

Nordic Smart Mobility Summit

Part I - 1 hr (10-11 CET // 11-12 EET)

Lunch break

Part II - 1,5hr (13-14:30 CET // 14-15:30 EET)

The Nordic Smart Mobility Summit

November 23

Agenda

Part I 10-11 (CET)

10:01 – 10:15

Opening remarks Hanna Leffler, Business Sweden Nordics

Sustainability in Focus – Remarks from the Swedish Ambassadors

- Ambassador of Sweden to Finland Nicola Clase, Ambassador of Sweden to Norway Cecilia Björner, Ambassador of Sweden to Denmark Charlotte Wrangberg, Ambassador of Sweden to Iceland Pär Ahlberger

10:15-10:35

Overview of the Nordic markets - Sweden, Norway, Finland, Denmark and Iceland

- Maximilian Richter, Business Sweden Nordics
- Jessica Olsson, Business Sweden Nordics
- Hanna Leffler, Business Sweden Nordics
- Martin Jönsson, Program manager, Ecosystem Smart Transportation

10:35- 11:00

Innovations from the Nordics on global markets - a Swedish perspective Jenny Simonsen, ITS Norway

- John Strand, CEO, **Nobina Travis**
- Shilan Demir, Head of Partnerships, **Zenseact**
- Christoffer Sveder, Director Commercial Operations, **Clean Motion**
- Karin Ebbinghaus, CEO, **Elonroad**

Part II 13-14:30 (CET)

13:00 – 13:30

Welcome back Jessica Olsson, Business Sweden Nordics

- **Panel #1: Seamless & Sustainable** Jenny Simonsen, ITS Norway
- John Strand, CEO, **Nobina Travis**
- Mathias Molden, Service Designer, **Kolumbus**
- Jonna Heikkinen, Head of Global Business Development, **Maas Global**
- Søren Kofoed Bom, Chief Consultant, **Capital Region of Denmark**

13:30 – 14:00

- **Panel #2: Charged & Smart** Jenny Simonsen, ITS Norway

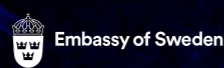
- Fredrik Nordin, MD, **Mer**
- Karin Ebbinghaus, CEO, **Elonroad**
- Elias Pöyry, Chief Business Officer, **Virta**
- David Fauné, Co-Founder, **Charge4Go**

14:00 – 14:30

- **Panel #3: Autonomous & Secure** Jenny Simonsen, ITS Norway

- Gunn Drogset, CTO, **Applied Autonomy**
- Harri Santamala, CEO, **Sensible 4**
- Christian Bering, CEO, **Holo**
- Peter Janevik, CEO, **AstaZero**

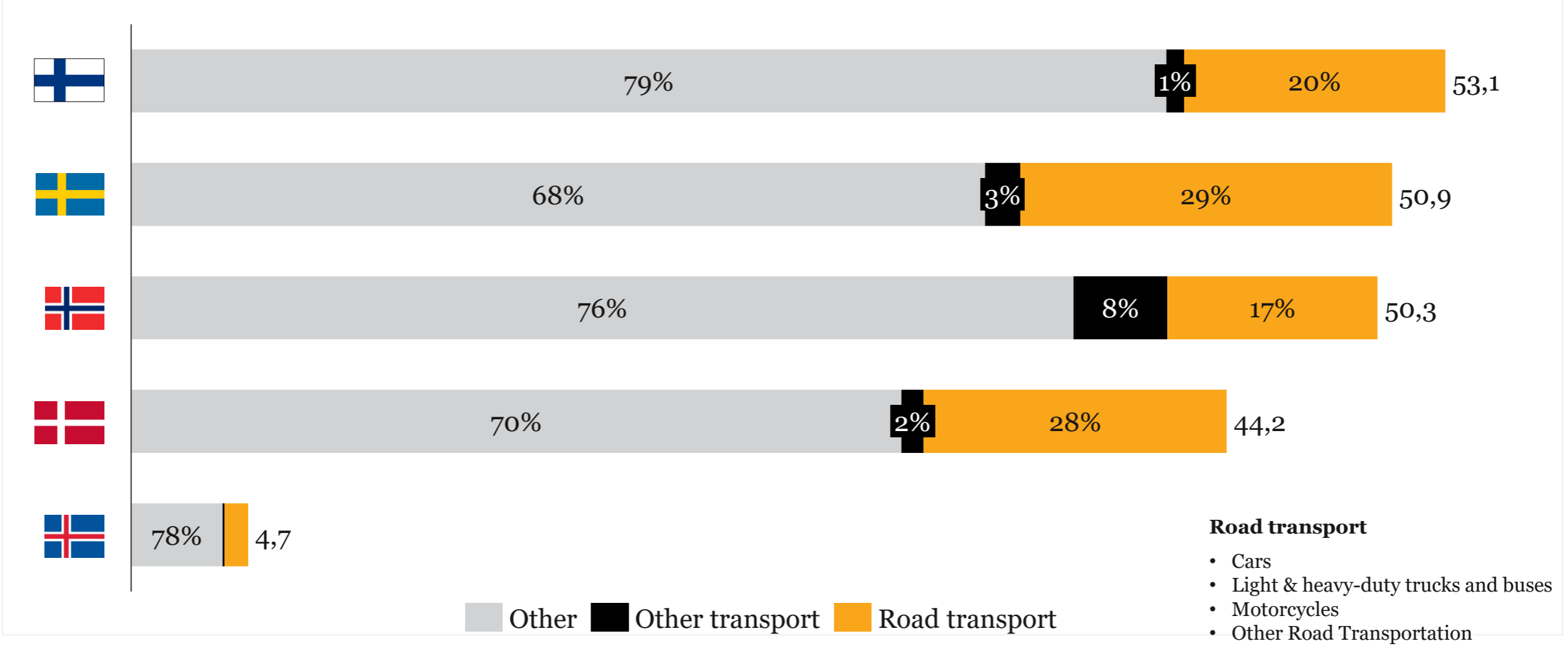
- **Closing Remarks and Next Step**



The domestic transport sector stands for over 30 per cent of all greenhouse gas emissions in the Nordics

CO₂ Greenhouse gas emissions from the Nordics

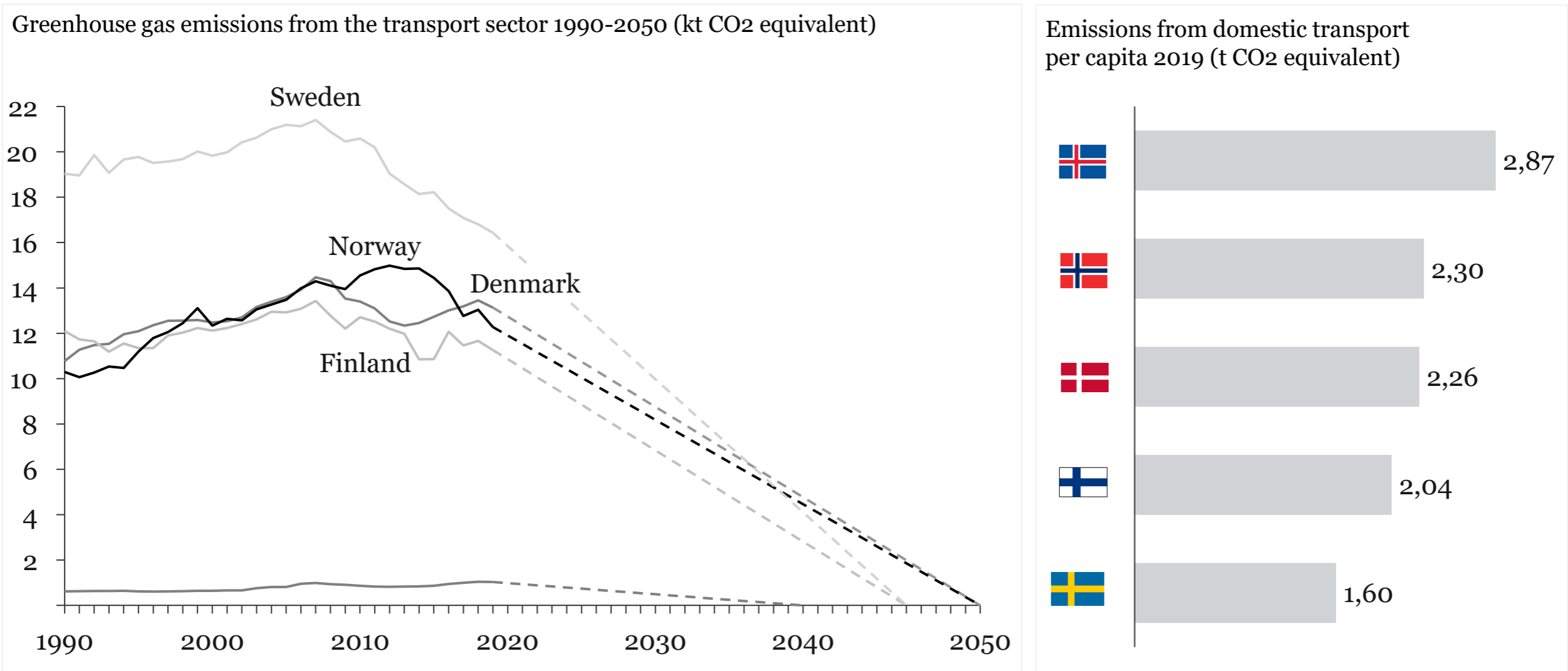
Total greenhouse gas emissions in 2019 (kt CO₂ equivalent)



Source: European Environment Agency

The Nordics aim to bring greenhouse gas emissions from the domestic transport sector down to zero between 2040-2050

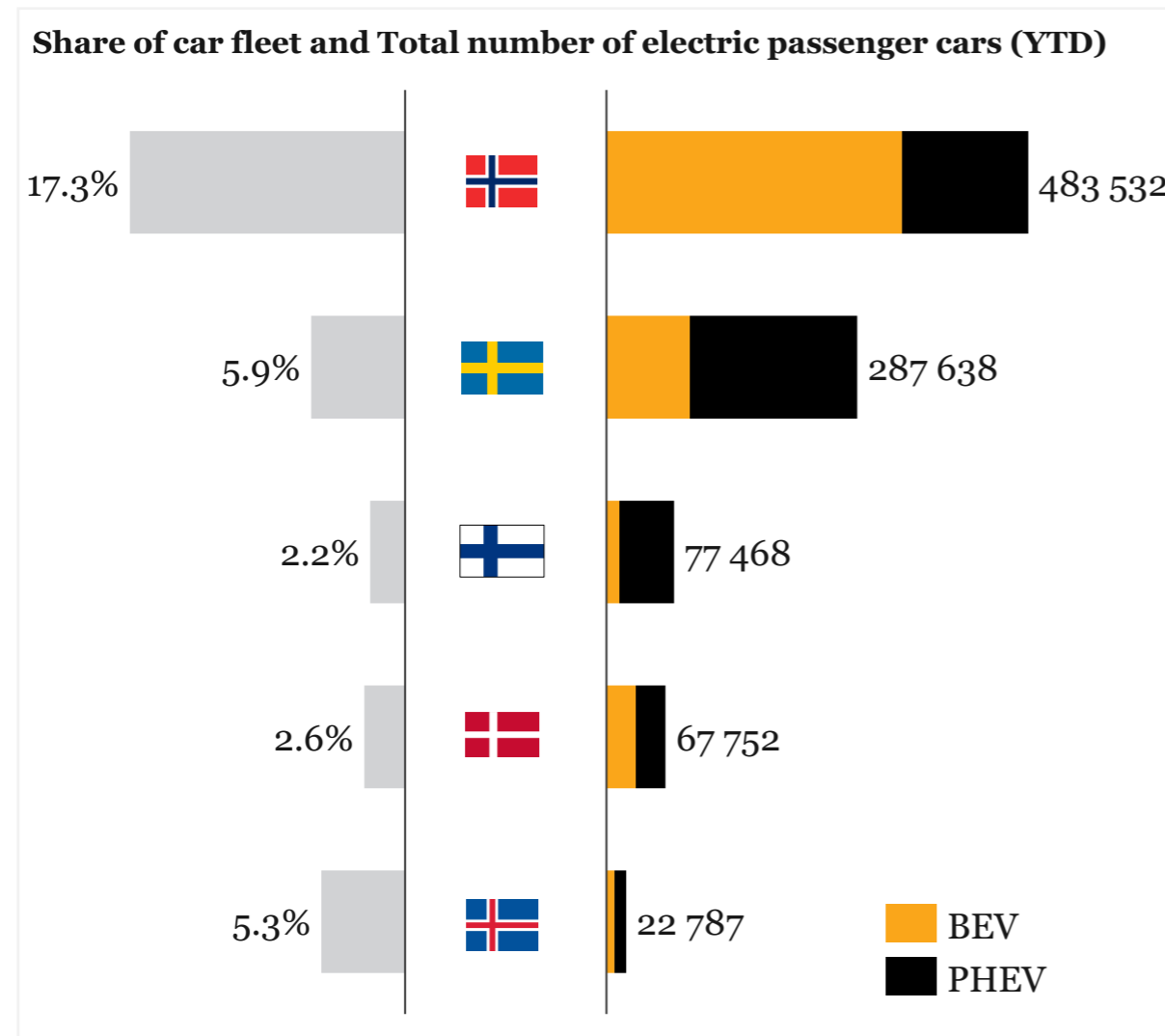
Greenhouse gas emissions from the domestic transport sector in the Nordics



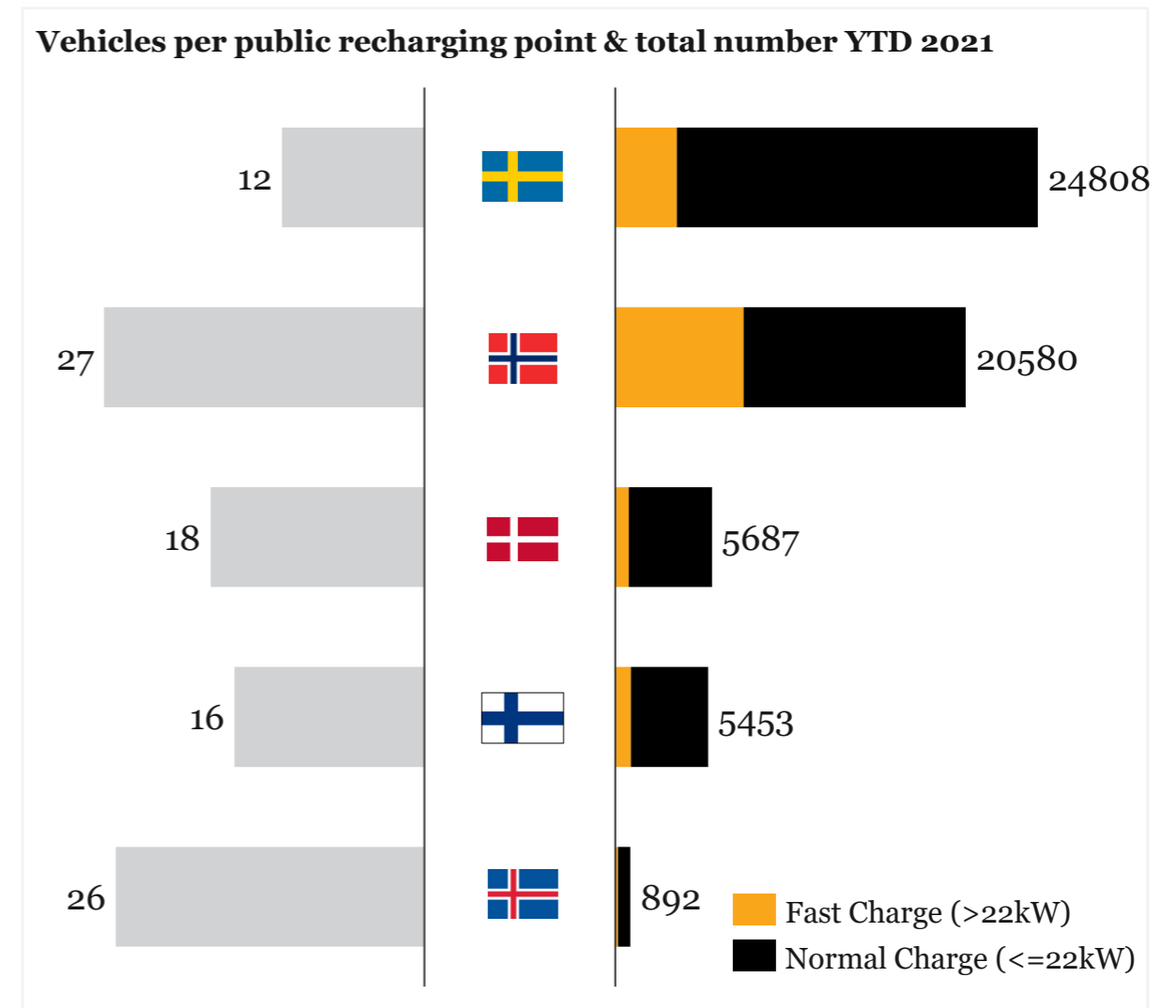
Source: European Environment Agency, National governments

Norway is leading the way in the electrification of the passenger car fleet

Electrification of passenger car fleet























Charging infrastructure



Source: European Alternative Fuels Observatory Note: BEV = Battery electric vehicle, PHEV = Plug-in hybrid electric vehicle

Nordic Smart Mobility Summit - panelists

 <p>Innovations from the Nordics on global markets - a Swedish perspective</p>		<p>John Strand CEO Nobina Travis</p>		<p>Christoffer Sveder Director Commercial Operations Clean Motion</p>		<p>Karin Ebbinghaus CEO Elonroad</p>		<p>Shilan Demir Head of Partnerships Zenseact</p>
 <p>Panel #1 Seamless & Sustainable</p>		<p>Jonna Heikkinen Head of Global Business Development MaaS Global</p>		<p>Søren Kofoed Bom Chief Consultant Capital Region of Denmark</p>		<p>John Strand CEO Nobina Travis</p>		<p>Mathias Molden Service Designer Kolumbus</p>
 <p>Panel #2 Charged & Smart</p>		<p>Elias Pöyry Chief Business Officer Virta</p>		<p>Karin Ebbinghaus CEO Elonroad</p>		<p>David Fauné Co-Founder Charge4Go</p>		<p>Fredrik Nordin Managing Director Mer</p>
 <p>Panel #3 Autonomous & Secure</p>		<p>Gunn Drogset CTO Applied Autonomy</p>		<p>Peter Janevik CEO AstaZero</p>		<p>Harri Santamala CEO Sensible 4</p>		<p>Christian Bering CEO Holo</p>

Bold decisions and a level playing field are key factors on the way towards a sustainable transport system

Innovations from the Nordics on global markets - a Swedish perspective:

Nordic collaboration is a base for global impact	<ul style="list-style-type: none">• Nordic collaboration improves our competitive position on a global market• Having a Nordic perspective is important to take the next step in into the rest of the world• We need digital platforms and meetings to share ideas and educate each other
A Common sustainability vision is needed	<ul style="list-style-type: none">• If you have a common vision, then you will also find solution• If we want to achieve something, we can and need to change regulations
Customers will lead the way	<ul style="list-style-type: none">• We need mobility solutions that is attractive enough and addressable enough to convince• First and last mile solutions are key to get a sustainable ecosystem• We need to fight monopolies and open the mobility market for competition
Higher pace and bolder decisions	<ul style="list-style-type: none">• Regulators/decision makers need to be bolder and dare to invest in sustainable mobility• A much higher pace is needed, time is something we don't have on our side• Investment in education will be another the key factor for success going forward

“ *We need **collaboration** to appear larger and also attract a bigger customers and markets.* ”

Karin Ebbinghaus, Elonroad

“ *At the end of the day it is the customer that decides how this could work.* ”

*I think the regulators need to understand there is a need for transportation, people want to be more sustainable, but it has to be also convenient and today **we are lacking that effort.***

Shilan Demir, Zenseact

“ *We tend to sit around and think a little bit **too much** and celebrate that we come together. What we really need to do is work!* ”

Christoffer Sveder, Clean Motion

The future of mobility is multimodal, connected and seamless

Panel #1: Seamless & Sustainable

Need for seamless business models due to new travel patterns

- There is a need for smarter and more sustainable travel solutions despite the current Covid-19 challenges
- Important for all actors within the industry to collaborate, innovate and adopt new business models to bring passengers to new mobility solutions and away from driving their own car

Service to customers ahead of “owning” the customer

- PTAs are focusing on “owning their customer relationships” but need to widen their perspective to focus on the “service” they can provide when collaborating with private actors
- Difficulty to get bilateral agreements with PTAs for e.g., MaaS integrator companies
- Need for cooperation between PTAs and private companies to be able to offer multimodal, seamless mobility solutions to the end customers

Digitalization

- Our neighboring Nordic countries have “flowering” ideas we can share with each other
- Use of data (open/real-time) gives us possibility to develop better digital solutions
- Next step to share mechanics of business models and e.g. buying “the right” to travel
- Digital ticketing gives a variety of innovative opportunities adapted to customer needs

Regulators need to increase awareness

- A need for politicians and public agencies to understand the new future of transportation and integration needed between actors in the value chain needed for it to happen
- A strong vision and goals within a city or even by the government would be an overarching way of finding solutions to getting people to travel more sustainable
- Encourage private and public actors to collaborate with different types of business models

“ The PTAs are a bit confused of their own role based on having a good customer relationship and need to own the customer and so on and I think it’s more important now to look at the service you provide ”

Søren Kofoed Bom, Chief Consultant, Capital Region of Denmark

“ We should have a better raw material for reselling tickets instead of current e.g. 30-days, 1 day ticket. We need to pack the products differently and to define the core product like kWh is the electricity kind of raw material ”

Mathias Molden, Service Designer, Kolumbus

“ There is a massive problem with monopoly where PTAs don’t give private actors access ...if we want to be able offer multimodal solutions to end customers we need to start co-operating in this area ”

John Strand, CEO, Nobina Travis

“ The Nordics could be leading the development of MaaS services, and it’s part of setting that shared vision ... there should be encouragement for the local PTAs to be more open to co-operation and for new pricing models. The more flexibility given the easier to create new services, not even existing yet ”

Jonna Heikkinen, Head of Global Business Development, Maas Global

Investments in charging infrastructure is crucial as EV adoption develop faster than expected and keeps growing

Panel #2: Charged & Smart

<p>Charging infrastructure crucial for electrification</p>	<ul style="list-style-type: none"> • The EV adoption faster than expected, but the charging infrastructure is lagging behind. <ul style="list-style-type: none"> ◦ Charging issues could hold the electrification back – or accelerate it • As EV usage reach a broader user group an expanded charging infrastructure is needed, e.g. more public charging stations in comparison to charging at home.
<p>Collaboration needed to set prerequisites for increased infrastructure</p>	<ul style="list-style-type: none"> • Increased charging infrastructure density decisive due to market growth and EU regulations • Closeness of governments / legislators and industry decisive to create the right prerequisites • Important to promote and share learnings from electrified regions to grow Europe as one • Connections to the grid as well as structure of grid tariffs are key to not loose pace
<p>Government incentives needed to not loose speed</p>	<ul style="list-style-type: none"> • Enable market-driven solutions with unified subsidies in a market area (Nordics, Europe). Each country are too small to compete. E.g. learnings from incentives in Norway • Standardizations can be positive (CCS of Type-2 for Europe), but not for customer interface. E.g. don't standardize payments methods. The Fintech industry is developing too fast • Reduce private investment risk though predictability as well as public private partnerships
<p>Investments for future mobility needed now</p>	<ul style="list-style-type: none"> • As volume of EVs growth and area of usage widen, several types of charging are needed. E.g. the sharing economy needs more charging points as well as electrical roads • Multi-modal customer interfaces are needed for public transport and seamless mobility • Ride-hailing will probably be the first Mobility as a Service needed to be electrification as well as autonomous technique.

“ In a future where we want to have fewer vehicles and higher utilization of those vehicles we will need a variety of charging infrastructure. We should invest in this infrastructure now. ”

Karin Ebbinghaus , Elonroad

“ It is important to build the infrastructure for the future. I believe that for carpools, car-sharing or rental the users do not want to care for charging the vehicle. ”

David Fauné, Charge4Go

“ The Nordic should push for regulation stricter than the EU with higher charging density. The next question is WHO can build these charging hubs ... it should be free Competition. ”

Elias Pöyry, Virta

“ We are willing to invest. We have to build the infrastructure as well as make it accessible: easy to find, easy to use as well as, easy to pay... we should look to Norway for experiences from incentives... electrifying from a to b. ”

Fredrik Nordin, Mer

Nordic collaboration can be a competitive advantage

Panel #3: Autonomous & Secure

Nordic collaboration is a base for global impact	<ul style="list-style-type: none">● Collaboration needed to gain a competitive advantage against the rest of the world● Definitions of operational design could be an area where more collaboration could be done● Vehicles are a part of a bigger chain and if you don't optimize the whole chain, it won't scale
Regulations need to adapt	<ul style="list-style-type: none">● Traffic regulations & policies are adapting too slow and need to get more coordinated● We need to be able to cross borders, if we want to be the most advanced AV region● European scattered regionalism today is a competitive disadvantage (e.g. China U.S.)
Business models need to adapt to technology maturity	<ul style="list-style-type: none">● Until the technology is ready, we should reduce the complexity● We should try to create business by adapting to what we can do, not what we cannot do● Focus today should be on automation within logistics rather than transport of people
Sense of urgency	<ul style="list-style-type: none">● Focus on pilots for the one sole purpose of becoming a permanent commercial operation● As technology advances, new and faster models of developing policies is needed● A sense of urgency is needed to overcome barriers for scaling

“
...together we will form a stronger team than by ourselves so that is why it is very important for us to find complementary and good partners.

Gunn Drogset, Applied Autonomy ”

“
...if we apply in one country [...], could the next country actually recognize this approval?

Harri Santamala, Sensible4 ”

“
I would say, it's not actually regulation keeping us from scaling, that is the technology.

Christian Bering, CEO, Holo ”

“
I think there's to a certain extent is a **lack of sense of urgency** on the side of the policy makers.

Peter Janevik, AstaZero ”