1.1 Session 1: Climate Neutral and Fossil-Free Future Paths

In 2015 the international community agreed to keep global average temperature increases well below 2°C above pre-industrial levels and to pursue efforts to keep temperature increases to 1.5°C above pre-industrial levels, recognizing that doing so would significantly reduce the risks and impacts of climate change [1]. Since human activity has contributed significantly to the rise in greenhouse gases in the atmosphere over the last 150 years and therefore to a changing climate [2], mitigation of greenhouse gases is one of the principle initiatives agreed upon internationally in the Paris Agreement [1]. The combustion of fossil fuels for energy supply, industry, and transportation is the largest source of greenhouse gas emissions from human activities in the European Union [3]. That is why businesses, governments, and individuals must collaborate to quantify, reduce, or offset these emissions in order to reach carbon neutrality, decarbonize our civilization, and develop new clean energy sources [4].

Hence, the global energy sector is undergoing a rapid transformation in order to comply with the Paris Agreement's emission reduction targets. In Europe, the EU's Green Deal has laid the groundwork for becoming the first carbon-neutral continent by 2050 [5]. With the "Fit for 55" package, the EU has committed to reduce its emissions by at least 55% by 2030 [6].

In this session, we heard a keynote by Berndt Schalin, CEO of Flexens Ltd. Flexens Ltd. was founded to capitalize on the rapidly expanding business potential associated with the renewable energy revolution and the urgent need to phase out fossil fuels [7].

Questions raised

- › What is Åland doing in terms of achieving carbon neutrality and a fossil free island?
- › What role does and can hydrogen play in the energy mix?
- › How can regions develop a self-sustaining energy system to become more resilient?
- › What role do energy communities play?
- › What role does nuclear power play, and what are the short-term alternatives to bridge the gap in the energy transition from fossil fuels to renewable energy?
- › How can we address public opposition, for example, when integrating renewable energy into the landscape?
- › Time constraints and end dates: Is it necessary to establish a (European) end date for fossil fuels?

1.1.1 Challenges

In this session, innovative solutions and respective challenges were discussed thoroughly touching on many different areas connected to renewable energy. It was highlighted that in a growing society with the global goal of prosperity for all, degrowth cannot solve the crisis. Rather, innovation needs to drive the capitalist society towards a smart consumption of resources.

Nuclear power was mentioned as one key pillar in the transition towards a carbon neutral and fossil free country in Finland and Sweden, while Germany is preparing to phase out the last nuclear plants by 2022 at the latest [8]. So far, nuclear power represents around 35% of both Sweden and Finland's energy supply [9][10]. There are even new plants to be built in Finland, while Sweden rather uses the existing infrastructure for the transition of the energy system. Germany is focusing, among other things, on expanding renewable energies and energy storage, increasing energy efficiency, sector coupling and grid expansion. In order to protect the climate, Germany and the federal states, such as North Rhine-Westphalia, rely on an ambitious climate protection law, which is accompanied in each case by a climate protection plan - the roadmap for achieving the climate protection goals [11][12][13][14]. The nuclear "gap" was discussed as an important issue in relation to reaching decarbonisation and climate neutrality goals.

Certainly the topic of technology efficiency came up highlighting that innovation as such might be important, however, the efficiency of these solutions is key. One example was the use of green hydrogen as a replacement for fossil fuels and its lack of efficiency as an intermediate step for fuel production. Due to the fact that hydrogen is not a primary source of energy, it must be manufactured, which can be done using renewable or fossil fuels. The group agreed that only hydrogen based on renewable energies - meaning green hydrogen - is really sustainable. Great hopes have been placed in power to gas technology. According to all the information available to date, it appears to be the ideal option for storing large quantities of renewable electricity as gas [15]. In order to foster power-to-gas and thus also green hydrogen, energy storage systems should be exempted from end-user charges and levies on electricity purchases. It has been shown that there is a leverage effect to foster the economic performance of P2G plants by reducing state-induced and regulated electricity price components in Germany [16].

Hence, market mechanisms hence were discussed as an important but contested concept. The topic of carbon pricing in relation to the competitiveness of green hydrogen was identified as a main challenge, as also discussed in global media [17]. The increase from around 70 Euros to over 200 Euros poses a significant challenge to the industry and is yet an unresolved issue. Thus, other renewable energy options should not be dismissed, on the contrary, they should be extended.

The lack of efficiency was discussed as causing public opinions turning against hydrogen. Public opposition was also discussed in relation to integrating renewable energy solutions to the landscape. For instance, there is a lot of resistance in Germany against windmills in some areas. In the Nordics, not so much opposition regarding this topic has been observed by the participants, however, it was mentioned that Germany has already implemented many more onshore windmills and the same challenge might be opposed to the Nordics soon.

On a European level the emission trade system (ETS) is an important building block to nudge businesses towards reducing their emissions. However, countries with access to the sea are challenged by the absence of means of transportation in the ETS, especially regarding shipping and aviation. In Åland, transportation accounts for around 60% of all emissions, highlighting the importance of integrating these emissions into the quotation. In Finland, the emissions of the transport sector are also a hot topic.

A European solution is needed to foster the decarbonisation of the transport sector. In line with this, the group discussed the necessity of having a common goal for phasing out fossil fuels in Europe. The current tenor in the Nordic countries is very mixed, while Germany has already set an end date. Germany will phase out coal by 2038 at the latest [18]. The Åland delegation to the Nordic council has proposed an end date to the Nordic council which was met by astonishment, as the belief that the market forces will suitably regulate things is very strong. It was underlined that we require further horizons including things such as negative carbon production in the future. Also, setting a joint end date for the use of fossil fuels was proposed to be a softer transition than through market mechanisms. In this context, the rise and fall of Nokia was discussed as an example [19].

The participants emphasized that the necessary phasing out of coal in Europe alone cannot be the solution since international competition will fill the gap quickly, mentioning the example of Norway's oil and gas extraction. Instruments like the Carbon Border Adjustment Mechanism might be promising in order to stimulate international decarbonisation efforts.

Another point raised were geopolitical issues around energy, e.g. the establishment of offshore wind plants in the Baltic sea, especially for islands like Åland. Germany is reliant on others to decarbonize due to its geography and topography, so it's renewable energy strategy also will have to be based on international cooperation. Regarding green hydrogen, treaties are made at the moment with countries abroad, e.g. Namibia [20].

1.1.2 Ideas for innovation

The transition in general cannot be made without taking a holistic perspective on what kind of system we want to create and what are the benefits of such a system. Local solutions are required and tied into the human perspective. Åland was highlighted as the ideal testbed for energy innovation because of favourable wind and solar conditions, its own energy market regulation and grid area, as well as its ambitious sustainability agenda. The example of Flexens' work on Åland showed that small islands can serve as testbeds for trying out new innovations. For example, renewable energy communities like on the island of Kökar or water-filled batteries like in the Nyhamn mine (see boxes 1.1 and 1.2).

Box 1.1 Renewable Energy Communities

Renewable Energy Communities (REC) refer to collective and citizen-driven energy actions that aim at putting community residents to the forefront of a clean energy transition. They are designed to enhance public acceptance of renewable energy projects and private investment in the clean energy transition, respectively. At the same time, they may directly benefit citizens by improving energy efficiency and cutting electricity expenditures. Energy communities can also help provide system flexibility through demand response and storage by encouraging citizen participation.

The island municipality of Kökar that is part of the Åland Islands, is one of such energy island demo site. With the support of Flexens, the local energy company, the Kökar implementation focuses on residential, educational, and geriatric facilities, where smart control technologies will maximize self-sufficiency as well as the island energy system overall. Solutions include energy storage, solar and small-scale wind generation. Ex: Flexens' plan covers high temperature energy storage systems for schools, beneficial during power outages. Power outages are widespread on islands and in rural areas. Also, for the first time, electric vehicle chargers will be installed on Kökar Island.

Further reading: https://ec.europa.eu/energy/topics/markets-and-consumers/energy-communities_en

<https://flexens.com/flexens-leads-the-way-as-four-energy-islands-including-kokar-transition-towards-local-renewable-energy-communities/>

They are designed to empower communities to “produce, consume, store and sell renewable energy” in order to advance energy efficiency in households [21] and are part of the EU Renewable Energy directive defined in Article 22 [22]. This kind of participatory measure might also prevent public opposition to renewable energy projects and foster social cohesion, among other things. Nevertheless, in many cases, the legal framework for these kinds of energy communities is not in place.

Box 1.2 Nyhamn Energy Mine

The formerly active Nyhamn iron mine in Åland has been converted into an environmentally friendly saltwater battery: Since the wind conditions at the island are really good, extra wind energy is utilized to pump water up into the pit. When the wind is insufficient or the sun doesn't shine, the procedure can be reversed. The water is then transported through turbines, where it creates electricity via kinetic energy.

Flexens is a subsidiary of Allwinds, a land-based wind energy firm, and Pumped Hydro Storage, a Swedish technological company. Pumped Hydro Storage is creating a pumping power technology that will now be evaluated on Åland for the first time. The Nyhamn mine's capacity is initially predicted to be 8 megawatt hours (MWh). This is enough to power 300 bigger homes for a whole day or 80-100 fully charged Tesla automobiles (or 200 Nissan Leaf).

Further reading:

<https://smartenergy.ax/nerlagd-gruva-pa-aland-blir-vattenfylt-batteri/> (in Swedish)

1.2 Session 2: Decoupling Growth from Resource use: Establishing the Circular Bioeconomy

Each year, the European Union generates more than 2.5 billion tonnes of waste leading to several pressing challenges [23]. Hence, the EU is actively revising its waste management legislation in order to encourage a shift toward a more sustainable model known as the circular economy.

A circular economy is a framework for developing systems solutions to global concerns such as climate change, biodiversity loss, waste, and pollution. It is founded on three design-driven principles: eliminate waste and pollution, circulate products and resources at their best possible value, and rejuvenate nature. It is based on a shift toward renewable energy and materials. To transition to a circular economy, economic activity must be decoupled from the consumption of finite resources. This is a paradigm change that fosters long-term resilience, creates commercial and economic opportunities, and benefits the environment and society [24].

The European Commission established the European Union's first circular economy action plan in 2015. It featured initiatives aimed at accelerating Europe's transition to a circular economy, boosting global competitiveness, promoting sustainable economic growth, and creating new jobs [25]. In March 2020, the new circular economy action plan was unveiled as part of the European Green Deal and in conjunction with a planned new industrial strategy. The plan contains ideas for more sustainable product design, waste reduction, and consumer empowerment (such as a right to repair). A special emphasis is placed on resource-intensive areas such as electronics and information technology, polymers, textiles, and construction [23]. Already in 2012, the European Commission has set up a Bioeconomy strategy for Europe with the goal of driving innovation for green growth [26]

While the circular economy bolsters eco-efficiency and the use of recycled carbon, hence reducing the need for additional fossil carbon, the bioeconomy substitutes bio-based carbon from agriculture, forestry, and marine ecosystems for fossil carbon. These are two distinct yet complementary perspectives [27].

However, it is clear that the bioeconomy and circular economy share a common goal: a world that is more sustainable, resource efficient, and has a low carbon footprint. Both the circular economy and the bioeconomy eschew the use of additional fossil carbon to meet climate goals.

In this session, Patricia Wiklund, the Creator and Director of Invenire a “making-things-happen”-agency and consultancy opened the session with an insight about her work with the circular economy on the Åland islands.

Questions raised

- › What effect did the Covid-19 pandemic have on regional supply chains?
- › How are we going to change the linear system more generally, given the separation of all the parts of it?
- › How can we improve the image of products made from recycled materials?
- › To what extent is governance agile capable of dismantling silo thinking for systemic thinking?
- › What can be done to foster circular business models?

1.2.1 Challenges

In regards to the establishment of a circular bioeconomy in the EU, the topic of the Covid-19 pandemic on regional supply chains was raised in the beginning of the discussion in regards to self-sufficiency, efficiency and resilience. In Åland, the pandemic had an impact on the design of the Circular Economy Programme, as the aspect of self-sufficiency was added. Another issue in relation to outspread food production was discussed, the “industrial symbiosis”, as divided farming sectors hinder creating synergies between different production lines. In sum, the pandemic created a good opportunity to discuss and think about adaptive measures and foster circular mind-sets.

The session reaffirmed the critical nature of a mind-set shift. This time, the circular mind-set was introduced as a critical component of the public and private sectors' transformation towards a green economy, as well as the transformation of society as a whole. The shift towards a circular economy was mentioned to be the biggest business opportunity next to climate change. Nevertheless, the price and quality are still the decisive criteria when it comes to the purchase of materials and new raw material is often cheaper and perceived as superior to reused material. It was mentioned that there is still a misconception that the costs of circular material are too high. The perception of brands, e.g. “Made in Germany”, was mentioned to be important for customers when it comes to the quality of a product.

A significant impediment to driving the circular transition was mentioned as the difficulty of "operating in silos," such as in ministries, although circular economy solutions spread over several disciplines. For example, digitalization and circular economy are two concepts that combined have huge potential for change. Numerous strategies for dismantling silos and enhancing agile, transdisciplinary, systemic governance, particularly in the public sector, were discussed in order to establish structures to facilitate the transition. Agreements are incredibly complicated even on very simple matters – you need both agility but also accountability and responsibility.

Adding to that, it was mentioned that so far there is still little realization and awareness in general public that a linear economy is an issue.

1.2.2 Ideas for innovation

The concept of systems thinking (see figure 1) was presented as a foundation for developing a more holistic and interconnected perspective necessary for embracing, designing and establishing circular systems.

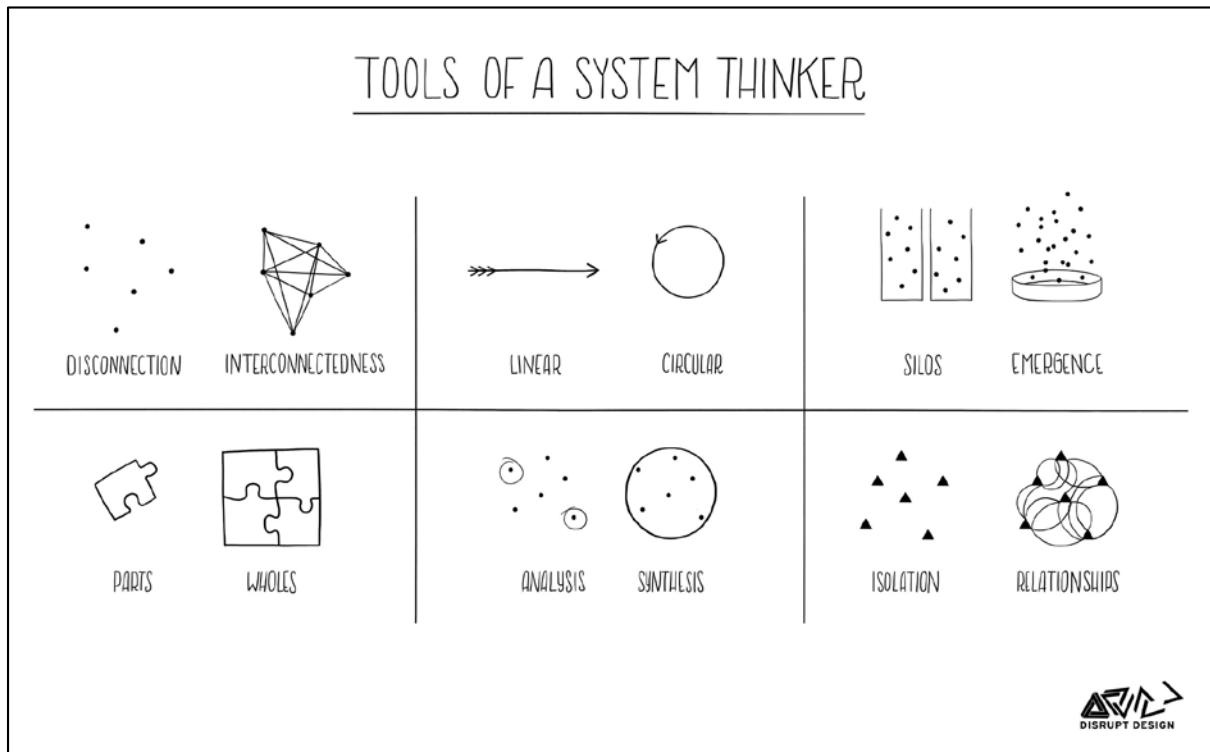


Figure 1: Tools of a system thinker (Leyla Acaroglu, 2017)¹

In the discussion it was underlined that circular economy is not only about the end of the product life cycle, the “waste”, but about the whole life cycle from the inception. Therefore, reconsiderations towards circular systems need to start at the design phase. These systems also require a high degree of collaboration which might be hindered by the competitive businesses sector.

The German Circular Economy Act (“Kreislaufwirtschaftsgesetz”), which has been amended in 2020, has the goal of increasing the development of the circular economy through the avoidance and, above all, the increased recycling of waste [28]. In addition, Germany has regulations for specific product waste, such as packaging, end-of-life vehicles, batteries, and electrical and

¹ Leyla Acaroglu (2017). Tools for Systems Thinkers: The 6 Fundamental Concepts of Systems Thinking. URL: <https://medium.com/disruptive-design/tools-for-systems-thinkers-the-6-fundamental-concepts-of-systems-thinking-379cdac3dc6a> (last accessed: 12.10.2021)

electronic equipment [29]. The government of North Rhine-Westphalia is also strengthening the circular economy and wants to significantly increase the use of recycled plastics in particular. To this end, it has presented a draft legislation for a North Rhine-Westphalia Circular Economy Act. Among other things, it provides for the introduction of a general obligation to give preference to so-called *recyclates* over primary materials in the context of public contracts. In particular, the use of recycled building materials is to be increased when awarding public construction contracts [30]. In order to strengthen start-ups in the circular economy in North Rhine-Westphalia, Circular Valley is presented as a good practice example: in the Rhine-Ruhr metropolitan region, NRW is to become a global development focus for the circular economy and the high-quality reuse of products in the sense of the EU's "Green Deal" (see box 2.1) [31].

In Finland and Sweden, circular economy action plans have been launched [32][33]. Especially Sitra, the Finnish Innovation Fund is taking on the topic of Circular Economy in its programmes and designed the world's first national road map to a circular economy in 2016 [34].

As a particular challenge but also possible potential scale up solution, public procurement was discussed. Following a study by the World Economic Forum in collaboration with the Ellen MacArthur Foundation and McKinsey & Company the circular economy represents a "net materials cost savings opportunity of US\$ 340 to 380 billion p.a. at an EU level for a 'transition scenario' and US\$ 520 to 630 billion p.a. for an 'advanced scenario,'" [e]. Examples of the circular economy as a business opportunity were also discussed, for example, circular valleys or the developments in the Vaasa region in Finland (see boxes 2.1 and 2.2).

Box 2.1 Circular Valley Wuppertal

Circular Valley is a global hub for establishing a circular economy. Local and international start-ups join together to close material loops along current value chains, establish policy proposals and political frameworks and educate the public on the topic of circular economy. Circular Valley is based in Wuppertal, NRW, in one of Europe's most dynamic commercial region, with over 20,000 international firms, 70 universities, and about 160 million inhabitants within a 500 km radius. The Circular Valley Foundation was established in May 2021, and the first batch of 15 multinational start-ups entered the Circular Economy Accelerator in June 2021, largely virtual due to the Covid-19 pandemic. Every two months, a new cohort meets in Wuppertal-Laaken to develop ideas and business models with the help of industry and academic mentors. On Demo Day, the start-ups exhibit themselves and their ideas to partners and the general public. The Circular Economy Accelerator is funded by the Circular Valley Foundation, the state of NRW, and the EU, among other various sponsors.

Further reading: <https://circular-valley.org/>

Box 2.2 CERM - Strategy- and action plan towards circular economy for the Ostrobothnia Region in Finland

CERM develops a roadmap, including a strategy and action plan, for the three regions of Ostrobothnia, Finland, in order to foster the development of a circular economy and sustainable society. The objective is to identify the most important branches in each region with the highest volume and the easiest implementation of circular economy. The strategy and action plan are founded on statistics, the social structure, the population, and business life. Local regional development companies have extensive knowledge of businesses, their various branches, and their potential to transition to a circular economy and sustainability. The action plan will establish multiple clusters of businesses that effectively utilize material flows from waste to new products in their manufacturing processes.

The project is concluded with a strategy and action plan for the region outlining how the region can most efficiently use all of our resources and finances while transitioning to a completely circular and sustainable society.

Further reading: <https://www.vasek.fi/regional-development/cerm-strategy-and-action-plan-towards-circular-economy-for-the-ostrobothnia-region-in-finland/>

Roadmap: <https://www.vasek.fi/ostrobothnia-in-transition/>

Åland was highlighted as an attractive bioeconomy system due to the small but complete society, spatial proximity, integrated production, diversity, relationship-based communication, creative humans and the still unleashed potential. The Hungry for Saltvik project was introduced as an example (see box 2.3).

Box 2.3 Hungry for Saltvik

The Hungry for Saltvik was a project about better circulation of nutrients and a more active food citizenship in the municipality of Saltvik, Åland islands, that ran between 2019 and 2021, as a pilot area.

The project was funded by the Finnish Ministry of Environment and Orkla Confectionary and Snacks Finland. It focused on the stakeholders of individuals as part of the food system, farmers, municipalities and food industry representatives looking for new circular solutions as part of an agroecological symbiosis. The project resulted in a new collaboration model between a dairy farm Haga Kungsgård and the Orkla potato production facility.

Further reading: <https://www.hungryforaland.fi/> (in Swedish)

Further, Patricia shared her most valuable insights about working with the circular economy (see box 2.4).

Box 2.4 Lessons from Patricia's work with Circular Economy

- Don't start without the right model
- Seek win-win-win
- Trust and vulnerability are key
- Unlearn old models and silo thinking
- influence policy and regulations
- ITT - It takes time
- Make it real - lead by example

For more information, please contact Patricia Wiklund: patricia.wiklund@invenire.fi

Subsequent to the session, the group visited a local dairy farm and was guided around by the local farmer Christopher (see photo 1 and 2). The aim of this visit was to understand the collaboration on nutrient recycling with the farmer and the local Orkla factory (see photo 3). Therefore, after the farm, the group went to visit the biogas plant at the local Orkla factory.



Photo 1: Introduction by Christopher at the dairy farm (Konrad Adenauer Foundation, 2021)



Photo 2: Exploring Christopher's farm (Konrad Adenauer Foundation, 2021)



Photo 3: Visit to the Orkla factory's biogas plant (Konrad Adenauer Foundation, 2021)

1.3 Session 3: Digitalization

The European Commission has proposed a "Path to the Digital Decade," a concrete plan for transforming our society and economy into a digital economy by 2030 [35]. This Path to the Digital Decade will concretize the EU's digital ambitions for 2030. Further, it will establish a governance framework based on an annual cooperation mechanism with Member States in order to achieve the Union's 2030 Digital Decade targets in the areas of digital skills, digital infrastructures, business and public service digitalization [36]

The pandemic emphasised the critical role of digital technology in achieving a sustainable and prosperous future. The crisis exposed a divide between businesses that are digitally savvy and those that have yet to adopt digital solutions, as well as the divide between well-connected urban, rural, and remote areas. While digitalization creates a slew of new job opportunities, it also poses a significant challenge to the European market. For example, in 2020, over 500,000 cybersecurity and data science job openings will go unfilled [35].

We started this session with a keynote by Anna-Lena Svenblad, Corporate Development Director from Paf, an international gaming company founded in 1966 on the Åland islands, which has experienced such a challenge. With their grit.lab initiative they are starting a new innovative coding education together with tech companies on Åland in order to fill the skill gap on the islands (see box 3.1). It is the first of its kind in the Nordics.

Box 3.1 Grit:lab

grit:lab is a coding program on the Åland Islands, designed for adults over the age of 18 that are interested in gaining new skills and exploring career opportunities in technology and development. The program aims at attracting new talent to the Åland islands to promote the future of the technology and start-up industry on the islands. Paf, Åland's responsible gaming company, has been assigned by the Åland government to launch the grit:lab program in order to establish a partner network in collaboration with various technology companies on the Åland Islands. The goal is to connect students with local businesses. It is based on the 01 edu-system pedagogy.

Further reading: <https://gritlab.ax/>

A similar programme called "Foo Café" exists in Malmö and was mentioned in connection to grit:lab (see box 3.2).

Box 3.2 Foo Café

Foo Café is a gathering spot for everyone interested in media and technology, including creatives, architects, programmers, gamers, geek ladies, or serial entrepreneurs. It provides a space to connect and create on a daily basis. Additionally, Foo Café hosts forums for startups to showcase their products and services, CSR programs that assist immigrants, newcomers, and other disadvantaged groups in obtaining jobs through coding education, and free coding workshops for children (accompanied by an adult). The service is free of charge and financed by several sponsors. Currently, there are two Food Cafés in Sweden: in Stockholm and in Malmö.

Further reading: <https://www.foocafe.org/>

After the session, the group had the opportunity to visit the Paf headquarter in the outskirts of Mariehamn in order to learn about the principles of responsible gaming.

Questions raised

- › What connections exist between sustainability and digitalization? What synergies are possible?
- › Will digitalization make us more vulnerable or more empowered?
- › What role do lifelong education and skill development play?
- › What is the digital divide between rural and urban areas, and how can this divide be bridged?

1.3.1 Challenges

The Covid-19 pandemic was mentioned to have led to a much more interest in agile governance. Yet again, bridging the gap between the different silos, e.g. agencies in Sweden, has been identified as a challenge.

Building up the keynote by Paf, the discussions started with a debate about “Learning how to learn” and new ways of learning to enhance individuals' capacities to solve current problems following the question: “how can we adapt better to a quickly changing environment and skill requirements. The lack of skilled workers creates a big challenge in the transition to a sustainable digital economy, especially in countries with a strongly ageing workforce. The question was raised if we should rethink our education system. However, the point was made that education provided by the private sector complements school education and is in general nothing new. The private sector just adds tailor made challenges to the education system. Life-long learning needs to be encouraged.

Again, the agility of governments and institutions in welcoming and facilitating these new forms of learning was raised.

In general, we discussed the increasing reliance on energy intensive climate solutions and the rising energy consumption due to digital activities in civil society and the vulnerability that comes with it. There was the suggestion that monitoring systems are improved with digitalisation, which increases measurability and resilience. The topic of energy and digitalization was discussed thoroughly.

Related to the topic of digitalization and data, security obstacles were mentioned.

1.3.2 Ideas for innovation

In connection with sustainable development, we discussed that digitalization is not an end in itself, but can provide interconnected solutions. For example, digital solutions allow sustainability assessments and tracking in supply chains or resource use. Digitalization and data can also be tools for planning and foresight when it comes to climate change adaptation. Tools to create new and innovative ideas to solve environmental problems like hackathons or other digital events were mentioned.

Again, Åland was mentioned as an example of the intent to enhance regional competitiveness through establishing a tech hub with collaboration among several digital enterprises. Several other examples of innovative solutions were mentioned (see boxes 3.3 and 3.4). The Åland government has tried to use so-called “hackathons” to solve current issues e.g. around ferry routes on the Baltic sea. These hackathons created a lot of new ideas that weren’t considered from a political side before and were scaled up and invested in (see box 3.3). However, there has been an issue with implementing the fruits of hackathons, for example including them into the more political and formal side of things with regards to the legislation. In Sweden it was mentioned that there are not enough financial resources for “hack the crisis”-events.

Also, the Åland index was mentioned, which tracks when buying things with your credit card the carbon footprint of your purchases – has been expanded to another company which actually limits the spending on your card according to the climate effect (see box 3.4). These kinds of solutions are observed by the Finnish participants in their home country as well.

Box 3.3 Stormig.ax and hackathons

Since 2018, Stormig.ax has been established as a website where Ålanders may digitally submit issues, as well as ideas and proposals for further developing the islands. As a continuation of the project, a competition based on the issues indicated in form of a “hackathon” for example regarding the archipelago traffic, was directed by the Åland Digitalization Commission.

During the Covid-19 pandemic, the platform allowed for the submission of suggestions addressing the crisis’ issues and how to build back better after the pandemic. The results were used as policy recommendations in policy reports. All proposals are anonymous and can be supported by the public.

Further reading:

<https://stormig.ax/#/>

<https://alandsradio.ax/nyheter/tva-vinnare-tavling-skargardsbokning>

Box 3.4 Åland index

The Åland Index is a cloud-based service for climate impact calculations and a joint venture between Ålandsbanken and Doconomy. Åland Index is the industry-leading index for calculating CO2 emissions associated with payments and financial transactions. It provides a comprehensive and innovative user experience for calculating, integrating, communicating, and activating climate impact so banks and payment providers can supply end users with data about their climate impacts.

Further reading:

<https://alandindexsolutions.com/>

<https://doconomy.com/>

1.4 Session 4: Regional Governance and the Just Transition

The primary, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) is "Leave no one behind". It embodies the unwavering commitment of all UN Member States to eradicate poverty in all of its manifestations, to abolish discrimination and exclusion, and to reduce the disparities and vulnerabilities that suffocate individuals and humanity as a whole [37]. Thus, implementing the promise does not imply a distinct path of action, but is inextricably linked to the actions necessary to accomplish the SDGs. In order to maintain and strengthen social cohesion, the transition must be fair and equitable and include everyone.

A Just Transition can be a vision-driven, unifying, and place-based collection of principles, processes, and practices for generating economic and political power in order to transition from an extractive to a regenerative economy. This also requires a holistic and waste-free approach to production and consumption cycles. The transition itself must be reasonable and equitable, with reparations redressing past wrongs and establishing new power arrangements for the future. The Just Transition encapsulates both the destination and the way of getting there [38].

On Åland, the Bärkraft network acts as a platform for all forms of organisations on Åland, working towards a common goal of a viable and sustainable region (see box 4.1). Micke Larsson, the Secretary General of the Development and Sustainability Council of Åland gave us an insight into the vision and ideas behind the Bärkraft network in the beginning of the session.

Questions raised

- › What does the word "just" mean in the phrase "just transition"?
- › Who will bear long-term responsibility for the political transition?
- › How can we ensure that meaningful opportunities for participation exist in order for people to take ownership of the process?
- › How can we use metrics and data to help us solve sustainability problems?
- › What role does the private sector play in these regional governance issues? How do we strike a balance between using soft and hard tools to solve problems and empower people?
- › How can we begin to shift these overconsumption mindsets, and what role does grass-roots activism play in this process?
- › Should we view the economy as a means to an end rather than the end in itself?

1.4.1 Challenges

The discrepancy between the actual legislation and its implementation on the ground was thoroughly discussed during this session, for example, in relation to adhering to outdated legislation when attempting to implement new innovative ideas. In this sense, system readiness has been questioned, as tracking target implementation frequently adds another layer of complexity to these processes and results in additional costs that are especially difficult to manage for small societies. Thus, while EU directives may pave the way for the transition, their implementation, particularly in small societies, can be challenging. Nevertheless, transparency was recognized to be an important tool to drive the transition and involve all stakeholders.

Another controversially discussed topic was creating the will and demand of the people in society for these changes and thereby the question what kind of combination of soft and hard tools are necessary. A big potential for creating innovative governance tools was mentioned.

1.4.2 Ideas for innovation

Certainly this session revolved around the Bärkraft network (see box 4.1), whose mission is to create a positive (yet maybe utopian) vision for society. It does not include challenges in the first place, but instead delegates them to concrete roadmaps tasked with implementing the vision. The government aims to act an enabler for empowering individual actors from civil society. The goals defined in the vision are science based and therefore highly ambitious, yet creating a vision of what the society should strive for. This kind of multi-stakeholder collaboration and guidance as a supporting structure for implementation was discussed thoroughly. Following the discussion on

the challenges of implementation costs and complexity, changes to reporting structures for decision support were discussed.

Box 4.1 Bärkraft network

Bärkraft.ax is a network created by and for the inhabitants of the Åland islands with the goal of establishing a “flourishing and viable community on the Islands of Peace”. The network was founded in 2016 and is based on the Development and Sustainability Agenda for Åland, which was agreed upon by the regional parliament and government. Bärkraft.ax serves as a hub for all Åland-based organizations dedicated to the common goal of a viable and sustainable region. The network's formation is firmly ingrained in society, and hence enjoys a high level of confidence and trust among citizens and enterprises. This confidence is what enables society to move toward a more sustainable future.

Further reading: <https://www.barkraft.ax/english>

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