



EUROPEAN UNION



EU MISSIONS

ADAPTATION TO CLIMATE CHANGE

BUILDING CAPACITIES FOR THE CLIMATE NEUTRAL AND SMART CITIES MISSION

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EC Board Member

#EUmissions #HorizonEU #MissionClimate



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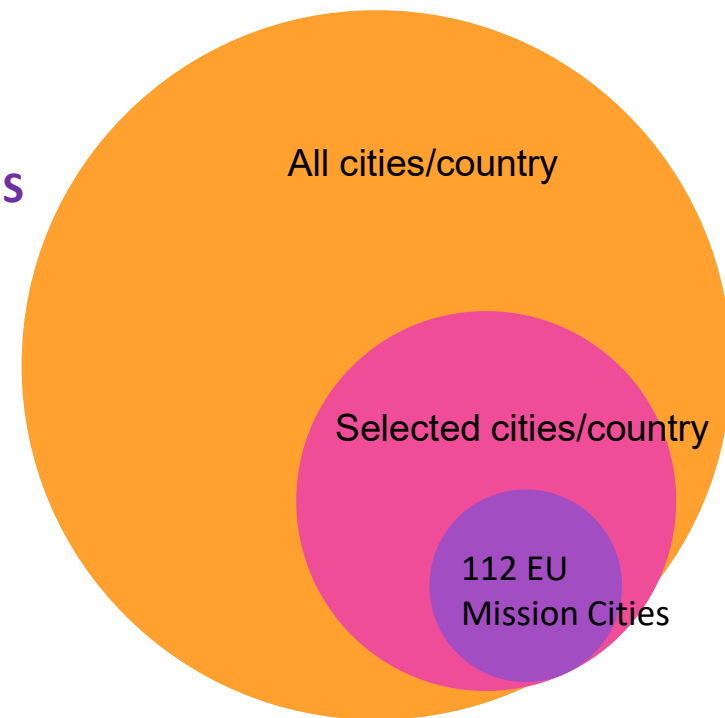
CONTENT

1. BACKGROUND

2. FINLAND NATIONAL MISSION PLATFORMS

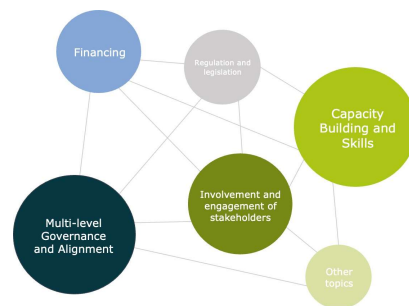
3. INNOVATION CAMP AS A TOOL TO FOSTER MULTI-LEVEL GOVERNANCE

4. FOR THE FUTURE



CapaCITIES

Deep dive into the core countries' challenges and activities



Multi-level Government and Alignment

Most activities in this category

- ▶ Foster transformation through a variety of initiatives

Involvement and engagement of stakeholders

National platforms with different focus, maturity and process history

- ▶ Support the willing – leave no one behind

Financing

National support funding and involvement in EU projects

- ▶ Go beyond RTD funding and link to capacity building

Regulation and legislation

Changes in political cycles, complicated procurement rules

Capacity Building and Skills

Language barriers, lack of experts, limited personnel capacities

Other topics

- ▶ Knowledge transfer to smaller cities, acceleration, clear direction, make it the new normal

Letter of Intent/ CapaCITIES Action plan

Finland

- **Activity cluster 1: Needs**

- National roundtable with relevant stakeholders to identify needs, interests and common topics
- Relevant national strategies and EU mapping
- Initiatives, platforms and ongoing actions.
- National and regional processes, practices, instruments, and models
- Forerunner initiatives of climate neutrality and smart city urban development

- **Activity cluster 2: Co-design the governance structure**

- Workshops and collaboration with stakeholders (incl. private sector and citizens)
- National task force for the co-design of mission governance
- Strategy for the change with the piloting cities

- **Activity cluster 3: Mobilisation of other cities**

- Partnerships and co-creation within Baltic Sea Region (+ other cities)
- Twinning and partnering programs
- Workshops, seminars, and European level events to showcase experiences
- Additional stakeholders to be involved and mobilized
- Engage all applicable cities with partners

Finland's goal is to be carbon neutral by 2035 (climate act 2022)

1. The National Platform has a network structure:

- Top-down, bottom-up and horizontal mechanisms with various stakeholders:
- National Cities' Climate Mission network, led by core ministries (MEE, MENV, TC) and coordinated by MEE.
- Includes Mission cities + other interested cities and key parties (CAPACITIES, NZC, Business Finland). (=explicit support from the national level)

2. Extended National Cities' Climate Mission network

- including selected and applicant Mission Cities of Finland
- VTT (technological research center in Finland),
- Climate Leadership Coalition (businesses),
- Municipalities of Finland and regional councils. (=explicit support from the national level)

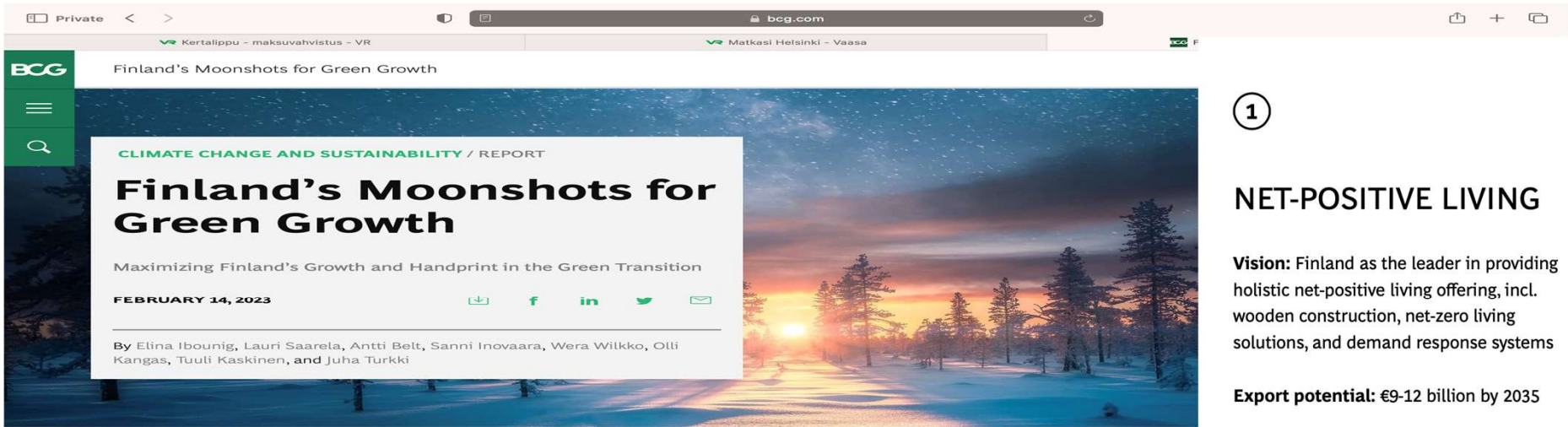
3. Operational network of Mission Label Cities.. (= Support from EU)

4. Horizontal networks, between cities.

- in the **context of the Innocities program** (comprising of 16 cities or city regions), where the Ministry of Economic Affairs and Employment and each City have drawn up an ecosystem contract.
- e.g., Hinku network – forerunner carbon neutral municipality/city network,, Fisu network, with a background in Sitra's resource efficiency.

5. Supported funding: Business Finland (innovation funding agency) has initiated, in early 2023,

- **a program for Decarbonized Cities**, with the aim to support innovation development.
- Ministry of the Environment funding calls, a project for support of climate city co-creation, regional funds have allocations for climate neutrality.



1

NET-POSITIVE LIVING

Vision: Finland as the leader in providing holistic net-positive living offering, incl. wooden construction, net-zero living solutions, and demand response systems

Export potential: €9-12 billion by 2035

2

BIO-BASED PRODUCTS AND MATERIALS

Vision: Finland as the global leader in developing and supplying advanced bio-based solutions, incl. circular textile fibers, circular consumer packaging, long-lasting consumer products, and advanced lightweight biomaterials

Export potential: €10-13 billion by 2035

3

DECARBONIZATION TECHNOLOGY AND SERVICES

Vision: Finland as the forerunner in providing smart technology solutions for high-emitting industrial processes, incl. electrification, lifecycle services, and energy system optimization

Export potential: €30-32 billion by 2035

4

CIRCULAR BATTERIES AND GREEN METALS

Vision: Finland with a circular battery ecosystem, and Finland as the leading supplier of green specialty steel, and other metals in Europe (e.g., for advanced applications in automotive and aviation)

Export potential: €27-29 billion by 2035

5

GREEN HYDROGEN-ENABLED SOLUTIONS

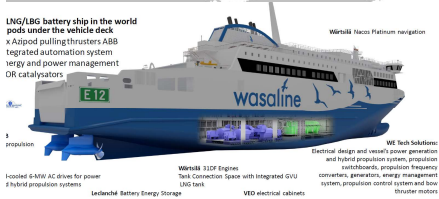
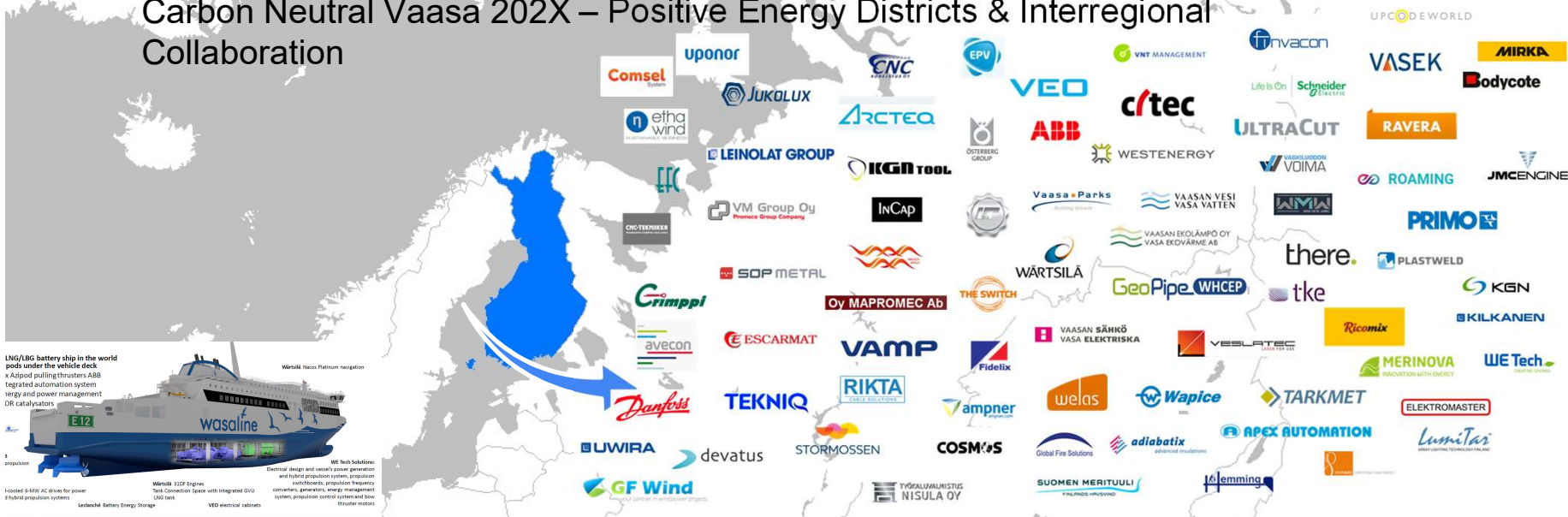
Vision: Finland as a competitive country for producing green hydrogen-enabled solutions, incl. green steel, synthetic fuels, green ammonia-based fertilizers, and food proteins

Export potential: €10-12 billion by 2035

2023 WALCC Forum in Vaasa 19 - 21.9.2023

Nordic Energy Cluster

Carbon Neutral Vaasa 202X – Positive Energy Districts & Interregional Collaboration



LNG/LBG battery ship in the world
 pods under the vehicle deck
 x-Azipod pulling thrusters ABB
 integrated automation system
 energy and power management
 OR catalyzators

Wärtsilä Nexus Platform navigation

Wärtsilä 312F Engines
 Tank Connection Space with integrated GPU
 LNG tank

VED electrical cables
 Wärtsilä motors

VED Tech Solutions:
 Electrical design and vessel power generation
 and hybrid propulsion system propulsion
 autothrottle, propulsion frequency
 conversion, generation, energy management
 system, propulsion control system and bow
 thruster motors

Wärtsilä 312F Engines
 Tank Connection Space with integrated GPU
 LNG tank

VED electrical cables
 Wärtsilä motors

MORE THAN
160
 BUSINESSES, SEVERAL
 OF WHICH ARE GLOBAL
 MARKET LEADERS IN
 THEIR FIELD

TOTAL BUSINESS TURNOVER SOME
 EUR **5.0**
 BILLION ANNUALLY
 EXPORT RATE OVER **80%**

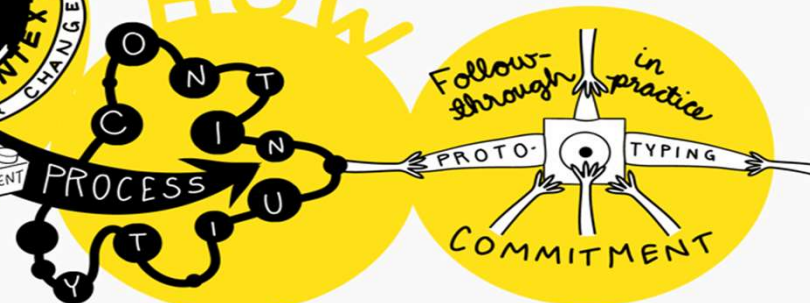
A STUNNING
25%
 OF FINLAND'S TOTAL
 EXPORT IN ENERGY
 TECHNOLOGY

HIGHLY
 TECHNOLOGICAL
90% of the Finnish R&D
 investments in electrical and
 automation solutions

SUSTAINABLE
2°C
 COMMITTED TO PARIS
 AGREEMENT
 Most green patents in
 the Nordics



a tool to foster multi-level governance



Transformative change

Multi-level governance – all actors included – public & private sector, also financing

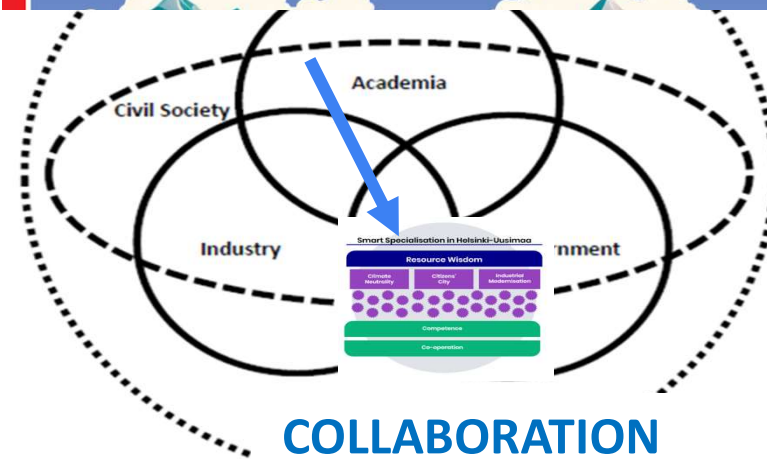
Exploratory experimentation Build in learning and adaptation

Systematic approach, bottom-up will have an increasing role in all global activities: new structures, processes and methods.

Societal innovations, entrepreneurship, creativity are essential.

Human capital, Intelligent assets are critical success factors: individual & team skills and competencies + **bench-learning**.

Avoiding Fragmentation: The only way to become the global leader in science, the industrial base, vibrant start-up ecosystems, favourable conditions for innovation, and the talent base.



**COLLABORATION
QUINTUPLE HELIX**



Advancing national support
for climate neutral cities

Thank you!

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