

# Climate engagement and acceptance at the civil society and municipalities

**Carbon neutrality: the role of municipalities and regions**

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# Steps to create climate engagement at the municipality level

## Back-bone

Set climate objectives in the strategy – important and necessary backbone.

## Make a plan

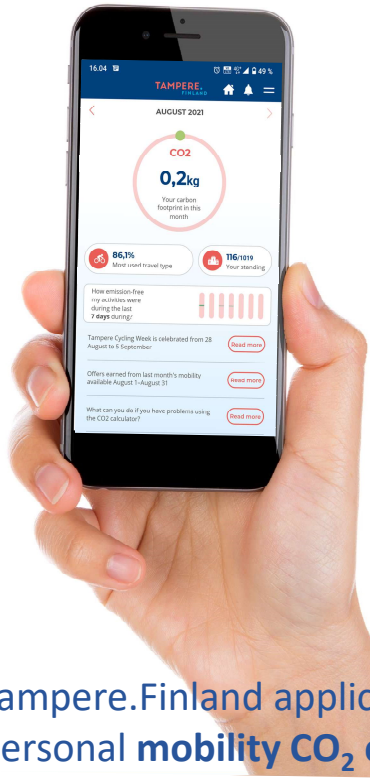
Co-create a plan/roadmap to achieve objectives – plan provides actions, timelines, responsible actors, impact and benefit evaluations but it is most impactful only when created in collaboration with the actors.

## Ensure action

Embed implementation to regular procedures – take advantage of systems already in place supplemented with collaboration with citizens, businesses, organizations and universities.



# Engaging citizens and creating acceptance through services and information



A free, outdoor **mobile adventure game** about climate change. *(also in English)*



Tampere.Finland application with personal **mobility CO<sub>2</sub> calculator** *(also in English)*. Over 120 000 downloads.

Free of charge, non-company-aligned **housing and construction energy advisory service** for citizens and housing cooperatives.



**Time-out dialogues** are for creating a deeper understanding of a topic through an equal encounter.



In **participatory budgeting** citizens decide how to use a dedicated amount of money in changing themes. In 2022-2030 the amount is 450 000 €.



## Carbon neutral actions – development program (2022-2025)

focuses on citizens and  
businesses enhancing  
just transition towards  
carbon neutral and  
climate resilient society.



Kuva: Visit Tampere / Laura Vanzo



# More information:

Climate Action in Tampere (in English):

<https://www.tampere.fi/en/nature-and-environment/climate-action-tampere>

Carbon Neutral Tampere 2030 roadmap (in English):

[https://www.tampere.fi/sites/default/files/2022-06/Carbon\\_Neutral\\_Tampere\\_2030\\_Roadmap.pdf](https://www.tampere.fi/sites/default/files/2022-06/Carbon_Neutral_Tampere_2030_Roadmap.pdf)

Tampere Climate Watch for monitoring city's climate work (in Finnish):

<https://ilmastovahti.tampere.fi/>

Tampere.Finland mobile application including the mobility CO2 calculator (in English):

<https://www.tampere.fi/en/communications/tamperefinland-app>

When visiting Tampere, play our Climate game (also in English): [my2050.fi/in-english/](https://my2050.fi/in-english/)

Regional climate partnership for companies (in English): <https://ilmastokumppanuus.fi/en/climate-partner/>

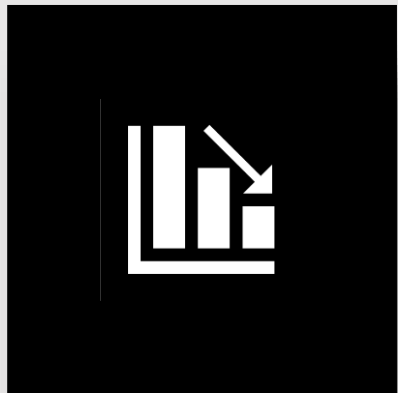




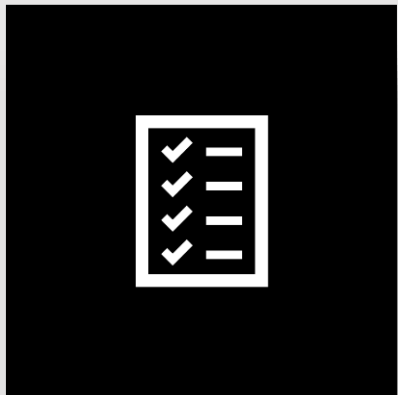


# KLIMATNEUTRALA BORÅS 2030

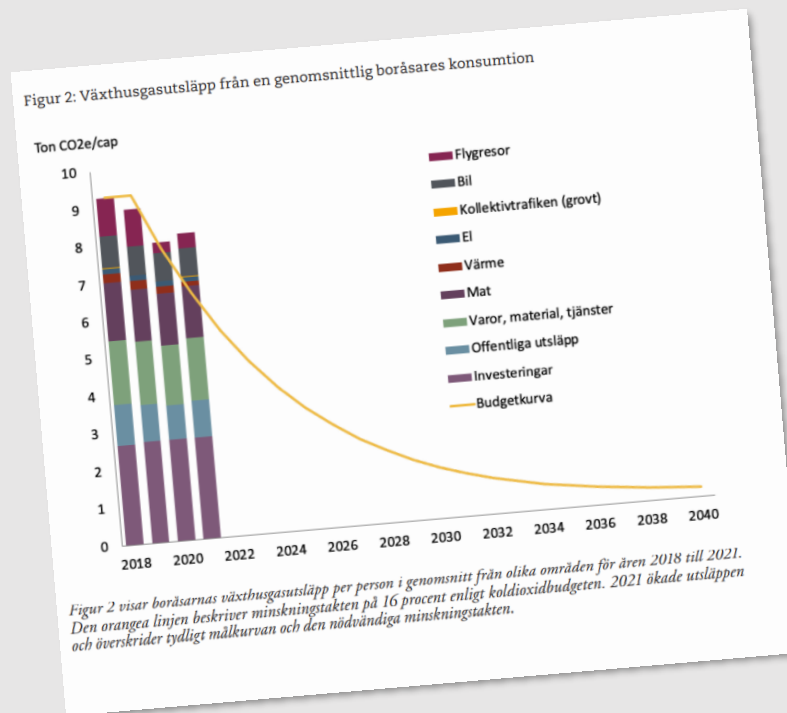




-16%



Energy and climate strategy











Let's try!







KLIMATNEUTRALA  
**BORÅS 2030**







**KLIMAT  
PRAT!**



**KLIMATNEUTRALA  
BORÅS 2030**





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# Carbon Neutrality

The role of regions and municipalities

Examples from Norwegian cities

Hanne Bertnes Norli, Asplan Viak As



# Agenda

- The Zero-Growth Goal
- Urban Growth Agreements
- Public Transport and Sustainable mobility solutions
- How to get the public on board





IN PRACTICE

# Norway's Zero-Growth Goal for major urban areas

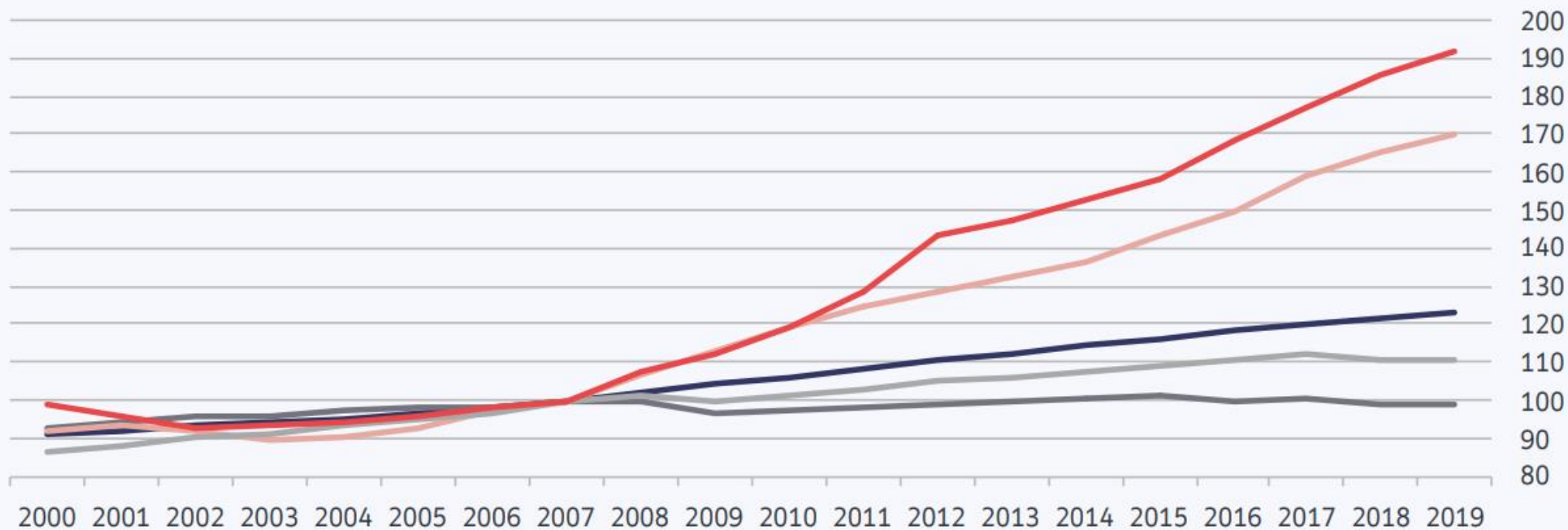


## Zero-Growth Goal & Urban Growth Agreements

- Growth in passenger transport shall be absorbed by public transport, cycling and walking (2012)
- Urban Growth Agreements established in the city regions of Oslo, Bergen, Trondheim and Stavanger
- Measures include land use (densification), investments in public transport and sustainable mobility solutions, parking policies and pricing mechanisms
- Financing is a mix of state funds, regional and municipal funds - and toll revenues



# Oslo - the success story



- Befolkning Oslo og Akershus
- Passasjerer kollektivtransport Oslo
- Passasjerer kollektivtransport Akershus

- Biltrafikk Oslo
- Biltrafikk Akershus

# Ruter – customer focus at the core of all strategies





# Oslo now - ramping up for biking av walking





# Trondheim - show and tell





# Trondheim - show and tell





# When it doesn't work





# What now – electrification, micromobility, automation and working from home



# A balancing act still

- ✓ Customer orientation
- ✓ Environmental goals
- ✓ More for the money

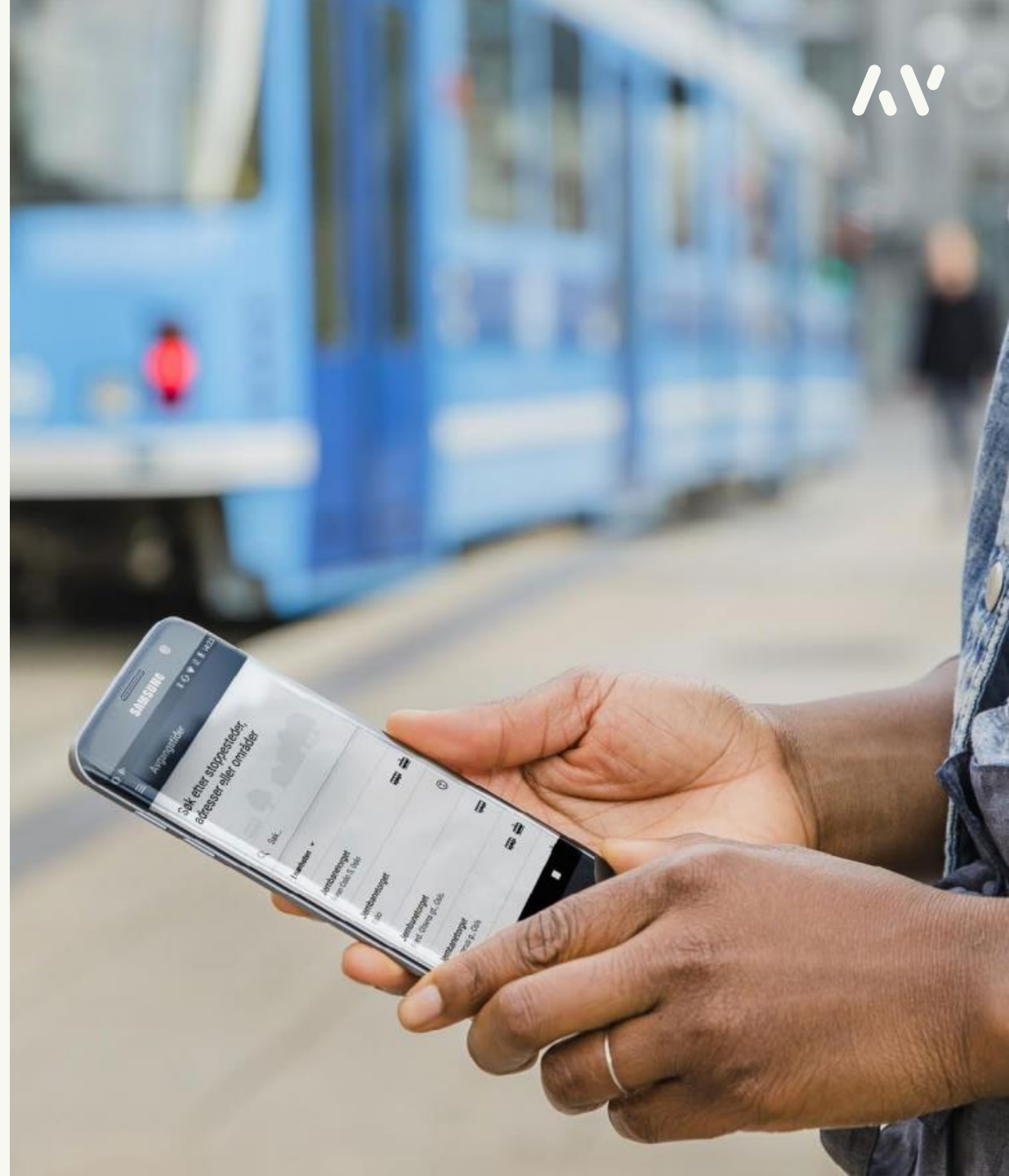
The Zero-Growth Goal is valid





# Summarized

- Establish common goals, across political lines and administrative levels
- Make it simple - communicate
- Know your customer/population
- Implement solutions/ carrots before restrictions/ costs
- Show and tell



# Climate Action Plan

2021–2025



REYKJAVÍK  
CARBON NEUTRAL  
2040







# Reykjavik City

- Capital city of Iceland
- 135.000 habitants (of 350.000 total population in Iceland)
- 246 km<sup>2</sup>
- Average temperature 0-10°C
- 100% renewable energy (geothermal and hydro)
- Used to natural hazards, storms, earthquakes and vulcanos
- Main environmental challenge: fossil fueled transport, most by private car



# Carbon neutral by 2040



“The vision of Reykjavik is to be carbon-neutral by 2040 and adapt to climate change in a humane and nature based way. Reykjavik supports the goals of the Paris agreement to keep global warming within 1.5°C.

The action plan will be reviewed in 2025 and every five years after that in accordance with the Paris Agreement of 2015. The results will be evaluated at least yearly.”

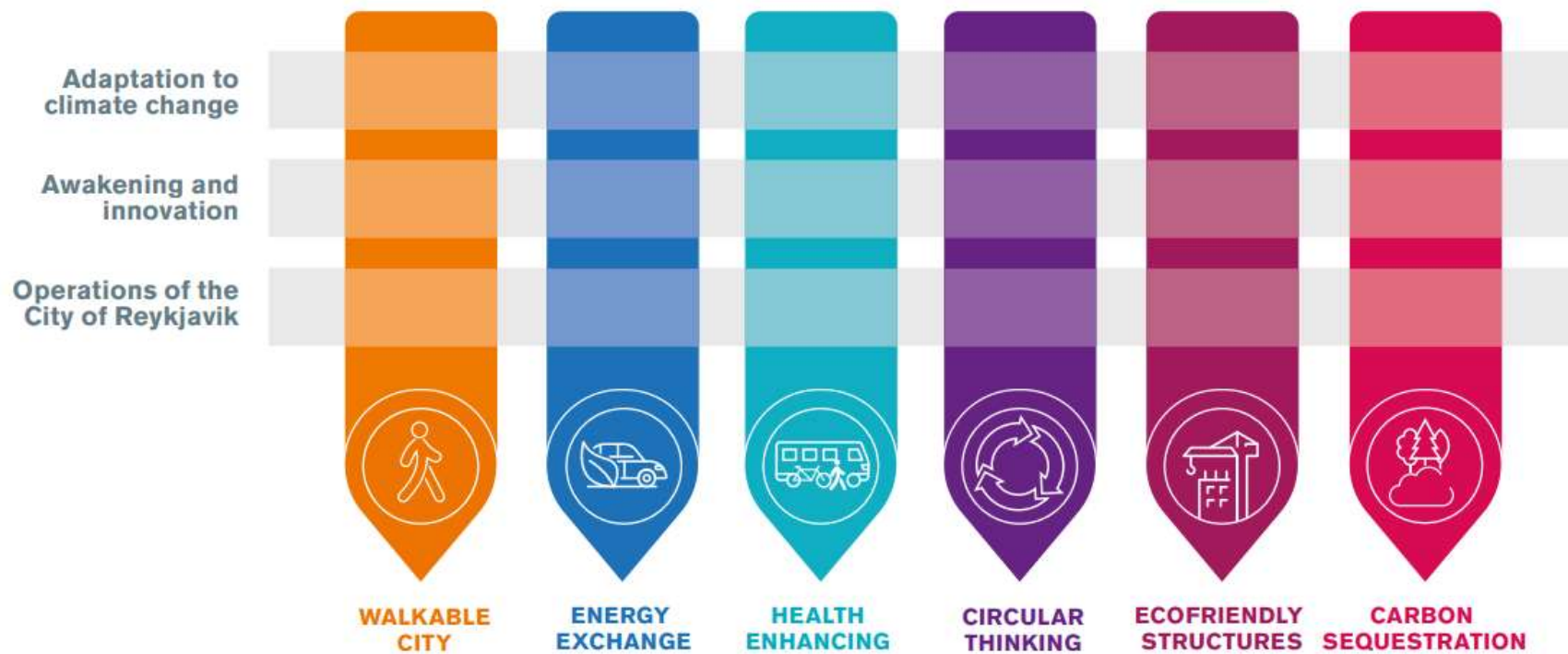
# Challenges - mitigation

Community-scale emissions inventory in Reykjavik according to scope in 2019;

Simple carbon footprint			Regional carbon footprint in addition to the value chain			Regional carbon footprint in addition to the value chain and the affect of other activities within the city limits		
	CO <sub>2</sub> t <sub>ig</sub>	Proportion		CO <sub>2</sub> t <sub>ig</sub>	Proportion		CO <sub>2</sub> t <sub>ig</sub>	Proportion
Transport	340,921	82%	Transport	340,921	64%	Transport	340,921	54%
Waste	54,524	13%	Waste	54,524	10%	Waste	54,524	9%
Energy use	21,637	5%	Energy use	21,637	4%	Energy use	21,637	3%
			Agriculture	3,510	1%	Agriculture	3,510	1%
			Chemical processes and industry	62,840	12%	Chemical processes and industry	62,840	10%
			Land use	45,421	9%	Land use	45,421	7%
						Manufacture of food products	8,043	1%
						Construction industry	93,968	15%
<b>Total</b>	<b>417,082</b>		<b>Total</b>	<b>528,853</b>		<b>Total</b>	<b>630,864</b>	



# Climate neutral – how?



# Milestone: 300.000 tonnes by 2030

## - transport

### 1 15 minute district

Through the process of district planning, renewal of urban centres and investments in infrastructure, the City's districts will become more pedestrian-friendly and the access to green areas, outdoors-activities and services will be ensured within a radius of fifteen minutes' walk or on bicycle.

### 2 Green city development

The city's future development will all be within its defined urban growth limit line and 80% of housing development will be located within convenient distance from the new BusRapid Transport system, Borgarlínan.

### 3 Energy exchange everywhere

A comprehensive plan to be drawn up and carried out for energy exchange infrastructure for private cars with charging stations in the city districts, for commercial cars, trucks, for public transport systems, in the ports and at sea.

### 4 World class cycling city

A revised cycling plan is to set goals with the aim that Reykjavik becomes a world class cycling city.

### 5 Borgarlína (Cityline) and improved public transportation

Improved as well as efficient public transportation and the compaction of the city are to play a key role in attaining the goals for changes in travel behaviour. Further climate goals will be defined for the transportation agreement between the state and the association of metropolitan area communities (SSH).

In total approx.  
170,000 tonnes

# How do you usually travel to and from work?

By car as driver	74,7%
By car as passenger	4,0%
By bicycle	6,6%
Walking	8,2%
By bus	4,0%
By micromobility	0,8%
Motorcycle	0,2%
Other	1,5%

[\\*2021-09\\_rvk\\_ferdavenjur\\_maskinuskyrsla.pdf\(reykjavik.is\)](#)



# How would you like to travel to and from work\*?

By car as driver	46,3%
By car as passenger	3,0%
By bicycle	17,8%
Walking	18,0%
By bus	8,8%
By micromobility	3,1%
Motorcycle	0,9%
Other	2,1%

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# Comparison

By car as driver	74,7%
By car as passenger	4,0%
By bicycle	6,6%
Walking	8,2%
By bus	4,0%
By micromobility	0,8%
Motorcycle	0,2%
Other	1,5%

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# Making space for people (not cars)















REYKJAVIK CAPITAL AREA  
EXPECTED GROWTH 2015-2040

70.000

How will we travel?  
How should we travel?





REYKJAVÍK  
CARBON NEUTRAL  
2040



# Environmental psychological aspects on policy instruments

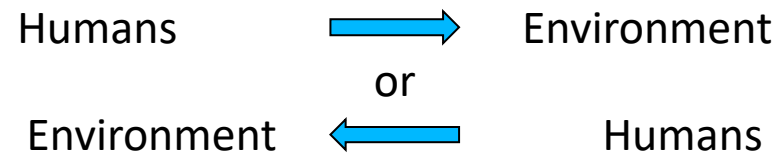


Henrik Kloo, IVL Swedish Environmental Institute

# Environmental psychology

Psychology – Social psychology – environmental psychology

Interaktion between humans and environment:

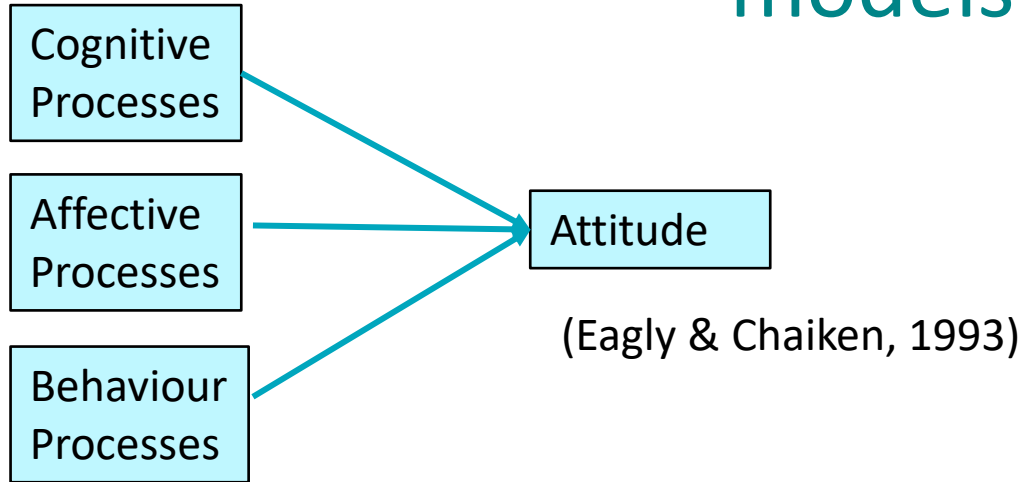


Topics:

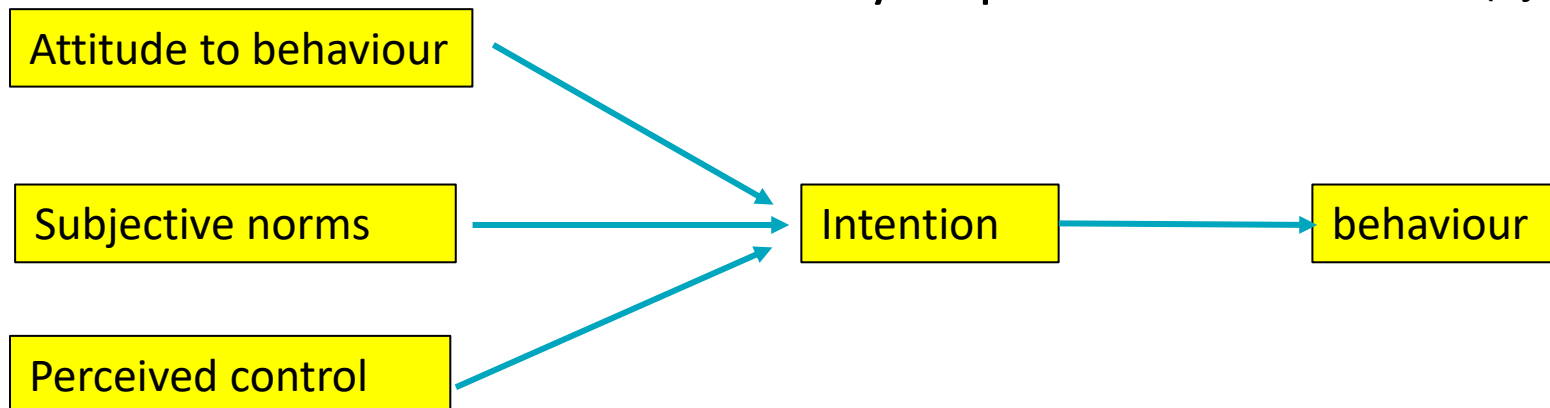
- Attitudes – behaviour
- Habits and decision making
- Interventions
- Acceptance for policy implementation
- Efficacy of policy implementations



# Attitudes: Environmental psychological models



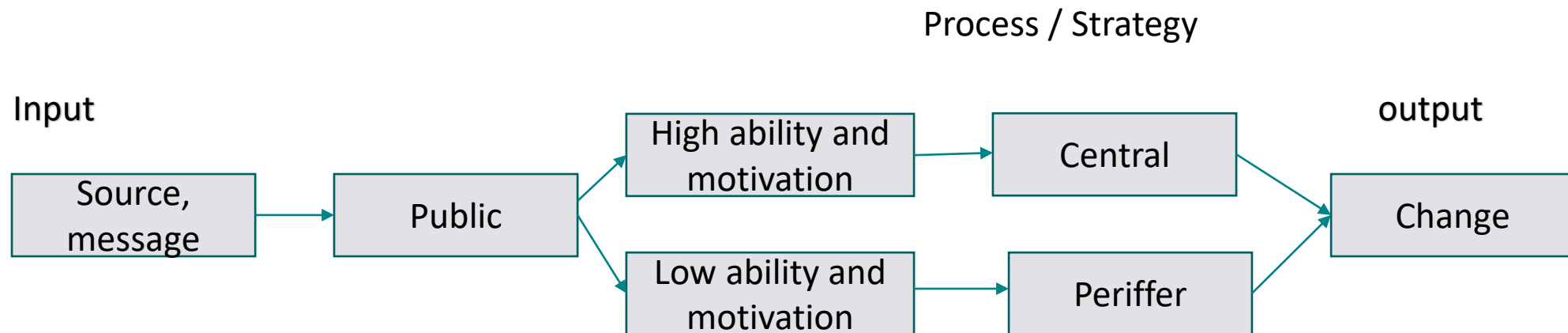
## Theory of planned behaviour (Ajzen, 1991)



# Habits, motivation – repeated behaviour – clues in the environment and simple decision paths

## Elaboration Likelihood Model:

High or low ability or motivation determines how we absorb messages and achieve change (Petty and Cacioppo, 1980ies)



# Habits, motivation – repeated behaviour – clues in the environment and simple decision paths

## Cognitive dissonance theory

When you realise that your behaviour is in conflict with your attitude and values

How to deal with this:

- Change your behaviour
- Change your attitude
- Change the perception
- Change or add cognitive elements
- Reduce the importance of the conflict
- Think: I did not have a choice



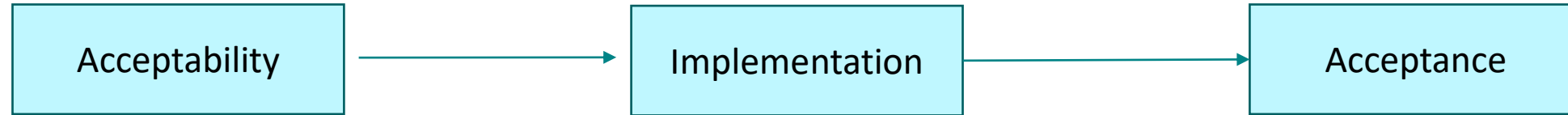


# Intervention strategies, some conclusions

- There are several that works
- Just information usually not sufficient
- The closer you get to the actual behavior the more efficient
- The more it is adapted to the ability of the persons the more efficient
- The effect may not be sustained over time



# Policy implementation



Possible to accept, But  
People dislikes  
changes and difficult  
to imagine what will  
be

Dialoges, test or  
demonstration and  
implementation  
strategy

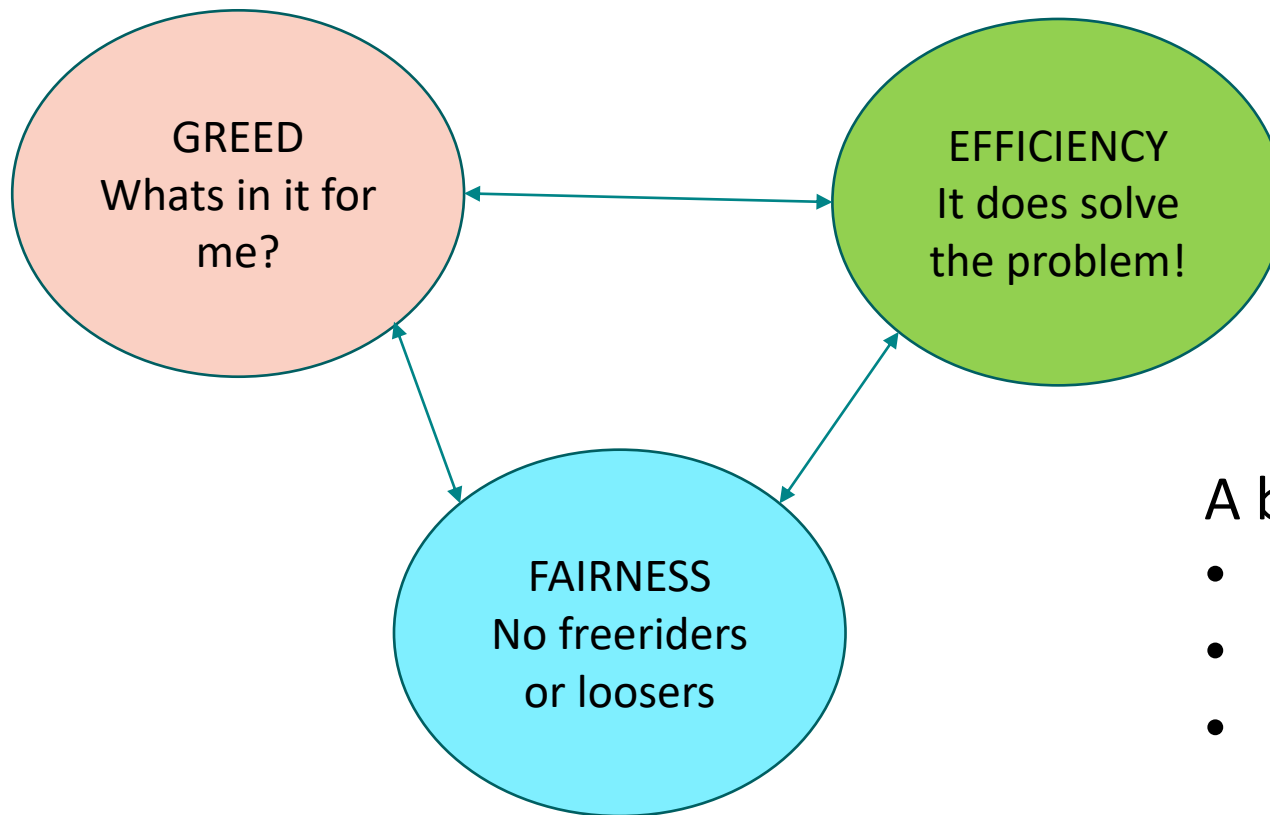
It was not so bad after  
all, or even better

## **Crowding out or Crowding in**

A risk when using economic incentives:

- The feeling that your intrinsic motivation is rejected and may be replaced with a business mind (Crowding out)
- Encouraging, an extra bonus (Crowding in)

# Policy implementation: Greed, Efficiency, Fairness theory (Wilke, 1991)



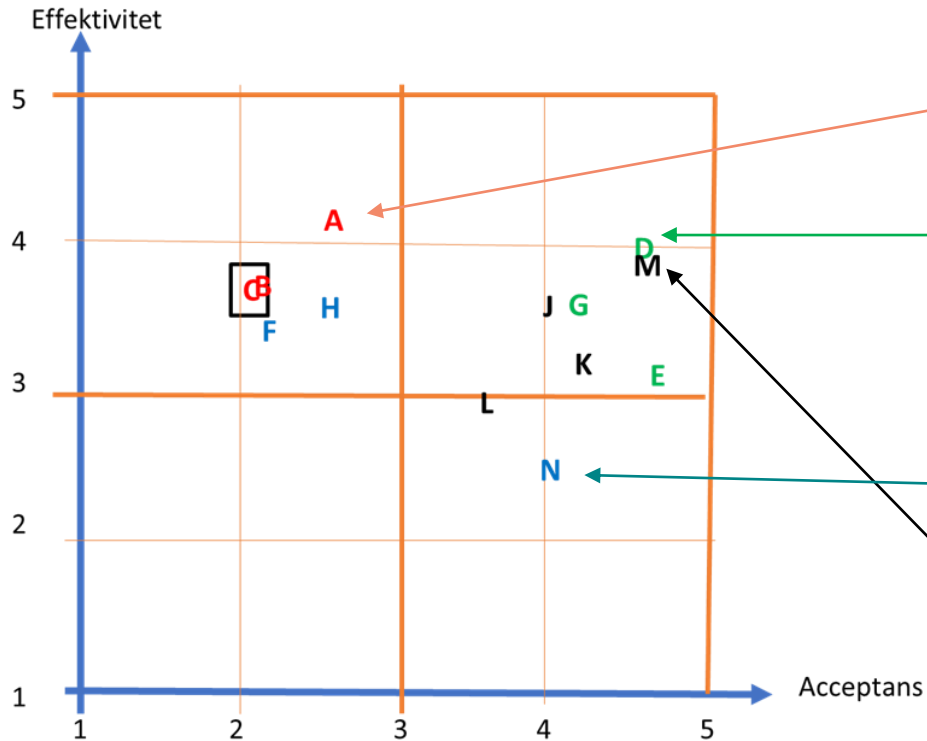
A balance between:

- Individual Consequenses
- Communal Consequenses
- Perception of justice



# Policy instruments (mobility)

## Accapttable? Efficient?



Parking: A=higher fees, B=less parking places C=Parking levy

Public transport : D= efficient, E= Reduced fee, G= Rail

Road: F= Road user charge, H= env. zones, N= investment in road infrastructure

Other: J= working at home, K=commuter parking, L= car sharing, M= measures for walking and cykling