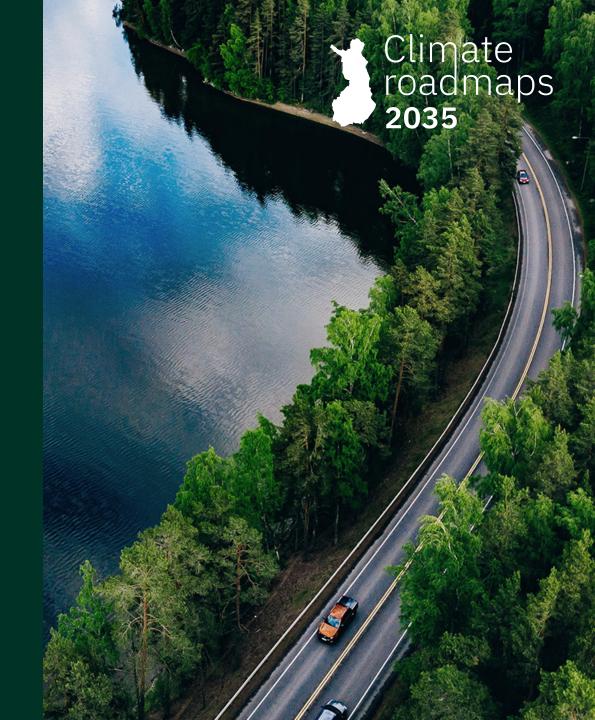
Finland's Unique Approach to Climate Roadmaps for Carbon-Neutrality by 2035



www.Climate2035.fi →



Finland's Climate Roadmaps 2035 – A unique approach

- Finland is committed to achieving carbon neutrality by 2035
- Finnish business is strongly committed we are part of the solution
- Climate roadmaps are our tool to achieve the ambitious goal
- 14 business sector specific roadmaps are integrated and interlinked



Business- driven and bottom-up





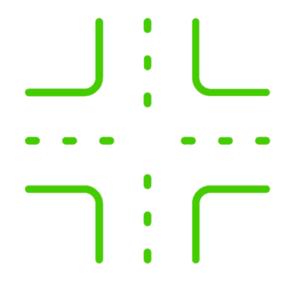
The world-first integrated climate roadmaps with all sectors working together

A unique methodology with government and business in coordinated cooperation we call it "crossroads" Government
Strong support
to sectors

to sectors
via responsible
ministry

Ambition

Joint high level of ambition and practical action



Sectors

Independent control over roadmaps – "each knows their own sector best"

Government and sectors, ambition and expertise meeting in an integrated

Integrated

Puzzling toge

"crossroads" process

Integration
Puzzling together key supply/
demand by sector interaction





Working from the same simple script towards carbon neutrality

1. DESCRIPTION

Description of the current situation

2. EMISSIONS

Mapping and categorisation of emission sources

3. MEASURES

Measures for reducing emission

4. SCENARIOS

Quantitative baseline and low-carbon scenario(s) with additional measures

5. PRECONDITIONS

Preconditions for the scenarios

6. HANDPRINT

Carbon handprint assessment





Sectors with a climate roadmap

Joint benefit for climate, society and business

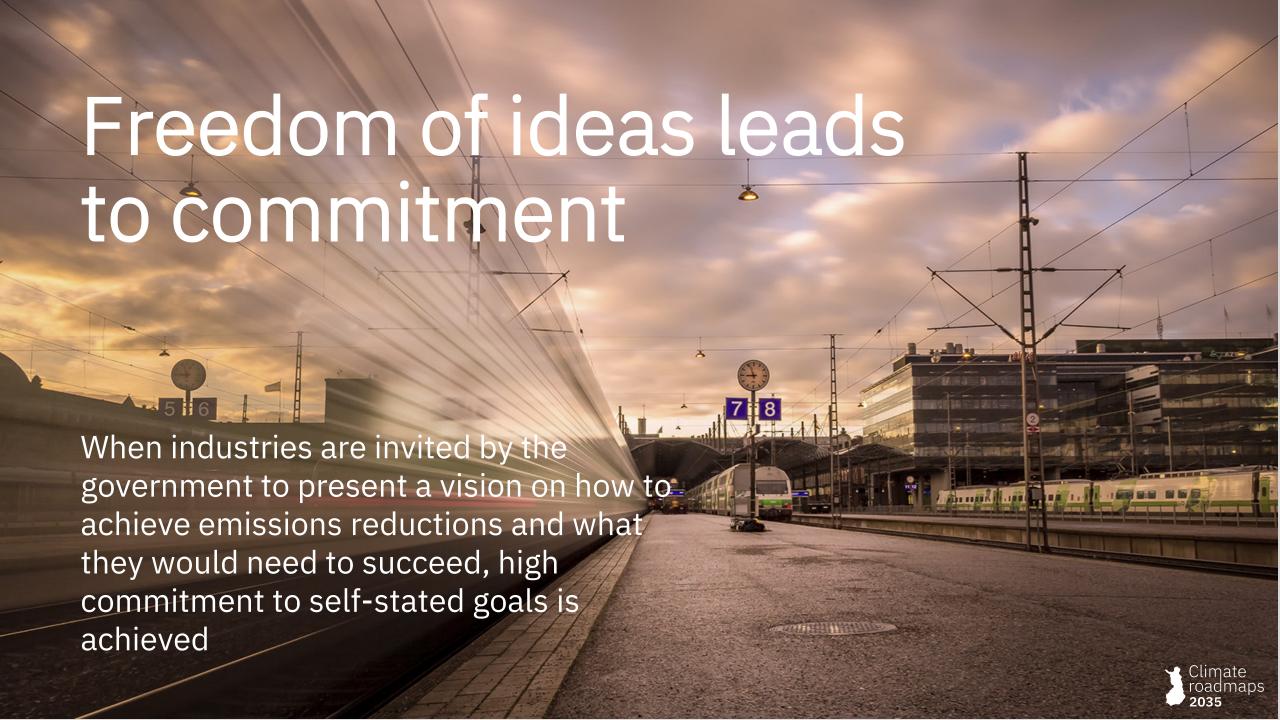
Logistics Chemical Hospitality Energy Agriculture and industry industry industry transport Textile and Forest Bioenergy Commerce fashion industry industry industry Real estate Food Construction Technology Sawmill owners and industry industry industry industry developers



Preconditions for success

PRECONDITION ACTION WHY? As a result of cross-sectoral Decarbonisation of energy → Build clean energy production capacity electrification, emission reductions sector and secured → Expand the transmission network depend on the climate measures taken → Reform energy taxation by the energy industry availability of clean and → Develop flexible energy markets • Electricity demand may increase by up to affordable energy 50% by 2050 Ensure continuity of the business → Enact predictable and consistent environment Favourable operating climate and energy policies Make low carbon alternatives more environment attractive than emission-intensive ones Long-term financial viability of investments → Utilise public procurement to create Investment decisions are made. Market for zero-emission demand for zero-emission solutions based on market signals, demand for → Apply green criteria for any such solutions must be articulated solutions procurement without a delay





Examples of the effective and innovative solutions from Finnish climate roadmaps



DIGITAL SOLUTIONS



PUBLIC SUPPORT FOR INNOVATIONS



ALTERNATIVE RAW MATERIALS



NEW BUSINESS MODELS

EXAMPLES

- Improvements in energy efficiency
- Cyber security
- Improvement in total energy/data transmitted and in energy/bit
- Bioenergy with carbon capture and storage
- Zero-emission concrete
- Small modular reactors
- Chemical recycling

- Waste from e.g.
 plastic, agriculture,
 textile and battery
 industry
- Hydrogen and other synthetics
- Plant based alternatives, e.g. algae

- From one-off to Service-as-a-Solution
- Circular business models, e.g. leasing platforms
- "Jugaad", sparse innovation
- Natural ecosystem services



What came out?

Our key learnings

A business-driven approach has significant abatement potential

1

If the investment environment is right, the sectors see that they can achieve the targets

Fellow passengers, no free-riders



The ambition level is so high that everybody must contribute. However, market potential for solutions follows across the borders

A stepwise progress instead of a continuous curve



Some steps and investments are larger than others. Work must be continuous, but impacts appear in steps

The conditions must be just right



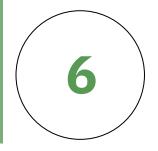
An optimal, perfect business environment doesn't exist, but the conditions for investments must be as close to perfect as possible

The right timing is crucial



Investment cycles are often long, whereas targets have tight timelines. The timing of pilots and upscaling must go like clockwork

Sector-coupling offers great possibilities



Although sectoral integration was not a familiar concept at the start, all now realise that sectors will also increasingly converge and cross borders



Roadmap organisations







Summaries of Finland's 14 sectoral roadmaps:

www.Climate2035.fi→

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In collaboration with:





