

INTERVIEW SUMMARY REPORT

PROJECT NR: P20026

NORDIC TRANSITION PARTNERSHIP FOR CLIMATE NEUTRAL CITIES 2030



27 April 2021



Voices from Nordic Climate Neutral Frontrunners

- Interviews with 21 small and medium sized municipalities



Nordic Transition Partnership for climate neutral cities 2030



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1. Background

This report is a part of the project Nordic Transition Partnership for climate neutral cities 2030 (NTP). NTP aims to establish an operational Nordic partnership that will accelerate the transition towards climate neutrality in small and medium sized municipalities by 2030.

As of today, most larger municipalities in the Nordics have developed and started to implement Smart City and/or circular economy strategies, including transformative business models based on sharing, industrial symbiosis networks etc. Some of them include a citizen-centric approach and collaboration with local academia and business. Research based innovation programs that include all of these four sectors (quadruple helix) are needed in order to transform the way cities work.

Many of the smaller municipalities have the same intentions but might lack time, funding or resources to follow the same progress. The challenges that these municipalities face when turning strategy into operation is not unique to any Nordic country. This project brings some of the leading Nordic organisations that offer support in these processes together in order to share best practice and to examine comparative advantages.

The NTP project builds on previous and current R&I work in the Nordic countries and is part of the Circular Cities & New Circular Solutions programme funded by Nordic Innovation.

1.1 Aim and goal with the project

The ambition of this partnership is to help turning ambitious strategies into concrete action on a local level, by offering support to small and medium sized municipalities through a joint Nordic methodology that recognizes that municipalities are in the position to enable and encourage the local business sector to provide transformative innovations that meet the needs of the city and its inhabitants, in order for them to lead a good life within planetary boundaries.

We want to provide small and medium sized cities with a Nordic toolbox and roadmap that can help with turning strategies into action as well as implementing and scaling up new systems and solutions by giving directionality for their investment efforts. The partnership will also develop a support offer for the municipalities based on the partners' different strengths. Another important objective is to connect to other relevant initiatives, networks and project in order to increase the speed of collaboration, knowledge-sharing and implementation of sustainable solutions.

1.2 Project key elements

The key elements of this project are **interviews** with Nordic municipalities, interactive **workshops** based on the interview results, a **toolbox** based on the workshops, a **roadmap** for long-term investments, and a **value proposition** / business offer to municipalities for further collaboration.

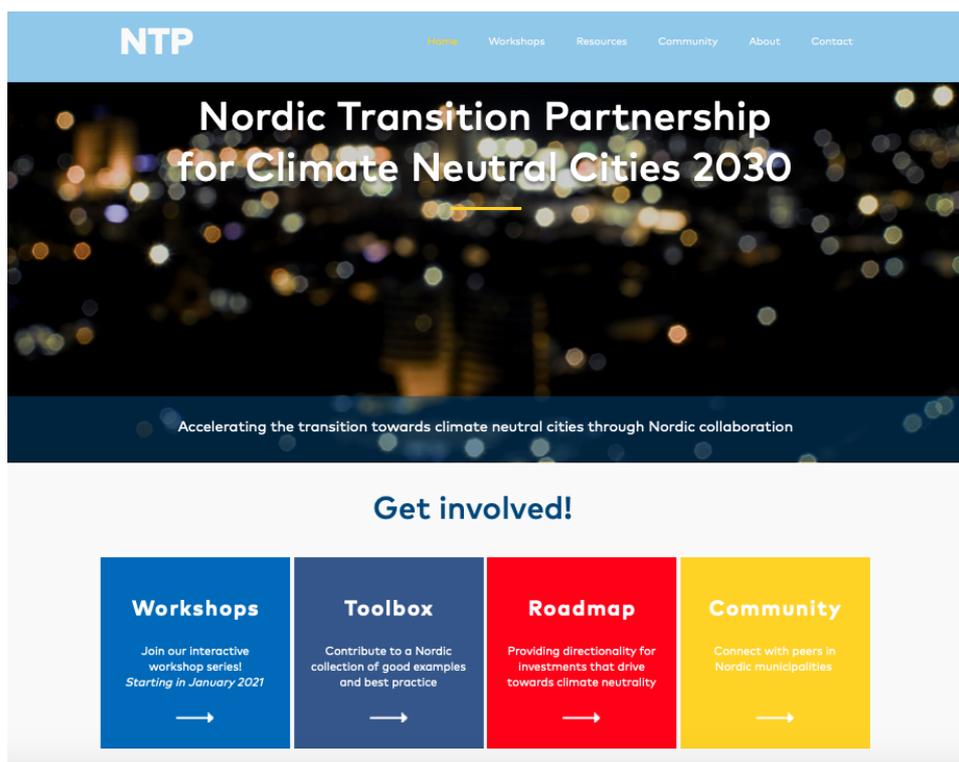


1.3 Project partners

The NTP project is run by four partners: Smart Innovation Norway (project manager), Reykjavik municipality (IS), Tampere municipality / Business Tampere (FI), Viable Cities (SE) and Smart City Insights (DK).



More information can be found at the project website:
www.nordictransitionpartnership.org





2. Interview purposes and goals

The interviews form the basis for the whole NTP project since they gather information that will be used in different ways throughout and after the project. Thus, there are several purposes for the interviews:

- Gather examples and ideas for the toolbox and the roadmap that could be of use for a wider group of municipalities.
- Create an understanding of what kind of support the small and medium size municipalities need regarding circular economy and climate neutrality, so we can provide it through our networks and other activities.
- Engage municipalities in Nordic knowledge exchange in this and coming projects.

The goal was to get five interviews from each partner country, that is 20 in total. We wanted the design of the interview process and the questions to result in that the participants will:

1. Think that here is a lot to learn from other Nordic cities regarding how to take actions in order to gain climate neutrality and a circular economy, and also that participating in this project will give them access to this information.
2. Feel that this is a professional project where they will get useful information and networks and where they also would like to contribute.
3. Participate in the project through interviews, workshops and information contribution as well as become part of new spinoff projects.



3. Interview participants

The selection of the municipalities to be interviewed was based on the following criteria:

- Five municipalities from each country, mainly from our already established networks.
- A good mix of municipalities regarding size and special features such as airport, large industry and commercial port.
- Both municipalities with a long and extensive record of working towards climate neutrality and/or circular economy and those rather new to the subject although with a keen interest.

Our ambition was to interview a climate strategist at the municipality or with similar responsibilities. However, the result was a broader mix of roles depending on the situation at the municipality.

In the end, the following 21 municipalities participated in the interview study:

Country	Municipality	Population size	Special themes	Goals
Denmark	Gladsaxe	69 600	Circular economy, Buildings 100% recycled, material exchange	-70% emissions by 2030
Denmark	<u>Køge</u>	37 700	New model for CO2 footprint	CO2 neutrality 2050
Finland	<u>Ii</u>	9 800	Emission reduction leader in Finland	-80% CO2 emissions by the end of 2020
Finland	<u>Lempäälä</u>	23 500	A strategic goal to reduce 80% of emissions from 2007 levels to 2030, new approaches to produce renewable energy locally (LEMENE)	Carbon neutrality 2030
Finland	<u>Lappeenranta</u>	73 000	European Green Leaf winner 2021 - themes nature, water, green electrification, climate change	Carbon neutrality 2030
Finland	<u>Lahti</u>	120 000	European Green Capital winner	Carbon neutrality 2025



			2021, abandoning all charcoal burning in the beginning of 2019	
Finland	<u>Tampere</u>	238 000	Carbon neutral Tampere 2030 - roadmap , new renewable energy and waste treatment investments, tram	Carbon neutrality 2030, 6aika city
Iceland	<u>Hornafjörður</u>	2 400	Car free thursdays	Carbon emissions reduction plan in the making
Iceland	<u>Hveragerði</u>	2 700	Effective waste sorting system and biowaste in a loop	
Iceland	<u>Akureyri</u>	19 000	Free city bus, effective waste sorting scheme	Carbon neutrality 2030
Iceland	<u>Kópavogur</u>	38 000	Implementation of SDGs in a OECD project	
Iceland	<u>Reykjavík</u>	131 000	Green steps, new green investment plan	Carbon neutrality in 2040
Norway	<u>Marker</u>	3 595	A short distance district heating system based on heat exchange. Electric cars shared with inhabitants. Public charging points installed.	50% in 2030 (compared to 2016 levels), fossil free energy (including transports) in 2040. <i>Goals to be decided, the plan is out for public hearing now.</i>
Norway	<u>Skiptvet</u>	3 805	Green sludge treatment / biogas. Smart Water meters. Smart mobility, sharing e-bikes and EVs.	Refers to the Paris Agreement in the community development plan.
Norway	<u>Halden</u>	31 373	Digital food waste reducing project, electric car & bike pool	30% in 2024, 60% in 2030.



			for inhabitants, garbage trucks run on locally produced biogas.	Climate & Energy plan with actions measured annually.
Norway	Narvik	21739	Applying for the Alpine Ski World Championships in 2027. Climate book-keeping in the central area plan for Narvik, putting a price on ecosystem services. A new mobility plan.	The most sustainable Ski World Championships ever. New Municipality Plan based on Agenda 2030 is now co-created with citizens. No defined/decided climate goals today.
Sweden	Östersund	50 000	Sustainable transport, renewable energy, sustainable investments, smart built environment, sustainable lifestyle	Fossil free and energy efficient 2030, the municipality organisation should be fossil free 2025
Sweden	Varberg	63 000	Sustainable ecosystems, sustainable use of resources, thriving society	Have a leading role in sustainable development through a combination of sustainability and creativity
Sweden	Växjö	95 000	Fossil free energy production and transport, sustainable consumption and production, circular built environment	Climate neutral 2030
Sweden	Umeå	130 000	Citizen engagement, circular economy, climate investment, regional collaboration, digital support	Climate neutral city 2030 and municipality 2040
Sweden	Örebro	156 000	Equal opportunities, quality of life through the built	Climate positive municipality 2050 (the municipality as an



			environment, healthy ecosystems and biological diversity	organisation climate neutral 2030), health equality in all ages 2050, various sub-goals reached 2030
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The names of the respondents can be found in Appendix A.



4. Method

The interview study was conducted in the following steps:

1. The design of the study and the interview questions (see Appendix B) were developed and decided upon by the partners, after receiving advice from Professor Kristian Widén at Halmstad University.
2. Each partner suggested municipalities to interview, and a decision was made jointly regarding which ones to pick. In 2021, Smart City Insights (Denmark) joined the project, and two additional danish municipalities were interviewed.
3. Invitations were sent to the municipalities, and if they accepted participation a date was set for the interview and they received most of the interview questions before. In the few cases where municipalities did not have time to participate, another municipality was recruited instead. The exception was Norway, where only four municipalities were interviewed before the period ended.
4. The interviews were recorded and conducted in English, with one none-native speaker from the partners asking the questions and the native speaker taking notes. One municipality preferred to send in the answers in writing rather than do an interview, which was accepted. They took around 1,5 hours to conduct. A few times some questions were skipped due to time restraints.
5. When all the interviews were done, the analysis was made by the same team who did the interviews. Although the work was somewhat divided among the team, the conclusions and discussion were developed jointly.
6. A preliminary report was sent to Professor Kristian Widén at Halmstad University, as well as all respondents, for comments and then a final version was made and published at the project website.



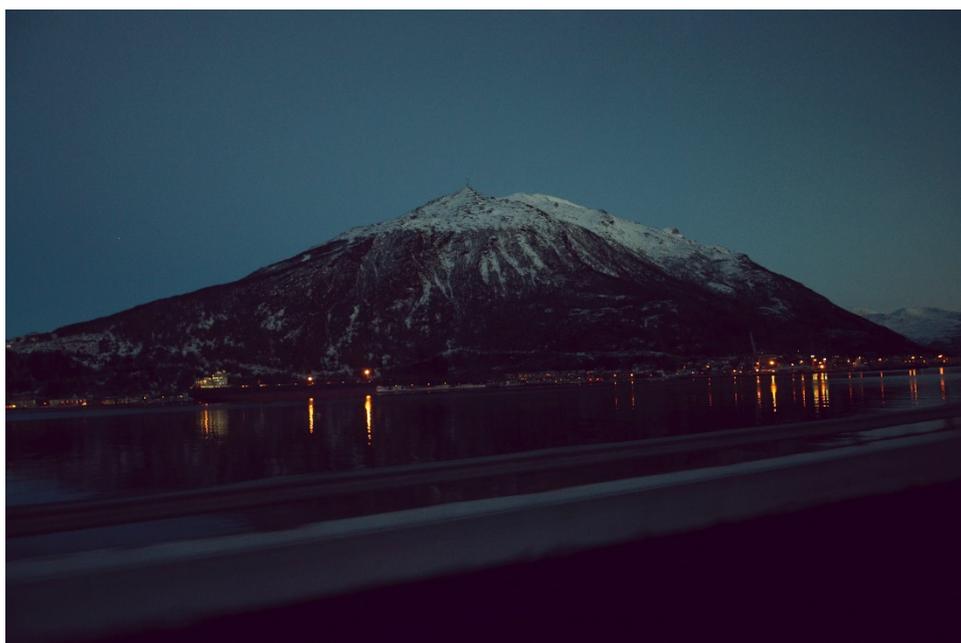
5. Results

The results from the interviews are described below, following the order of the questions asked (see Appendix B). The analysis of the results is presented in the sections following, together with suggestions for future actions. Links to reference material and more in-depth reading can be found at the [Nordic Transition Partnership website](#).

5.1 Examples of efforts to reach climate neutrality and circular economy

The respondents were asked what they had done so far in order to reach climate neutrality and to share something that they were particularly proud of. The examples came from many different sectors within the municipality and varied in character.

The sector that was mentioned most frequently was the energy sector and the examples were mostly centred around the transition from fossil fuels to renewable energy sources. Examples of this are Akureyri's use of biodiesel and methane, and the Solsidan solar plant near Varberg. Other examples within the energy sector focused on energy efficiency and reduced energy demand.



From Narvik, Norway

Many examples were related to the municipalities' already existing plans and strategies, or other collaboration initiatives they were a part of. Some of the municipalities highlighted their current climate neutrality goals as being examples of something that they are proud of while others emphasized how important collaboration with other networks or initiatives is to reach climate neutrality. Examples of this are Tampere's 2030 carbon neutrality roadmap that was made in cooperation with every city unit and Narvik's ambition to host The Alpine Ski World Championships, where they focus on sustainable event management.

Numerous municipalities mentioned examples from the waste sector. The collection of organic waste is what was mentioned the most, and initiatives to reduce food waste.



Växjö is one of the municipalities that have an effective organic waste collection system.



From Växjö, Sweden

Urban planning was mentioned many times as something that has a great impact on their journey to climate neutrality. Some examples include planning strategically to enhance walkability and enable more people to cycle. Other examples have to do with forestry and land use within the municipality. Examples of urban planning measures that contribute to the goal of climate neutrality are Reykjavik's urban densing strategies and Lempäälä's strategic city planning that favours walking, cycling and public transport.

The transport sector is also represented by a few examples. Most examples are transport sharing initiatives: electric car sharing or bike sharing. For the electric car sharing, Marker, Halden and Lempäälä have started car sharing schemes where the municipal employees use the cars during office hours and citizens can use outside working hours.



From Reykjavik, Iceland.

Citizen engagement is a topic that a few municipalities mention as something they have focused on where the examples include different types of collaboration methods with citizens, companies, and universities.

Other examples include green investments, material use in the building sector and a carbon offset program.

Køge emphasised the importance of being honest with overall municipality's emissions, incorporating also those being emitted outside municipal borders. For this reason, they have developed a new tool for emission calculations providing a more realistic picture.



From Køge, Denmark.

5.1.1 Reasons for choosing these examples

When asked why the respondents chose to highlight exactly these examples, most said that they chose examples that had the biggest CO₂ emission reductions. Many examples are derived from the overall municipal plan or strategy. The position of the respondents also influenced which examples were chosen, as they often chose to highlight something that they work on themselves. Other reasons for choosing their examples were that it was something that raises attention, important to locals or simply just “the most obvious ones”.

5.1.2 Organization models for horizontal collaboration

The way the municipalities have organized themselves to meet horizontal and long-term challenges varies greatly.

The Danish, Finnish and Swedish municipalities in this study stood out as generally more well set up for this as all of them mentioned cross-departmental or -sectoral groups that met regularly to discuss, decide, and monitor actions related to climate issues. In Gladsaxe municipality, climate neutrality and UN’s SDGs guidelines are implemented in every department, so everyone know how to contribute to the goals within their area. Some of them had long-term programs with attached budgets that each department had to contribute to, and some had digital platforms that helped create transparency between departments where everyone could see each other’s planned activities, actions and goals as well as contributing to progress reports. Several of the respondents mentioned the need for a systematic approach to this kind of horizontal collaboration and many of them have come quite far in terms of internal organization. Most of them still need to improve the way that they include citizens in more meaningful ways than the dialogues that municipalities are obliged to have whenever new larger development projects are planned. Business and academia are often involved in specific theme-based collaboration projects.



Most of the municipalities from Norway and Iceland mentioned more fragmented collaboration models and initiatives depending on the topic, but also some well-established involvement platforms for citizen engagement on Agenda 21 and the Agenda 2030 goals. In Norway, some are using the municipality climate and energy plans to identify common goals and actions that the whole society can get involved in. The Smart City innovation programs that Smart Innovation Norway run in collaboration with the Norwegian municipalities in this study were also mentioned, as some of the projects within them relate to climate neutrality. Some expressed a need for a more structured way to collaborate horizontally within the organization as well as with involving academia, businesses and citizens.

5.2 Collaboration with external partners

The respondents were asked how much and in which ways they co-operate related to climate issues and climate neutrality efforts with public sector, businesses, academia, non-governmental organisations (NGO's) and citizens.

All the interviewed municipalities were already active in all of these sectors - especially regarding public sector, businesses and academia. In many municipalities, the role of major public (or private) sector companies related to energy production and waste management is crucial in order to tackle the climate change. Also, the role of academia was seen important in generating and carrying out research, innovation and collaboration projects related to climate work. Many municipalities are already having or planning public procurement processes that take sustainability and climate issues also into consideration in the selection criteria – this is a good way of engaging business sector more in the climate neutrality targets of the municipalities. Some of them have also launched a climate partnership model (for instance Tampere and Lahti in Finland) to engage business sector more in regional climate actions. Similarly, in Iceland, Reykjavik city initiated a climate declaration with businesses in Reykjavik, co-operating with Festa, association of CSR companies in Iceland, that later expanded to Akureyri as well.



From Akureyri, Iceland.

The role of NGO's was considered an efficient way, i.e., in promoting reuse and recycling of materials/goods and boosting sharing economy-based solutions. In many municipalities, it was under consideration to co-operate with the NGOs in the forthcoming years even more than today.

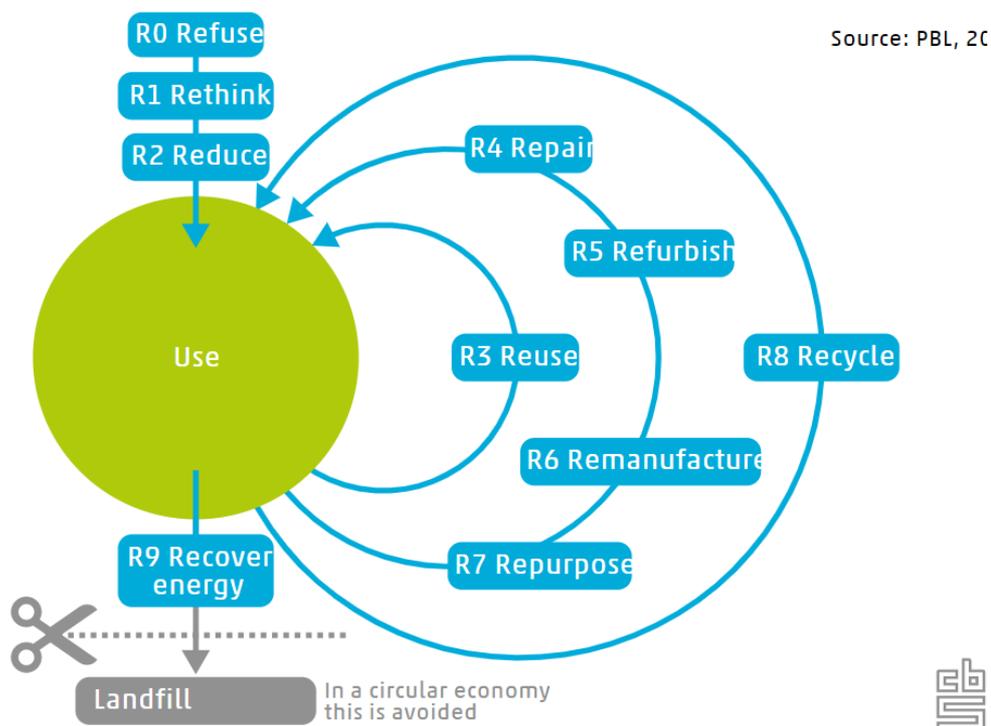
The citizen-engagement is carried out in many municipalities already, but it seems that this is the trickiest way of collaboration since the citizens have so many varying opinions and ideas on how to do or not to do the climate work. However, most of the respondents think that engaging the citizens is one of the most crucial aspects in regards of reaching the climate goals. There is a need for changing the attitudes and behaviour of the citizens for instance in waste sorting, choices of mobility (private car vs. public transport/biking/walking etc.) and reducing consumption and energy use to reach the climate targets.

5.3 Circular activities

The respondents were asked about their municipality's circular economy related work based on the R-ladder figure presenting various ways for carrying out circular economy. The picture itself seemed to be a little tricky for many respondents but through discussion a good overview of the work being done in the municipalities was gathered up.



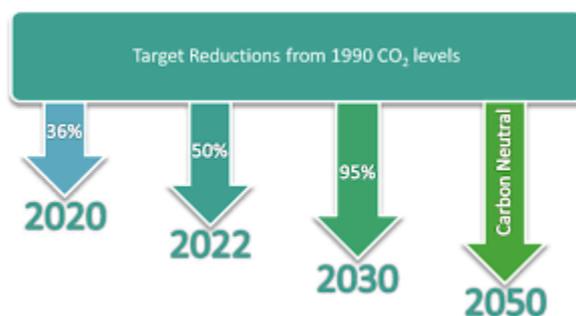
Circular economy / R-ladder



The R-ladder. Source: PBL Planbureau voor de Leefomgeving, 2018.

Many of the municipalities are focusing on energy-related work (shift to renewable energy production, organic waste handling into biogas etc.), reducing and recycling (waste material sorting and reuse), reuse and refurbish of furniture, shared mobility solutions (cars, bikes etc.). For example, Gladsaxe has been using material from a demolished school to build a new day-care. Interestingly, they have also managed to find a financially viable model where it is cheaper to build using recycled materials in comparison to new buildings.

Some of the municipalities have an internal management system checklist (for instance Reykjavik has a system called Green Steps regarding recycling, transport & mobility etc.) through which they monitor yearly the progress and actions of the climate work inside the municipality organisation. And for instance, in Tampere, they are building up a climate budget where it is possible to collect the yearly actions and financial budgets for various climate actions and to evaluate their effect on CO₂ emission reduction.



Some municipalities have also already engaged a sustainable public procurement process or are planning to do it soon. Køge has incorporated some principles of circular economy such as longevity and repairing options to its procurement process for own equipment.

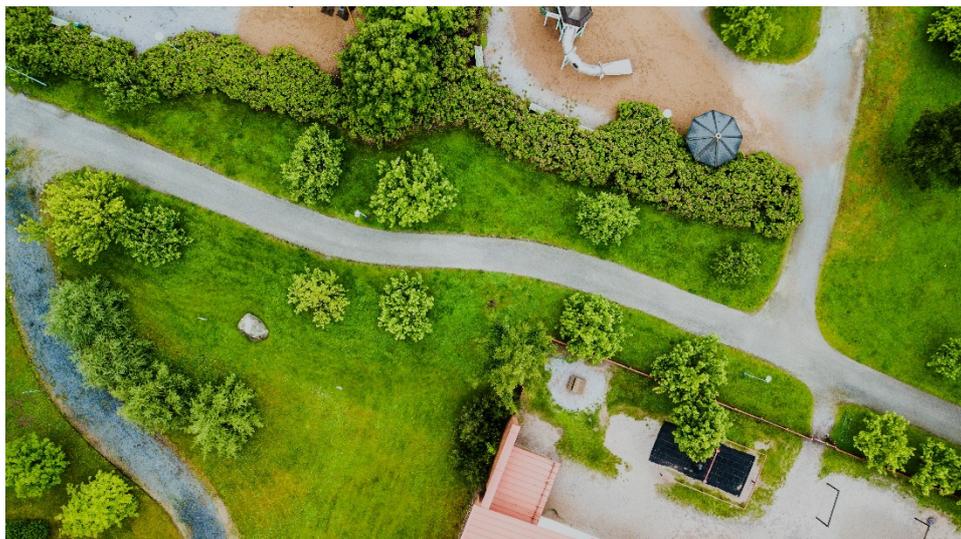
Some of them also have a metric development process going on, as for example in case of Ii in Finland – they have three major targets – no emission, no waste, no over-consumption – and are planning a metrics system together with SYKE (Finnish Environmental Institute) in order to measure the limit for (over)consumption.

5.4 Challenges

The most frequently mentioned challenges relate to areas over which the municipalities don't have full control or governance themselves but depend on the behaviour of their citizens. These are transportation/mobility, consumption, and other lifestyle choices with climate impact. Many of the respondents from municipalities that have measured their total climate impact say that a lot has already been done in the areas of energy, construction, water, and waste management and that it's really hard to reach climate neutrality for the last remaining areas without quite dramatic shifts of mindset and behaviour among citizens.

Other challenges mentioned are lack of knowledge and/or interest in climate change issues among politicians, but also within local business and citizens in general. Some also mention that their municipality is struggling with financial hardships, especially since the Covid-19 outbreak.

There have been also cases where municipalities are more ambitious than the central government and the legislation is preventing them to move forward with such ambitious plans.



From Tampere, Finland

Several respondents mentioned that political short-term thinking or the lack of political will, instructions and goals are slowing down the work towards climate neutrality. At the same time, many agree that sustainability issues are high up on most municipalities' agendas today, but that it's very hard to work with long-term issues like transition towards climate neutrality in a systematic way. Many saw a need for improvement of both internal organization across departments and for new collaboration platforms and processes that include citizens, businesses and academia for joint efforts towards smart and sustainable development of the local community.

There was a clear difference between the pioneering municipalities and those who more recently have started their ambitious work towards climate neutrality. While the pioneers see challenges in more advanced areas like "impact calculations" (which sectors have which effect and which costs – where do we get the most effect for the money?), how to measure climate impact from cultural and social activities, or how to create co-investment mechanisms in collaboration with external partners, the other group is looking at more basic challenges like how to start measuring their climate impact or how to follow up and measure their local roadmap for climate neutrality.

Other challenges mentioned by a few respondents are:

- Isolated technical areas like water and waste management, organic waste collection, electricity production etc. – often linked to the small size of the municipalities. In order to find viable solutions, some need improved collaboration with neighbouring municipalities.
- Some border municipalities would like to collaborate with their closest neighbours, who might be located on the other side of the border, but the rules and regulations for this is often too complicated.
- Smaller municipalities feel that many national top-down regulations are better suited for the larger municipalities and not easy to implement in the smaller ones.
- There is a need for more standards for open data and common data platforms. Standards are very important for a systemic approach and to be able to combine data from different platforms – we're building too many platforms locally.



- It is tricky (often regarding tax regulations) for municipalities to share resources with the citizens (carpools etc.).
- There are so many different initiatives going on. It is really difficult to be updated with everything which makes it difficult to get hold of the most relevant knowhow.

5.5 Support from others

The answers to the question “What kind of support do you already receive from others when it comes to working for climate neutrality or circular economy” revealed that most of the municipalities in the study already received support from national networks or programmes. For example, in Finland the support provided by the national association for local and regional authorities, [Kunta Liitto](#), is very much appreciated whereas in Sweden the NGO [Klimatkommunerna](#) (The Climate Municipalities) is also held in high esteem. In Norway, many municipalities are part of [Smarte Byer Norge](#) (Smart Cities Norway), In Iceland, the [Icelandic Association of Local Authorities](#) is the main source of support for subjects in this area. Danish municipalities have strong and active collaboration with other municipalities where being part of Gate 21 partnership is important. Both municipalities are also part of DK2020 which aims to help municipalities to prepare climate plans and reach climate neutrality by 2050.

Several municipalities also mentioned support from researchers from universities and institutes. This was especially strong when relevant research units were located in the municipality.

A few municipalities mentioned participating in EU-based networks or projects. Examples of such initiatives are The [Green Rural Economy project](#) and [SMICE](#) focusing on circular economy in the middle and northern parts of Norway and Sweden.

Some got support from regional organisations or national authorities or projects. One example of such initiative is [Klima Østfold](#), focusing on farming and rural areas. Another one is [Carbon Neutral Finland](#). A few municipalities mentioned support from local businesses and other cities. Some also mentioned participating in global networks.

It should be noted that there are quite a number of international support initiatives for municipalities such as:

- [Covenant of Mayors](#)
- [European Circular Cities Declaration](#)
- [ICLEI](#)
- [Carbon Neutral Cities Alliance](#)
- [Ellen MacArthur Foundation](#)

More material and resources for municipalities can be found on the NTP website.

5.5.1 Interest in Nordic collaboration

When the respondents were asked to describe if they needed any kind of additional support (other than funding) they mentioned a diverse array of topics. One recurring theme was an interest in more Nordic collaboration. Another topic mentioned several times was support for more digitalization including standardization on both national and European level. Support regarding procurement and investments, including green



bonds were also suggested. More resources in terms of more skilled people but also better tools to support decision-making and evaluation were also wanted. The need for better communication with citizens, companies and decision-makers was also recognised, especially in order to motivate the large investments needed. Much support regarding how to work with the building and energy sector was also mentioned.

When asked specifically about the support activities planned within this project, the municipalities were in general positive to all the suggestions. Some were somewhat hesitant to yet another toolbox, since they find themselves not using the existing ones that much. An example of such a toolbox is the one provided by [Klimatkommunerna](#), the [HINKU](#) network in Finland but also the new initiative [The Nordic Circular Hotspot](#). Also, many municipalities emphasised that they are only interested in participating in collaboration projects if they are in line with their own policies and plans.

Which of the following kinds of support would be of interest for you?

1. Workshops together with other municipalities
2. Access to a Nordic toolbox with good examples, methods, processes
3. A Nordic Roadmap that gives directionality for investment efforts
4. Support for procurement of circular / climate neutral solutions
5. Participation in larger collaboration projects

5.6 Workshop themes

In the interview the respondents were asked to provide ideas for themes for collaboration workshops to be organised within the project. Many themes were suggested, but the four that were mentioned most times were the following:

1. Climate neutral mobility
2. Mission oriented organizations and collaboration
3. Circular procurement & Investments for climate neutrality
4. Nordic collaboration and matchmaking



From Örebro, Sweden.

Some of the suggested topics focused on more technical aspects of the municipal services such as waste management, carbon storage, positive energy districts, greener buildings, hydrogen, biogas and biofuel, urban planning and energy solutions, and sludge treatment.

Others focused more on the management of the municipality such as quadruple helix collaboration, mission-oriented organisations and collaboration models, short term vs long term thinking, and how to institutionalise climate work.

A few suggestions focused on economic aspects such as how to calculate climate impact on cultural activities, emissions calculation and climate budget, how to calculate impact from scope 3 activities, and green bonds.

Some suggestions focused more on communication and engagement such as changing behaviours and attitudes, use of storytelling in communication, citizen involvement, how to engage landowners and farmers regarding wetland restoration. One municipality framed the theme in this way: "How far can the municipality go, and where do we need the help from citizens?"

A few suggestions addressed aspects beyond the municipality such as digitalization and standardization on national and European level, the need for government support and new legislation.

Others mentioned business-oriented themes such as business models, how to work with incubators, tourism, and circular economy in general.

One municipality suggested a workshop on climate change adaptation.



5.7 Further collaboration interest

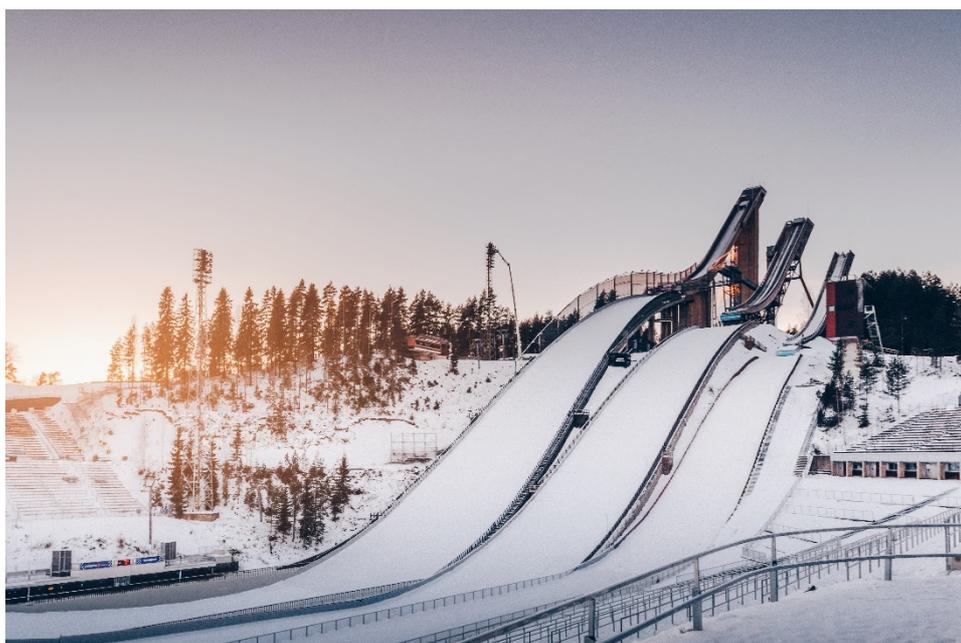
The respondents were asked if they were interested in participating in Nordic or EU projects in the future if such an opportunity arises. Every single municipality was positive about this and further collaboration. However, several municipalities mentioned that it depended on the topic. Additionally, a few mentioned that it also depended on how time consuming the participation would be and that it couldn't be too costly for them to participate. Lastly, a few municipalities emphasized that a Nordic collaboration was of special interest to them.

6. Discussion

When reviewing the results in this study it is hard to find distinct patterns relating to differences in country, size or special features in the municipalities. This is probably mainly a consequence of a small sample of municipalities and short interviews. The municipalities were also selected based on that they featured in the partner networks and thus were oriented towards climate neutrality and collaboration.

It was also hard to find people in the municipalities with roughly the same role and responsibilities since there are few established professions in this area. In smaller municipalities people are forced to take on many different responsibilities. This gives them a good overview and opportunity to initiate activities bridging several areas and departments which is a great advantage when it comes to circular economy and climate neutrality. However, since the smaller municipalities also often lack funding, it is often hard for them to start big and complex projects.

It is also clear that small rural municipalities have different opportunities than the ones closer to larger cities, why size and location are important aspects to consider for the Nordic Transition Partnership project when it comes to designing and developing support.



From Lahti, Finland.

6.1 Support needs

One of the main purposes behind the interview study was to identify potential needs for support regarding how to become climate neutral faster and incorporate circular economy. The results indicate that although several municipalities already get some support regarding climate neutrality and circular economy, there is certainly room and demand for more for example on a Nordic level. To some extent this support is already



available, but some municipalities lack the knowledge about it or do not have the resources needed to handle it. It is also unclear to what extent the municipalities have a strategy for which support networks and collaboration projects to participate in. In terms of actions for this project and coming projects, this indicates that:

- The planned activities in the Nordic Transition Partnership project are relevant and should be developed, based on the suggestions received from the municipalities and on their characteristics.
- It is important to present information about relevant support initiatives, but also to help them become aware of each other, especially the ones based in the Nordic countries.
- The municipalities are interested in more Nordic collaboration in addition to other kinds of support, and there is not much currently available.
- One part of the continued support offered to the municipalities could be a model or method for selecting which support initiatives and/or strategic collaboration projects to participate in, given established climate objectives, policies and plans. Although this is important for all kinds of municipalities, it is probably even more important for smaller ones because of their lack of resources. This idea can be tested during the workshops, in order to tailor a suitable future support.
- We will include a strategic discussion about where to find the most relevant support and collaboration partners in the last workshop.
- Focus even more on the smaller municipalities as their needs are so specific and they often struggle with lack of resources.
- Several municipalities had started or engaged in regional collaboration as a way of sharing resources, for example the networks around Tampere, Reykjavik and Oslo. In addition to focus on small and medium-sized municipalities it makes sense to also include such regional collaboration when planning and conducting project activities.

6.2 Horizontal organization

One of the perhaps most important issues that came up in several of the questions during the interviews was how to adapt the organisation of work in the municipality for the kind of horizontal and mission-oriented efforts associated with climate neutrality and circular economy. Not only does this concern the inner work of the municipality, but also how they interact with companies and citizens, as well as what role it should take on. For example, it is often necessary to develop not just one single business model when introducing new circular solutions, but a network business model where a large number of actors, including the municipality, must design and re-design their ways of doing business.

The interviews revealed that many municipalities struggle with cross-sectoral collaboration and are still very much divided into silos in the organisations. However, the interviews have provided glimpses of new ways of working within the municipality and between organisations, new kinds of roles and competencies, as well as new ways of doing budgets, investing and procuring. Some municipalities have also taken on the responsibility to become role-models, providing inspiration to other organisations. This is much needed, especially for those municipalities who have come a long way



and where the next step depends on how citizens and other organisations choose to act, for example regarding the use of fossil-free transport.

6.3 Nordic Value

Because of the similarities between the Nordic countries, it makes a lot of sense to share experience regarding how to organise for accelerating the work towards climate neutrality and circular economy. Especially when the ambition is to move away from scattered projects and towards implementing 24/7, scaling and replication. Because of the necessary high pace in the transformation in order to reach the climate goals, it is good to compare solutions with other similar municipalities. However, it is important to do this in an informed and systematic way, since municipalities may differ in rather subtle but important ways, for examples the set-up for the energy company or the impact from a large industry or airport. Furthermore, local conditions at each municipality differ and consequently the solutions may differ as well, depending on the contextual situation. More research into this area is needed and the Nordic Transition Partnership can act as a platform for identifying needs and challenges, as well as supporting matchmaking between researchers and municipalities.



From Umeå, Sweden.



7. Conclusions and recommendations

7.1 Conclusions

The results of the interviews show that much work has already been accomplished in these municipalities, regarding planning for climate neutrality in 2030. It varies considerably how far along the municipalities are on this journey. The difference can be explained by factors like size, resources, expertise, political will etc., but it is clear that these differences need to be taken into account. Naturally, the low hanging fruits have already been harvested, which is positive. However, that leaves the municipalities with various challenges in regard to moving forward and to start tackling more complex issues. Technology is seldom the problem, as technological solutions have already been developed and are available. But finding affordable ways to accomplish impact is a challenge, as well as scaling these solutions down to fit the size of the municipality. The municipalities are therefore more centred around investments, competence, behaviour, culture and business models and how to develop these elements in a sustainable way.

Citizen engagement proved to be one of the challenges that most municipalities have in common. However, citizen dialogue is not enough, and the municipalities express a need for effective methods to engage civil society. On that note, new ways of organizing horizontal and cross-sectoral collaboration in a systemic way are needed in all municipalities, even in the pioneering municipalities.

The municipalities express the need for methods for measuring their efforts. That includes handling data and building tools and platforms for impact calculations.

One clear conclusion that can be drawn from these interviews is that there is huge interest in Nordic collaboration around these issues. Increased knowledge exchange across borders and strengthened collaboration between small and medium municipalities in the Nordics, was something that every municipality expressed interest in.

7.2 Recommendations

The results of this interview study contribute to identifying themes for the NTP project's upcoming workshop. Additionally, the results give rise to some recommended actions which are presented below.

Workshop themes

Based on feedback from our interviewees and their expressed needs and challenges, the following workshop themes were identified:

- Climate neutral mobility
- Sustainable procurement and investments for climate neutrality
- Mission oriented organizations and collaboration models
- Nordic collaboration and matchmaking

Ideas for future projects and support

The interviews also contributed with ideas for future support actions, for example:

- Bench-learning between the municipalities
- Focusing on ports as a mutual element



- Collaboration among national networks
- More intense Nordic collaboration
- Metrics development regarding climate actions and their effectiveness

A general recommendation is that the municipalities look closer into the initiative of *Climate City Contracts*. Viable Cities initiated this in Sweden, where governmental agencies work together with municipalities to commit to climate goals. A similar initiative is the Climate Neutral Municipality network HINKU in Finland. In Denmark, above mentioned DK2020 represents an equivalent to Climate City Contracts.

The interviews reveal a big interest and believe in increased Nordic collaboration for tackling climate issues. Another recommendation is therefore that Nordic Innovation and national authorities invest even more in Nordic collaboration.

As William Gibson once said; "The future is already here, it's just not very evenly distributed."



Appendix A. Interview Respondents

The following people were interviewed:

Denmark	Gladsaxe	Anja Kraag
Denmark	Køge	Jeppe Krommes-Ravnsmed
Finland	Ii	Ari Alatossava
Finland	Lahti	Aino Kulonen
Finland	Lappeenranta	Ilkka Räsänen
Finland	Lempäälä	Kati Skippari
Finland	Tampere	Laura Inha
Iceland	Reykjavík	Hrönn Hrafnisdóttir
Iceland	Akureyri	Guðmundur H. Sigurðarson
Iceland	Hveragerði	Höskuldur Þorbjarnarson
Iceland	Kópavogur	Bjarki Valberg
Iceland	Hornafjörður	Anna Ragnarsdóttir Pedersen
Norway	Marker	Ann-Mari Nylund
Norway	Skiptvet	Frank van den Ring (in writing)
Norway	Halden	Bjørnar Strøm-Hågensen
Norway	Narvik	Caroline Tollstadius
Sweden	Växjö	Henrik Johansson
Sweden	Örebro	Sascha Benes
Sweden	Varberg	Sofie Nilsson
Sweden	Umeå	Philip Näslund
Sweden	Östersund	Anne Sörenson and Viktoria Winberg



Appendix B. Interview Questions

The following questions were included in the interview:

1. Can you please give us three examples of what you have done so far in order to reach climate neutrality that you are really proud of? (
 - a. Why/how did you select these examples? (This question was not part of the list sent to the respondents before the interview)
 - b. How do you organise yourselves within the municipality in order to handle such complex issues such as climate neutrality and circular economy? (This question was not part of the list sent to the respondents before the interview))
2. Collaboration is an important success factor when it comes to working with Climate Neutrality and Circular Economy. Who are your most important partners from the following sectors:
 - Business sector
 - Public Sector
 - Academic sector
 - Civil Society Organizations
 - Citizens
3. Regarding circular economy and circular solutions, in which areas are you already working now? (Please relate to the picture with the R-ladder and link your examples to the different areas)
4. Which are the three biggest challenges for implementing solutions that lead towards climate neutrality in your municipality?
5. What kind of support do you already receive from others when it comes to working for climate neutrality or circular economy?
6. Do you need any kind of additional support (other than funding)?
 - If yes, what kind of support would make a large difference to you?
 - Which of the following would be of interest for you?
 - Workshops together with other municipalities
 - Access to a Nordic toolbox with good examples, methods, processes
 - A Nordic Roadmap that gives directionality for investment efforts
 - Support for procurement of circular / climate neutral solutions
 - Participation in larger collaboration projects
7. We are planning to organize web-based workshops as part of this Nordic project, what topics should we focus on and who should be invited?
8. Are you interested in participating in Nordic or EU projects in the future, if such an opportunity would arise?
9. Is there something that you would like to add?